

Railway Industry Supplier Approval Scheme - BRIEFING NOTE

Subject: 'Bogie Overhaul'

Advice to: RISAB's

Reference: Standard: RISAS/003/001 Issue: 2 Section A Clause:2
Appendix B

Applies when: Carrying out assessment of 'Bogie Overhaul'.

Note's Purpose: To provide clarification on the assessment requirements for, and scope definition of, 'Bogie Overhaul' suppliers.

Background: Feedback from RISAS Stakeholders highlighted a misunderstanding related to the scope of certification of suppliers holding RISAS Approval for RISAS Product Group M1C – Complete Bogies.

Following discussion with key industry stakeholders it was established that there was a general belief that approval to M1C meant the whole bogie i.e. the item(s) which are removed from under a railway vehicle and shipped to a supplier for overhaul on the back of a delivery vehicle.

The intention of the cross industry working group which created RISAS was to enable certification of those suppliers who e.g. strip complete bogies and sub-contract the overhaul of bogie sub-components to other suppliers (e.g. wheelsets, dampers etc.), carry out work on the frame e.g. shot blasting, NDT, painting and subsequent re-assembly with sub-contracted overhauled components (e.g. Transmissions, brake valves etc.), and testing.

Following a detailed review of the RISAS Product Group List and consultation with the RISAS Board, it was established that the vehicle systems, sub-systems and components breakdown of RISAS Product Group M1– Running Gear, could be adding to the confusion. Therefore the opportunity was taken to amend the M1 section of the list to clarify some of the key bogie components. An extract of the amended M1 Section of the RISAS Product Group List is attached at Appendix A.

Additionally, to enable the opportunity for approval of the whole bogie, the RISAS Board have declared that assessment of 'Bogie Overhaul' will consider all work carried out by the supplier and the management and control of sub-suppliers, for the whole bogie, including all equipment that is re-delivered as part of the assembly. To aid understanding, marked up extracts of the RISAS Product Group List, identifying those components for generic vehicle bogie types e.g. HST Power/Trailer that require

consideration during the assessment, are attached at Appendix B. It should be noted that the customer usually defines their definition of the bogie within the overhaul contract. The full controlled RISAS Product Group List is available at www.risas-online.org.

Requirements: When assessing 'Bogie Overhaul' suppliers, the RISAB shall ensure that the following is included in the assessment.

1. Scope

The assessment shall consider all work carried out by the supplier and the management and control of sub-suppliers, for the whole bogie, including all equipment that is re-delivered as part of the assembly.

2. Competencies

For assessment of the management and control of sub-contacted overhaul of bogie components, the assessment team may include, or shall have access to procurement, contract management and the relevant technical expertise, as required under the Accreditation Agencies arrangements for RISAB Accreditation for RISAS Product Group S1 – Procurement of Vehicle Maintenance, Repair, Overhaul and Modification of Rolling Stock and relevant Materials Product Groups .

3. Assessment

Prior to the on-site element of the assessment, the assessment team shall request details of sub-contracted overhaul of bogie components from the supplier and details of the arrangements for their management and control, including e.g. procurement policies and procedures including supplier assurance, engineering and contract management policies and procedures, example contracts and sample evidence of conformance.

The assessment team shall review the information provided to establish that the arrangements conform to RISAS requirements and detail any areas required for further review during the on-site element of the assessment, in the assessment plan.

Where the supplier specifies RISAS as the means of assurance within its arrangements for management and control of overhaul of those sub-contracted bogie components, included in the RISAS Product Group List, and the suppliers of overhaul of those sub-contracted bogie components hold current RISAS certification, the RISAB shall obtain copies of the sub-contractors RISAS certificate for inclusion in the assessment report, and accept the certificate(s) as evidence of conformance.

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Appendix A – Amended RISAS Product Group List, Section M1

M01 Running Gear	
A Wheelsets	
0006	Trailer Wheelsets
0008	Powered Wheelsets
B Wheelset Components	
0007	Axlebox bearings
0520	Axles
0521	Axleboxes #
0522	Brake Discs
0523	Gearwheels #
0524	Monobloc Wheels
0525	Resilient Wheel Units
0526	Suspension Tubes #
0527	Wheel Centres & Tyres
C Bogie Components	
0528	Bolsters / Spring Planks
0529	Cast Bogie Frames
0530	Earth & Traction Return Brush gear #
0531	Fabricated Bogie Frames
0532	Lifeguards
0533	Riveted Bogie Frames
0534	Swing Links / Torque Links
D Suspension Components	
0010	Springs - coil
0011	Springs - air
0012	Springs - rubber
0013	Springs - leaf
0521	Axleboxes #
0535	Anti-roll bars
0536	Bogie centre pivot
0537	Dampers - friction
0538	Dampers - hydraulic
0539	Side bearers

Appendix B
HST Power Bogies are typically comprised of those components shaded in pink.

M01 Running Gear	
A Wheelsets	
0006	Trailer Wheelsets
0008	Powered Wheelsets
B Wheelset Components	
0007	Axlebox bearings
0520	Axles
0521	Axleboxes #
0522	Brake Discs
0523	Gearwheels #
0524	Monobloc Wheels
0525	Resilient Wheel Units
0526	Suspension Tubes #
0527	Wheel Centres & Tyres
C Bogie Components	
0528	Bolsters / Spring Planks
0529	Cast Bogie Frames
0530	Earth & Traction Return Brush gear #
0531	Fabricated Bogie Frames
0532	Lifeguards
0533	Riveted Bogie Frames
0534	Swing Links / Torque Links
D Suspension Components	
0010	Springs - coil
0011	Springs - air
0012	Springs - rubber
0013	Springs - leaf
0521	Axleboxes #
0535	Anti-roll bars
0536	Bogie centre pivot
0537	Dampers - friction
0538	Dampers - hydraulic
0539	Side bearers

M02 Brakes and Pneumatics

A Apply forces to wheels

0022	Actuators - pneumatic & spring
0023	Actuators - hydraulic
0024	Slack adjustors
0166	Brake cylinders
0167	Callipers
0169	Scrubber actuators
0540	Brake Mechanical Linkage

B Air - production, storage, treatment

0025	Reservoirs
0026	Compressors - reciprocating
0027	Compressors - screw
0170	Compressors - vane
0172	Safety valves
0174	Pressure gauge
0175	Pressure switches
0176	Air supply hoses
0177	Filters
0182	Air driers
0183	Oil separators
0541	Valves (not safety)
0773	Cocks including isolating and coupling

C Brake Control

0046	Brake controllers
0047	Power/brake controllers #
0048	Brake control units - pneumatic only
0118	Tripcocks #
0184	Brake control units - Electro pneumatic
0185	Brake control units - electronic
0186	Distributors
0192	Handbrake control
0193	Parking brake control unit
0199	Pressure balance switch
0542	Electro pneumatic valves #
0543	Hydraulic parking brake control unit
0544	passenger communication device pneumatic
0545	Pneumatic Relays

0546	Pneumatic Valves
D Slide and slip control	
0202	Tachometers
0203	Sanding control
0205	WSP control
0542	Electro pneumatic valves #
0547	Sanding delivery equipment

M03 T&RS Mechanical Equipment	
A Buffers	
0548	Buffers - hydraulic
0549	Buffers - metalastic
0550	Buffers - spring
B Couplers	
0038	Bar couplers
0039	Automatic couplers
0040	Semi-automatic couplers
0041	Screw coupling
0551	Shackle
C Drawgear	
0552	Collapse Unit
0553	Drawgear springs/side rubber
0554	Drawgear units
0555	Retraction Mechanism
D Gangways	
0043	Gangways
E Mechanical Components	
0557	Locking/Retention Devices for loads

M04 T&RS Electrical Equipment	
A Cells & batteries	
0054	Cells & batteries
B Electrical Equipment	
0057	Battery chargers

0058	Amplifiers
0197	Electrical Relays
0558	Auxiliary Contactors and switchgear
0559	Auxiliary convertor
0560	Lighting Convertor
C Intercar connections	
0059	Jumpers
0561	Autocoupler connectors and electrical heads
D HVAC	
0060	Air conditioning units
0061	Heaters
0062	Fans #

M05 T&RS electric traction equipment	
A Transformers etc	
0070	Transformers
0071	Buchholz relays
0562	Oil Pumps #
B Traction switchgear & equipment	
0072	Dc Traction Switchgear and Camshafts
0073	Ac Traction Switchgear and Tapchangers
0563	Resistor grids
C Static Converters	
0074	Traction Converters and Inverters
D Power circuits	
0075	Power circuit breakers
0076	Surge arrestors
0564	Capacitors
0565	Chokes
E Rotating machines	
0062	Fans #
0077	Traction motors
0078	Dynamos & generators
0079	Alternators & MA sets
0080	Starter motors for diesel engines

F Collection equipment

0082	Pantographs
0083	Shoegear
0530	Earth & Traction Return Brush gear #

M06 T&RS diesel traction equipment

A Diesel engines & components

0089	Diesel engines
0090	Governors
0091	Turbochargers
0092	Cylinder heads & liners
0093	Power packs
0131	Fuel Injection Equipment

B Cooler groups & radiators

0566	Hydrostatic
0567	Oil Cooler
0568	Radiators
0569	Thermostats

C Fuel and oil systems

0095	Fuel tanks
0096	Low pressure Fuel pumps
0562	Oil Pumps #
0570	Filling valves and couplings
0571	Fuel hoses

D Exhaust systems

0097	Exhaust Systems
0572	After Treatment

M07 T&RS Transmission

A Gearboxes (Mechanical transmission)

0103	Gearboxes (mechanical transmission)
0523	Gearwheels #
0562	Oil Pumps #
0573	Bearings #
0574	Final Drives
0575	Fluid Couplings/Torque Convertors

0576	Other Gearboxes
B Gearcases (Electrical transmission)	
0104	Gearcases (electrical transmission)
0523	Gearwheels #
0526	Suspension Tubes #
0562	Oil Pumps #
0573	Bearings #
C Drive equipment	
0105	Cardan Shafts
0106	Flexible Couplings
0577	Quill Tubes
0578	Transmission Safety Device

M08 Trainborne safety/ monitoring equipment	
A Train Control	
0047	Power/brake controllers #
0113	Automatic Warning System
0114	Train Protection & Warning System
0115	Automatic Train Protection
0116	Radio Electronic Tokenless Block
0117	Driver's Safety Device/Vigilance
0118	Tripcocks #
0579	Drivers Controller
0580	Emergency Passenger Communication Device
0581	ETCS/ERTMS
0582	Radar
0583	Tilt Authority & Speed Supervision
B Data recording & communications	
0119	Speedometers
0121	Passenger Information Systems
0122	Train Management Systems
0123	Closed Circuit TV systems
0584	Data Recorders including OTMR
C Radios	
0124	Cab Secure Radio
0125	National Radio Network
0126	Global System for Mobile Communications - Railway

D Train Detection

0127 Track Circuit Actuator

0128 Horns

E Fire System

0129 Fire Detection

0130 Fire Suppression