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 their 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.

Contact: In the event of any queries on this Briefing Note, please contact:
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or by e-mail to john.barber@rssb.co.uk

Signature/Name

J Barber
## 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 bearings
Appendix B

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

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## M02 Brakes and Pneumatics

### A Apply forces to wheels
- **0022** Actuators - pneumatic & spring
- **0023** Actuators - hydraulic
- **0024** Slack adjustors
- **0160** Brake cylinders
- **0167** Calipers
- **0169** Scrubber actuators
- **0840** 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
### 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
### 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
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<tr>
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