Lead Standards Committee:	Rolling Stock	**Date:**	October 2022
Support Standards Committee:	Plant	**Date:**	September 2022
Subject:	Five-year review of RIS-2709-RST Issue 1 Rail Industry Standard for the Identification of Roller Bearings Defects		
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1. Purpose of the paper

1.1 This paper sets out the outcome of the five-year review of RIS-2709-RST Issue 1 - *Rail Industry Standard for the Identification of Roller Bearings Defects*. Standards Committee(s) approval and support is sought for the recommendation and way forward.

2. Background

2.1 RIS-2709-RST was created in 2016 to incorporate the content of and supersede TF-TT0025 issue two with improvements to good practice and clarity.

2.2 RIS-2709-RST is a standard on the identification and recording of roller bearing defects at overhaul intended to identify defects of taper, cylindrical and spherical roller bearings during overhaul in a maintenance workshop.

2.3 The document contains simple requirements to identify and record bearing defects but mostly comprises guidance in terms of defects, defect reporting codes, descriptions and pictorial examples of each defect. This common definition of bearing defects facilitates the understanding of failure modes and communication of faults and trends between organisations and through the supply chain.

2.4 The standard is commonly used as a daily reference for bearing overhaul and for occasional reference when considering axle bearing failures detected outside the overhaul process. Newer, clearer images are available to replace some of the pictorial examples to improve their definition.

3. Impacts on the document(s) following publication/entering into force

3.1 Consideration has been given to the following during the assessment:

a Business case for change – RIS-2709-RST was created to incorporate the content of and supersede TF-TT0025 issue two with improvements to good practice and clarity. This has been achieved.

b Deviations - As a Rail Industry Standard, deviation from RIS-2709-RST does not require approval from the standards committees and therefore no applications have been received since publication. Standards committees have not been consulted on any potential alternatives to the requirements in the standard.

c Current projects or proposals being processed – there are no current or proposed projects directly related to the content of this standard. Guidance on the processes associated with the inspection of failed bearings is being considered but this does not fit logically in this document, however an RSSB Technical Note is under consideration.

d Amendments and clarifications – No amendments or clarifications have been issued against RIS-2709-RST.

e Enquiries – No enquiries have been recorded regarding the content or use of this standard.

f Research projects – There are no complete, live or pending research projects relating to axle bearing maintenance that would influence the content of RIS-2709-RST.

g Regulations (refer to the list of legislation effective from 1 January 2021, that is applicable to the operation of the mainline railway) - There have been no changes in regulations directly relevant to the content of RIS-2709-RST since it was issued.

h National technical specification notices (NTSNs) and European standards – As a Rail Industry Standard, RIS-2709-RST contains no national technical rules and the content does not reference any NTSNs, TSIs or European standards.

i Changes in technology – There have been no changes in technology that affect the nature and interpretation of axle bearing defects.

4. Discussion

4.1 Review outcome

4.1.1 The document generally serves as a common description of phenomena that have not changed over the years and are unlikely to change in the foreseeable future, and therefore the content is considered to be up to date and fit for purpose.

4.1.2 Although the content is still valid and appropriate to the railway today the standard is written using an obsolete template and was not created in RMDB and therefore does not follow the current requirement, rationale and guidance structure and nomenclature.

4.1.3 The images in the document are all adequate but it has been suggested that there may be an opportunity to replace the images with newer versions that depict each defect more clearly.

4.1.4 In addition, it has been suggested by BSI Bearings Mirror Group RAE/3/-/2 that the industry would benefit from a documented process describing the actions and care to be taken when inspecting an axle bearing that has failed in service. In such a case the damage to the bearing is beyond any of the defects described in RIS-2709-RST but could be described in a new Technical Note and there may be some synergies between the two documents.

5. Recommendations

5.1 The standard committees are asked to:

a DISCUSS the outcome of the five-year review and the following proposed recommendation:

Initiate a change project to recreate the standard in the current RIS format and replace some of the images with more-recent, clearer examples, and to prepare a Technical Note setting out the process and care points when removing and inspecting failed axle bearings.

b APPROVE/SUPPORT as appropriate:

The Lead Standards Committee to approve the recommendation including consultation with industry.

The Support Standards Committee(s) to support the recommendation.

RSSB completion: [do not delete]

Standards Committee	*Meeting date*	*Decision*	*Minute numbers*		*Next review date*
			Pre-consultation review	*Post-consultation review*	
Rolling Stock	*06/10/2022*	approved			
Plant	*15/09/2022*	*supported*			

[add rows as necessary]