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**ASSOCIATION OF AMERICAN
RAILROADS**

July 16, 2004

**CIRCULAR LETTER
(c-9892)**

**Subject: Solicitation of Comments: Stress State Reduction Initiative Rule Changes
TO MEMBERS AND PRIVATE CAR OWNERS**

File Number: AC-2324

A Town Hall meeting in Chicago was held on June 12, 2003 to bring all stakeholders of the AAR Car Repair Billing and Interchange System up to speed on an initiative to make the overall freight interchange system safer and more efficient by taking advantage of new technology that facilitates more sophisticated assessment of the condition of in-service equipment. This effort began several months earlier, looking for ways to revamp the current system of car repairs to offer opportunities for proactive maintenance intervention by car owners rather than primary reliance on the current manual inspection approach. The wheel impact load detector network was selected as the first technology to initiate this effort.

Since the initial Town Hall meeting, a continuing series of public meetings have been held to keep all stakeholders, i.e., railroads, private car owners, leasing companies and contract repair companies in the information loop. The essence of this initiative is to employ a predictive and proactive maintenance system, using the best available technologies to detect and report poorly performing equipment and other nascent problems before they result in accidents or undue rail damage. Since the first meeting, the AAR has encouraged and received direct participation from all stakeholders in reviewing this new approach. The stakeholders have worked together on new concepts that will show up in the interchange Rules as the process moves forward.

The new system is designed for early identification of a component's deteriorating performance through different levels to the final level, at which time operations may be interrupted to mitigate the condition. The Wheels, Axles, Bearings and Lubrication, the Equipment Engineering and the Arbitration and Rules Committees have developed a concept termed the "Window of Opportunity" which establishes an initial "trigger" in the network system that a freight car component has reached a point where maintenance/repair attention is appropriate. The Committees have also developed the concept of "Opportunistic Repair" which will permit efficient predictive maintenance repairs at less than existing interchange rule repair limits. In addition to existing Rule 41 requirements for dealing with high impact wheels, another new term arises, the "Final Alert" level. This level is the point where stress is being placed on the physical plant and equipment.

This initiative is the first step in many that may need to be taken to keep freight rail operations efficient and track infrastructure strong. The industry group that has spearheaded this effort is already looking ahead to determine other proven and useful technologies to employ. But before starting that part in earnest, a series of Interchange Rules changes implementing this first piece, and embodying the concepts described above, has been developed. They have been accepted for comment by the Arbitration and Rules Committee and are included as an attachment to this circular letter. Changes to existing rules are underlined in the text. New rule additions are identified as such and not underlined. In accordance with Rule 123, comments from interested parties are hereby solicited. All comments should be directed to the

undersigned within 30 days of this letter. All comments will be considered by the responsible Committees before the targeted implementation date of October 1, 2004.

The new concepts outlined above may catch some stakeholders off guard if they have not been participating in the development of this new initiative. To ensure that all stakeholders have another opportunity to ask questions and receive answers from the Committees, the AAR is contemplating convening another Town Hall meeting, possibly in Chicago in late August. As that detail gets sorted out, they will be communicated via circular letter. Also be reminded that there are still a few issues that are not yet completed. The AAR expects them to be ready within the next month, and when ready they will be published. More specifically, we are finalizing the Appendix E fee structure as well as the Appendix F Calibration procedure.



Rule Changes for Stress State Initiative.d

Sincerely,

A handwritten signature in black ink that reads "Thomas J. Stahura". The signature is written in a cursive style with a large initial 'T'.

Thomas Stahura

Stress State Reduction Initiative Proposed Rule Changes
7/15/04

Proposed Changes to the 2004 Field Manual of the AAR Interchange Rules.

Rule 41-Wheels

Present Rule 41.A.1.r.: See Field Manual page 277.

Proposed revised 41.A.1.r. (Condemnable at any time): Wheels Out-of-Round or 90,000 Pounds (90 kips) or Greater Impact.

Present Rule 41.A.1.r.(1): See Field Manual page 277.

Proposed revised 41.A.1.r.(1): Detected by a wheel impact load detector reading 90,000 pounds (90 kips) or greater for a single wheel. The detector used must have been calibrated per Appendix E. The detector must reliably measure peak impacts and must provide a printable record of such measurements. Device calibration records must be maintained. Wheels with condemnable slid flat spots are handling line responsibility and must not be billed otherwise.

Present Rule 41.A.1.r.(2): See Field Manual page 277.

Proposed revised 41.A.1.r.(2) last sentence: Wheels with condemnable slid flat spots are handling line responsibility and must not be billed otherwise.

Present Rule 41.A.2.k: Vacant

Proposed new Rule 41.A.2.k (Condemnable When Car is on Repair Track for Any Reason): Detected by a wheel impact load detector reading from 80 kips to less than 90 kips for a single wheel. The detector used must have been calibrated per Appendix F. The detector must reliably measure peak impacts and must provide a printable record of such measurements. Device calibration records must be maintained. Wheels with condemnable slid flat spots are handling line responsibility and must not be billed otherwise. This will be considered an Opportunistic Repair for the repairing party.

Present Rule 41.A.3: Vacant

Proposed new Rule 41.A.3: Final alert level as detected by a wheel impact load detector is a reading of 140 kips or greater for a single wheel. Wheels with this impact level will be changed while on the handling line. The detector used must have been calibrated per Appendix F. The detector must reliably measure peak impacts and provide a printable record of such measurements. Device calibration records must be maintained. Wheels with condemnable slid flat spots are handling line responsibility and must not be billed otherwise.

Present Rule 41.B.1: Vacant

Proposed new Field Manual Rule 41.B.1 (number existing Correct Repair Charts as item B.2): All cars set out of trains for high impact wheel readings must receive attention while on the handling line.

Present Rule 41.E.15: Vacant

Proposed new Rule 41.E.15: Final alert level units will be billed in accordance with Office Manual Rule 111.19 unless the car owner or agent attempted to remediate car during previously identified three Maintenance Advisory alert levels. If a car was on a repair track with a kip reading at the second or third Maintenance Advisory alert levels, i.e. 41.A.2.k or 41.A.1.r.(1) it is also considered an attempt to remediate. If the car owner or agent remediated or attempted to remediate the condition, or the car was not previously identified in a Window of Opportunity (first Maintenance Advisory alert level), the car should be repaired under Field Manual Rule 41.A.1 and billed under Field Manual Rule 44.

Present Rule 41.E.16: Vacant

Proposed new Rule 41.E.16: The responsible party will be notified through the Equipment Health Management System (EHMS) when a wheel is detected by a wheel impact load detector reading 65 kips or greater for a single wheel. This will be considered the Window of Opportunity for the responsible party. The detector used must have been calibrated per Appendix F. The detector must reliably measure peak impacts and must provide a printable record of such measurements. Device calibration records must be maintained. Wheels with condemnable slid flat spots are handling line responsibility and must not be billed otherwise. See Office Manual Rule 94.

Rules 36(Roller Bearings),41,43(Axles), 44(Wheel Sets) and 83(Repair Record Preparation)

Add new Why Made Code (WMC) to Field Manual Rule 41.F. 6, 44.F.6 and 83.18.C:

61 = High impact wheel from 80 kips to less than 90 kips as detected by a wheel impact detector.

Add WMC 61 to 41.F.6 Job Codes 3001 through 3114 and 44.F.6 Job Codes 3328 though 3343.

Present WMC 65: See Field Manual pages 305 and 517.

Revise WMC 65 in Rule 41.F.6 and 83.18.C: High impact wheel 90 kips or greater as detected by a wheel impact detector.

Add new Field Manual Rule 44.B.1 and B.2 (renumber existing 44.B.1 as B.3):

1. Wheel sets changed must have wheel impact detector information traceable to an AAR approved reference file.
2. Wheels identified in EHMS through a Maintenance Advisory as high impact must be reported within 24 hours by the repairing company when wheel change out has been performed. The instruction manuals for this application can be accessed at www.railinc.com.
3. See Rules 36, 41 and 43. [Existing B.1]

Present Rules 36.E.9, 41.E.17, 43.E.7 and 44.E.6.a: Vacant

Proposed new Field Manual Rules 36.E.9, 41.E.17, 43.E.7 and 44.E.6.a: When a wheel set has a combination of high impact and other condemnable defects, report the Why Made Code for the other condemnable defect.

Appendix F-Wheel impact Load Detector Calibration and Verification

Present Appendix F: Vacant

Proposed new Appendix F: Wheel Impact Load Detector Calibration and Verification Requirements --- Currently under review.

Proposed Changes to the 2004 Office Manual of the AAR Interchange Rules

Rule 44-Wheel Sets

Present Rule 44 Price Matrix: Does not currently include use of WMC 61.

Proposed revision to Rule 44 Price Matrix: The Price Matrix (pricing structure) will report a new why made code for wheel set changes for opportunistic repairs. A credit will be applied for the remaining wheel life to all applied Job Codes. The credit will be based and normalized on wheel size, weighted by car type for an average kip reading for wheels in the opportunistic repair category. Why Made Code 61 will credit \$XX.xx to each applicable job code for wheels subject to this type of repair.

Present Rule 44.7: Vacant

Proposed new Rule 44.7: When a car that was listed on a wheel impact Maintenance Advisory has a second wheel set changed for WMC 61 and 65 at the same wheel set location within 12 months of the first repair and the initial repairing company fails to report to EHMS, the charges for the initial repair will be cancelled. When the car owner submits the request for counter billing authority, the car owner must include a copy of the first repair, a copy of the second repair, and proof that the EHMS was not updated. The car owner is entitled to recovery of the labor and material for the component replaced plus any additional labor charges shown on the initial bill directly related to the repair (i.e. jacking, articulated connection labor, solid drawbar labor).

Rule 94-Equipment Health Management Systems

Present Office Manual Rule 94: Vacant

Proposed new Equipment Health Management Systems (EHMS) Rule 94:

1. The car owner must register equipment in the EHMS if an alert generated through the EHMS is to be sent to another party.
2. Alert notices will be first directed to the party identified and registered in EHMS as having maintenance responsibility. The car owner (UMLER mark owner) will be the system default for alerts.
3. A repairing party may effect repairs if a car in the EHMS has registered a single actionable reading, as defined in Field Manual Rule 41.
4. For monitoring cars with deteriorating performance, a series of uniquely numbered Maintenance Advisories (MA) will be employed.
 - a. A first Maintenance Advisory will be issued to identify the Window of Opportunity repairs.
 - b. A second Maintenance Advisory will be issued to identify cars in the Opportunistic Repair category.

c. A third Maintenance Advisory will be issued identifying cars with defects in excess of current condemning criteria.

d. A fourth Maintenance Advisory will be issued for equipment exceeding the final alert level.

5. Car owner must update the EHMS and/or the MA in case of non-reporting instances, prior to or at the time of taking exception to the bill for a repair.

6. To remove a MA from a car, as a minimum, the date of repair, the repairing party, location on car, and location (SPLC) of repairing party must be entered into the EHMS.

7. When a car that was listed on a wheel impact Maintenance Advisory has a second wheel set changed for WMC 61 and 65 at the same wheel set location within 12 months of the first repair and the initial repairing company fails to report to EHMS, the charges for the initial repair will be cancelled. When the car owner submits the request for counter billing authority, the car owner must include a copy of the first repair, a copy of the second repair, and proof that the EHMS was not updated. The car owner is entitled to recovery of the labor and material for the component replaced plus any additional labor charges shown on the initial bill directly related to the repair (i.e. jacking, articulated connection labor, solid drawbar labor).

Rule 111-Car Repair Pricing

Present Rule 111.19: Vacant

Proposed new Rule 111.19: Final alert level pricing is the point at which the handling line carrier has the right to repair cars at an independently determined price.

Rule 113-Data Exchange Procedures

Present Rule 113.2 through 4: Vacant

Proposed new Rule 113.2 through 4:

2. Wheel impact detector information must be traceable to an AAR approved reference file. Approved references include EHMS file, Maintenance Advisory, InteRISS data or data received direct from a certified detector.

3. Data will only be accepted by the AAR approved reference file from calibrated detector sites.

4. The party responsible for maintenance of equipment may be added to the reference file.

Appendix E-Service Fees

Present Appendix E: See Office Manual page 125.

Proposed Appendix E: Retitle User Fees to "Miscellaneous Fees for Interchange Services"

Member Fees:

1. User Fee: \$1.65 per car

2. Stress State EHMS Fee: \$X.xx per revenue ton-mile

Private Car Owner Fees:

1. User Fee: \$1.65 per car

2. Stress State EHMS Fee: \$0.xx per car

Notes:

1) Retain existing language on Office Manual page 125 as Note 1.

- 2) The percentage potential cost avoidance associated with railroads and private car owners is to be determined annually.
- 3) The basis for railroad Stress State EHMS fee is determined by the percentage potential cost avoidance divided by revenue ton-miles.
- 4) The basis for private car owner Stress State EHMS fee is determined by the percentage potential cost avoidance divided by number of cars with private owner mark in UMLER.

Proposed Changes to both the Field and Office Manuals of the AAR Interchange Rules

Rule A

Present Rule A.7: Vacant

Proposed new Rule A.7: Refer to Appendix E of the Office Manual for the list of required fees.

Rule 125-Early Warning Maintenance Advisory (EW/MA) System

Present Rule 125.B.7: See Office Manual page 90, Field Manual page 589.

Proposed revised Rule 125.B.7: Add to existing paragraph: Uniquely identified Maintenance Advisories are exempted from the automatic upgrade to an Early Warning after one year.

Appendix A-Definitions

Present definition of Final Alert Level: Vacant

Proposed new definition of Final Alert Level: The point where a component or system places undue stress upon the physical plant and equipment.

Present definition of Mechanical Advisory: See Field Manual page 598 and Office Manual page 94.

Proposed new title of Mechanical Advisory: Change the name from Mechanical Advisory to Equipment Alert. See Office Manual Rule 89.

Present definition of Maintenance Advisory: See Office Manual page 94 and Field Manual page 598.

Proposed revised definition of Maintenance Advisory: An informational notice issued by the AAR for interchange freight cars having mechanical defects or on which preventive/corrective maintenance is to be performed.

Present definition of Opportunistic Repair: Vacant

Proposed new definition of Opportunistic Repair: Specific authorized repairs at less than existing interchange rule repair limits

Present definition of Window of Opportunity: Vacant

Proposed new definition of Window of Opportunity: A defined period of time and/or deteriorating performance for a freight car component that has a sub-critical condition that will require repair attention. A car owner (party responsible for maintenance) must be advised that a particular car with a specific condition has entered the window.