

AAR Advanced Technology Safety Initiative (ATSI)

Background and Current Status

December 2005

The AAR implemented a number of changes to the AAR Interchange Rules in 2004 and 2005 to utilize data from trackside Wheel Impact Load Detectors (WILD) to help railcar owners be more proactive in their railcar maintenance. These detectors measure the impact of a wheel on the rail as it moves over the detector. The principle is that a high impact reflects a problem with the condition of the wheel. The AAR, through its subsidiaries Transportation Technology Center, Inc. (TTCI) and Railinc, is notifying railcar owners via e-mail when a wheel records certain readings as it passes over a detector.

Many Class I Railroads have also implemented Truck Performance Detectors (TPD) and Acoustical Bearing Detectors (ABD) on their systems. The AAR is currently evaluating data from these detectors and developing rules that will utilize this data in an effort to provide railcar owners with more information about the mechanical condition of the key operating components on their cars.

HOW ATSI WORKS

Rules Utilizing WILD Data

Window of Opportunity (65 kips or greater)

When a wheel gets a reading of 65 kips or greater for a single wheel, the car owner, lessor (or designated agent) receives a Maintenance Advisory (via e-mail) from the Equipment Health Management System (EHMS). This notification opens the "Window of Opportunity." Theoretically this early notification gives you enough time to schedule the car into a shop to change the wheel before its condition deteriorates much further.

Opportunistic Repair (80 kips to less than 90 kips)

When a wheel gets a reading of at least 80 kips and less than 90 kips you will receive a Maintenance Advisory from EHMS. The car is now in the "Opportunistic Repair" category. Any wheel with a reading of at least 80 and less than 90 kips may be changed by the railroad if it is on a designated repair track for any other reason.

AAR Condemnable (90 kips or greater)

A Maintenance Advisory will be sent when a wheel gets a reading of 90 kips or greater. The wheel is now "Condemnable" and the railroad may send the car to a repair track and change the wheel at any time.

Final Alert Level (140 kips or greater)

When a wheel gets a reading of 140 kips a Maintenance Advisory will be sent. This is the "Final Alert" level. At this point the railroad must change the wheel. *The charge for changing a wheel after final notification is not constrained by regular AAR PriceMaster pricing. Each railroad is free to set its own charge.*

The Final Alert Level has been proposed but not yet implemented as of December 2005

Reporting Requirements for Wheel Changes with Open Windows

When a wheel with an open window is changed AAR rules require that the repairing party report the wheel change to the AAR Equipment Health Monitoring System (EHMS) within 24 hours.

Railcar owners should make sure that your contract shops are aware of this requirement and are reporting wheel changes properly and timely. You should also keep accurate records of wheel changes and closely monitor this activity. The only way to close a “window” on a wheel is to report the repair in EHMS. If the repair is not reported and the open “window” is above 80 kips then the wheel may be changed (and billed to you) again by another railroad. The AAR rules allow you to recover the charges from the party that did not report the original wheel change but this requires careful record keeping and administrative costs.

Additional References

More information can be found in the following:

- Field Manual of the AAR Interchange Rules, Rule 41 and Appendix F
- Office Manual of the AAR Interchange Rules, Rule 44 and 94
- AAR Circular Letters: C-9907, C-9912, C-9930, C-9952, C-10081 and C-10132.

Rules Utilizing Truck Performance Detector Data and Acoustical Bearing Detector Data

AAR has not established or proposed specific rules utilizing data from either of these types of detectors. They are working on them and you can probably expect some proposed rules on Truck Performance Detector data in 2006.

More Information

Please call us at 308-382-3880 or 303-216-4260 for more information on how this railroad initiative may affect you.