

AAR Comparison Panels

Frequently Asked Questions

November 8, 2018



Reflective
Solutions

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AAR Comparison Panels

Frequently Ask Questions

- **Why are retroreflective sheeting inspection procedures changing?**

Title 49 of the Code of Federal Regulation, Part 224.111, “Renewal” required retroreflective tape applied on non-passenger freight cars and locomotives for conspicuity purposes be replaced at least once every 10 years regardless of condition, which would have cost tens of millions of dollars. This replacement period was based on the manufacturers’ warranty.

The American Association of Railroads (AAR) found that in most instances the tape was only dirty. When cleaned, the retroreflective sheeting material was performing well above safety requirements even after 10 years. To ensure safety standards were met, and to avoid the heavy cost of blanket replacement of good material, the AAR implemented an inspection process that requires cleaning the tape used on freight cars and locomotives, and checking its performance if material is suspect.

- **What is the inspection requirement?**

Current rules require the cleaning of all retroreflective tapes applied to a freight car or locomotive. The new inspection process requires inspectors to stand back about 15 feet once the tape is cleaned, and visually check the performance using a sufficiently bright light source to determine if the tape is good, bad, or suspect:

Good: the tape is clearly fine

Bad: the tape is clearly damaged

Suspect: the tape may not be as bright as it should be and should be further inspected

Most inspectors should have a good understanding of suspect tape after using the comparison panels a few times.

- **What to do if you find retroreflective tape that is “suspect” during your inspection?**

Tape that is suspect should be compared to a calibrated comparison panel. If the tape is not as bright as the calibrated comparison panel, it should be replaced.

You may also measure the retroreflectivity of the tape with a hand-held retroreflectometer to determine if it’s performing above the allowed 250 cd/lx/m². RIP track owners can decide what method to use.

- **What method of inspection can be used?**

Either calibrated comparator panels or electronic hand-held retroreflectometers must be used.



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- **When will the new requirements go into effect?**

Revised Rule 66 will be implemented with the normal publication schedule of the Field manual. AAR's intent is to have all requirements effective by **January 1, 2019**, with compliance due by **July 1, 2019**. RIP track owners must have calibrated comparison panels or a hand-held retroreflectometer by the compliance due date.

- **What is Rule 66?**

Rule 66 states all requirements for retroreflective sheeting for rail cars. It includes the details of the inspection process and when it should be done.

- **How will this requirement be enforced?**

AAR has inspectors that audit RIP tracks, and ensure compliance with all rules in the field manual, including rule 66.

- **How often will reflective tape be inspected by this new method?**

Tape must be inspected when a car or locomotive is brought in for repairs. The inspection will also become part of the single car air brake test (SCAT) or annual locomotive inspection.

- **How do RIP track owners get paid for this inspection?**

Time and labor will be added to the brake inspection code.

- **Where do I get comparison panels?**

Highly calibrated panels are not easy to produce, requiring highly sophisticated equipment and processes. To help AAR members save on the cost of blanket replacement, Avery Dennison has offered to produce highly calibrated comparison panels that meet AAR Standard S-916 *Retroreflective Comparison Panel Requirements*.

The AAR Equipment Engineering Committee (EEC) has approved the Avery Dennison comparison panels under AAR Standard S-916. A list of approved comparison panels can be found on TTCl's website:

<http://www.aar.com/standards/approvals/S-916.pdf>

- **Why is precise calibration so important?**

Retroreflective tape has been proven to increase safety and save lives by increasing conspicuity of freight cars and locomotives. Because the comparison panels are being used to determine if retroreflective tape can still be safely seen by drivers, it is imperative that they meet the tight tolerances set by the FRA. If the comparison panel is below the allowed range, it will endanger the public. If the comparison panels are too bright, AAR members will need to spend time and money replacing tape that is compliant.



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