



Thomas E. DeLafosse
 Vice President
 Salco Products
 Engineering and Technical Services
 1385 101st Street, Suite A
 Lemont, IL 60439
 630.512.7595
 Tom_delafosse@salcoproducts.com

To: Distribution List
Subject: October 2017 AAR Circular Letter Summary

The October 2017 summary includes the (20) circular letters issued during the month.

This document provides a summary of each Association of American Railroads (“AAR”) circular letter issued during the previous month. A circular letter provides information of general applicability to the railroad industry, including proposed and final rules, standards, and recommended practices. Circulars are a fee-based service provided by AAR’s Transportation Technology Center, Incorporated (“TTCI”) located in Pueblo, Colorado. You may sign up to receive AAR circular letters online. If you need further assistance with access to circulars, please send any future questions and issues to Pubs@aar.com.

The Field Manual of the AAR Interchange Rules, Rule 1, b. (11), requires maintaining a copy of each “*mandatory circular letter*” that revises an “*Interchange Rule*” or the “*Manual of Standards and Recommended Practices.*” For your convenience, this document identifies mandatory circular letters. For those circulars that propose or implement final changes to an existing rule, standard, or recommended practice, this document provides an impact statement to car owners, lessors, mechanical shops, and railroad operations.

The following matrix identifies the AAR circular letter number, a summary of the circular, any effective date of a rule, standard, or recommended practice, any comment due date, an impact statement, and to the extent it applies, if the circular letter is mandatory.

If you have any questions, please contact Tom DeLafosse at 630.512.7595 or tom_delafosse@salcoproducts.com.

Circular No.	Subject and Summary	Impact Statement
Implemented Changes, Effective the Date of Circular		
CPC-1330 Oct. 6, 2017	<p>Subject: Recommended Railroad Operating Practices for Transportation of Hazardous Materials.</p> <p>Summary: AAR's Safety and Operations department revised appendices C. This is the only change to this version of OT-55.</p> <p>Implementation Date: Effective October 16, 2017 and supersedes OT-55- P issued January 19, 2016.</p>	<p>Car Type: Tank Car (Railroad Operating Practices)</p> <p>Car Owner: No</p> <p>Repair Shop: No</p> <p>Comments: The revised standard is included in this circular and is in effect as of the publication date of this circular. Under the provisions of Standard S-050, which may be found on the TTCI web site (www.AAR.com).</p>
C-12965 Oct. 12, 2017	<p>Subject: Implementation of New and Revised Definitions to the Manual of Standards and Recommended Practices (MSRP), Section M; Standard S-5019 – Locomotive Definitions.</p> <p>Summary: The Natural Gas Fuel Tender Technical Action Group (NGFT TAG) implemented</p>	<p>Car Type: Railroads</p> <p>Car Owner: No</p> <p>Repair Shop: No</p>

Circular No.	Subject and Summary	Impact Statement
	<p>recommendations as well as other input from locomotive manufacturers, into this standard.</p> <p>Implementation Date: The revised AAR standard S-5019 is effective immediately and is appended to this circular.</p>	<p>Comments: The revised S-5019 standard will be reflected in the next issue of Section M.</p>
C-12966 Oct. 16, 2017	<p>Subject: Implementation: Manual of Standards and Recommended Practices, Section I - Intermodal Equipment Manual - M-935 - Standard Operating Procedures for Intermodal Securement.</p> <p>Summary: Circular Letter C-12955 was issued on September 13, 2017 on behalf of the Intermodal Operations Committee seeking comments on the publication of a new standard, M-935 - Standard Operating Procedures for Intermodal Securement, to be added to MSRP, Section I, Intermodal Equipment Manual.</p> <p>Implementation Date: The M-935 standard will be included in the next issue of Section I. Insert this circular in your copy of MSRP Section I.</p>	<p>Car Type: Intermodal</p> <p>Car Owner: No</p> <p>Repair Shop: No</p> <p>Comments: If Section I is a required publication for your location, be sure to update your manual with the new edition of M-935.</p>
C-12971 Oct. 25, 2017	<p>Subject: Implementation of Editorial Revisions to MSRP Section C Part II, Design, Fabrication, and Construction of Freight Cars, Specification M-1001, Chapter 1 Administrative Provisions, Edits Related to Standard S-2044 Safety Appliance Requirements.</p> <p>Summary: The purpose of this circular letter is to notify the industry of editorial revisions made to MSRP Section C Part II, Design, Fabrication, and Construction of Freight Cars, Specification M-1001, Chapter 1 Administrative Provisions, to create a proper reference to S-2044 and notify car builders and design agencies of the responsibility to comply with Standard S-2044 Safety Appliance Requirements for Freight Cars.</p> <p>Implementation Date: The revised Specification M-1001 Chapter 1, attached, is now implemented effective immediately. This modification will be incorporated in the next issue of the Manual of Standards and Recommended Practices, Section C.</p>	<p>Car Type: Freight</p> <p>Car Owner: Yes</p> <p>Repair Shop: Yes</p> <p>Comments: If Section C Part II is a required publication for your facility be sure to update your manual with the new Chapter 1.</p>
C-12972 Oct. 25, 2017	<p>Subject: Implementation of Editorial Revisions to MSRP Section C, Car Construction Fundamentals and Details, S-219, S-220, S-2035, S-2038, S-2042, Edits Related to Standard S-2044 Safety Appliance Requirements for Freight Cars.</p> <p>Summary: The purpose of this circular letter is to notify the industry of editorial revisions to the following standards in MSRP Section C, Car Construction fundamentals and details. Edits were made to bring the standards into agreement with</p>	<p>Car Type: Freight</p> <p>Car Owner: Yes</p> <p>Repair Shop: Yes</p> <p>Comments: If Section C is a required publication for your facility be sure to update your manual with the specifications noted.</p>

Circular No.	Subject and Summary	Impact Statement
	<p>Standard S-2044 Safety Appliance Requirements for Freight Cars. Standards revised are: S-219, S-220, S-2035, S-2038, and S-2042.</p> <p>Implementation Date: The revised standards are now implemented and effective immediately. This modification will be incorporated in the next issue of the Manual of Standards and Recommended Practices, Section C.</p>	
<p>C-12973 Oct. 25, 2017</p>	<p>Subject: Implementation of revision to MSRP Section C Part II, Specification M-1001, Design, Fabrication, and Construction of Freight Cars, Chapter 2 – General Data: Addition of Cooper Bridge Rating Criteria, and Clarification of Coupler Height.</p> <p>Summary: The revision places design limits on truck wheelbase and Gross Rail Load combinations for freight cars in unrestricted interchange service. In addition, cooper load rating requirements are set forth for bridge spans up to 400 feet in length. In addition, Editorial changes to paragraph 2.1.5.2 had been implemented to clarify requirements for coupler height. The Maximum coupler height on new empty cars was raised from 34.5 inches to 35 inches to be in agreement with changes previously made to the AAR Field Manual Rule 16. Additional guidance was provided for flatcars with long overhangs, for which the coupler height may be as low as 33.5 inches.</p> <p>Implementation Date: The revised specification M-1001 Chapter 2, attached, is now implemented effective immediately.</p>	<p>Car Type: Freight</p> <p>Car Owner: No</p> <p>Repair Shop: Yes</p> <p>Comments: If Section C Part II is a required publication for your facility be sure to update your manual with the new Chapter 2.</p>
<p>C-12974 Oct. 25, 2017</p>	<p>Subject: Implementation of New Specification M-1006 Passenger Equipment Performance Specification for MSRP Section M, Locomotives and Locomotive Interchange Equipment.</p> <p>Summary: The Association of American Railroads has formed a Passenger Equipment Acceptance Task Force, with the goal to develop an AAR Specification to address operational safety of new-design passenger equipment (both passenger cars and passenger locomotives) on freight railroad track.</p> <p>Implementation Date: Specification M-1006 is attached and is implemented effective immediately.</p>	<p>Car Type: Locomotives</p> <p>Car Owner: No</p> <p>Repair Shop: No</p> <p>Comments: If Section M is a required publication for your facility be sure to update your manual with the new Sections 1 through 8.</p>
<p>C-12976 Oct. 25, 2017</p>	<p>Subject: Implementation of Appendix J Inspections and Maintenance, to be added to M-1004 Specification for Fuel Tenders.</p> <p>Summary: The purpose of this circular letter is to notify the industry of a new Appendix for MSRP Section T, M-1004 Specification for Fuel Tenders. The</p>	<p>Car Type: Locomotives</p> <p>Car Owner: No</p> <p>Repair Shop: No</p> <p>Comments: The first full edition of Section T will include the following Specification and</p>

Circular No.	Subject and Summary	Impact Statement
	<p>new addition is Appendix J Inspections and Maintenance.</p> <p>Implementation Date: It is planned that M-1004 and all supporting Standards will be available for purchase under a new MSRP titled Section T – Interoperable Fuel Tenders for Locomotives at www.aarpublishings.com. Until then, M-1004 and supporting standards will only be available via implementation Circular Letters.</p>	<p>Standards: M-1004 Specification for Fuel Tenders, S-5025 Gaseous Natural Gas Supply Hose Unit for Natural Gas Fuel Tenders, S-5026 Heat Exchange Fluid Hose Unit for Natural Gas Fuel Tenders, S-5027 21-Point Control Plug, Cable Assembly and Receptacle (TC-21 Tender Control Cable), S-5028 Safety Appliances for Tank Car-Style Natural Gas Fuel Tenders, S-5029 Safety Appliances on Fuel Tenders Other Than Tank Car-Style, S-5030 Natural Gas Fuel Tender Fueling Control Cable (FC-20).</p>
<p>C-12977 Oct. 27, 2017</p>	<p>Subject: Implementation of Revisions to MSRP Section L - Lettering and Marking of Cars: Retiring of Recommended Practice RP-021, Equipment Identification and Warranty Administration.</p> <p>Summary: The purpose of this Circular is to notify the industry of revisions to MSRP Section L Lettering and Marking of Cars. Recommended Practice RP-021 Equipment Identification and Warranty Administration is being removed from the MSRP.</p> <p>Implementation Date: Recommended Practice RP-021, Equipment Identification and Warranty Administration is now retired effective immediately.</p>	<p>Car Type: Freight</p> <p>Car Owner: No</p> <p>Repair Shop: Yes</p> <p>Comments: If Section L is a required publication for your facility, be sure to remove and destroy RP-021 from your manual.</p>
<p>C-12978 Oct. 27, 2017</p>	<p>Subject: Implementation of Revisions to MSRP Section L - Lettering and Marking of Cars, Standard S-910 Lettering and Marking of Cars. Removal of Consolidated Stencil and max height for reporting marks and car number</p> <p>Summary: The purpose of this circular letter is to notify the industry of editorial revisions to MSRP Section L - Lettering and Marking of Cars, Standard S-910 Lettering and Marking of Cars.</p> <p>Implementation Date: The revised Standard S-910, attached, is now implemented and effective immediately.</p>	<p>Car Type: Freight</p> <p>Car Owner: No</p> <p>Repair Shop: Yes</p> <p>Comments: If Section L is a required publication for your facility, be sure to update your manual to replace the existing S-910 with the revised one attached to this circular.</p>
Changes Pending 30-Day Comment Period from Date of Circular		
<p>C-12963 Oct. 2, 2017</p>	<p>Subject: Solicitation of comments - Archival of AAR MSRP Section I - Specification M-962 - Remanufacture of TOFC Trailers.</p> <p>Summary: It was determined that Specification M-962 - Remanufacture of TOFC Trailers was largely outdated and that content contained therein could be covered with a number of editorial changes to M-931 - Trailers for Intermodal Service. As a result, the Intermodal Operations Committee has decided to archive Specification M-962.</p>	<p>Car Type: Intermodal</p> <p>Car Owner: No</p> <p>Repair Shop: No</p> <p>Comments: If Section I is a required publication for your facility, review the attachments to this circular and provide any comments as directed to AAR within the 30 day comment period.</p>

Circular No.	Subject and Summary	Impact Statement
	<p>Implementation Date: All comments received within 30 days of issuance of this Circular will be considered by the IOC prior to the proposed removal of this standard from Section I.</p>	
<p>C-12964 Oct. 2, 2017</p>	<p>Subject: Solicitation of comments for revisions proposed for Section I, Standard M-931, Trailers for Intermodal Service.</p> <p>Summary: The Intermodal Operations Committee has proposed revisions to M-931. The proposed changes are identified in the attachment to this circular.</p> <p>Implementation Date: All comments received within 30 days of the issuance of this Circular will be considered by the IOC prior to any final action on the proposed revisions.</p>	<p>Car Type: Intermodal</p> <p>Car Owner: No</p> <p>Repair Shop: No</p> <p>Comments: If Section I is a required publication for your facility, review the attachments to this circular and provide any comments as directed to AAR within the 30 day comment period.</p>
<p>C-12968 Oct. 20, 2017</p>	<p>Subject: Solicitation for Comment, Revisions to Field Manual, Rule 90, Extend Side Frame and Bolster Life to 52 Years.</p> <p>Summary: During new car builds, truck casting production can precede the car built date by as much as two years, which means castings will reach 50 years prior to associated cars. This extension to the AAR 50 year limit for truck castings acknowledges the difference in production times and permits car owners to better manage assets.</p> <p>Implementation Date: Comments should be sent to AAR within 30 days of this letter for consideration. All comments received will be reviewed and considered by the Arbitration and Rules Committees, with a targeted implementation date of January 1, 2018.</p>	<p>Car Type: Freight</p> <p>Car Owner: Yes</p> <p>Repair Shop: Yes</p> <p>Comments: See this circular for the revised Rule 90 wording.</p>
<p>C-12969 Oct. 25, 2017</p>	<p>Subject: Solicitation of Comments for New Standard S-5030 Tender-Fill Control Cable (FC-20).</p> <p>Summary: The purpose of this circular letter is to solicit comments for a new Standard S-5030 Tender-Fill Control Cable (FC-20).</p> <p>Implementation Date: All comments received within 30 days of the issuance of this circular will be considered by the Natural Gas Fuel Tender Technical Advisory Group prior to taking action on the revisions which are the subject of the comments.</p>	<p>Car Type: Locomotive</p> <p>Car Owner: No</p> <p>Repair Shop: No</p> <p>Comments: The Natural Gas Fuel Tender Technical Advisory Group was formed in October, 2012, with the mission to develop AAR Fuel Tender Specifications and Standards to support the use of natural gas (methane) as an alternative locomotive fuel. The resulting M-1004 Specification and accompanying standards apply to new natural gas fuel tenders to be qualified for free, unrestricted interchange in freight service.</p>
<p>C-12970 Oct. 25, 2017</p>	<p>Subject: Solicitation of Comments on proposed new Specification, MSRP Section D, Trucks and Truck</p>	<p>Car Type: Freight</p> <p>Car Owner: No</p>

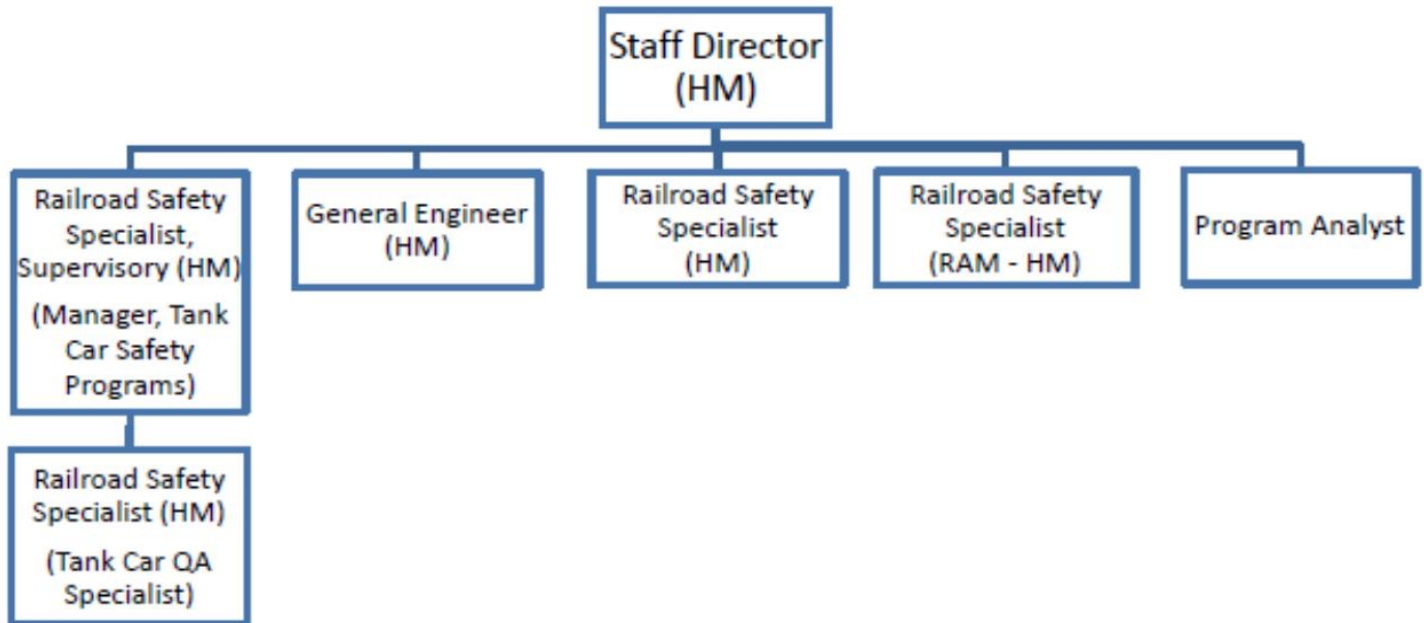
Circular No.	Subject and Summary	Impact Statement
	<p>Details, Specification M-980, Friction Wedge Performance for Railcars, Dynamic Wear Test.</p> <p>Summary: AAR is proposing a new specification for the approval of friction wedges through testing of the friction wedge material. The new specification M-980 would be included in the Manual of Standards and Recommended Practices (MSRP) Section D, Trucks and Truck Details, and be titled "Specification M-980, Friction Wedge Performance for Railcars, Dynamic Wear Test."</p> <p>Implementation Date: Comments from interested parties are herewith solicited under the provisions of AAR Standard S-050. All comments received within 30 days of the issuance of this circular will be considered by the EEC.</p>	<p>Repair Shop: Yes</p> <p>Comments: The attached updated draft was produced by this Task Force and approved for comment circular by the EEC.</p>
<p>C-12975 Oct. 25, 2017</p>	<p>Subject: Solicitation of Comments for New Standard S-5028 Safety Appliances for Tank Car-Style Fuel Tenders.</p> <p>Summary: The purpose of this circular letter is to solicit comments for a new Standard S-5028 Safety Appliances for Tank Car-Style Fuel Tenders.</p> <p>Implementation Date: All comments received within 30 days of the issuance of this circular will be considered by the Natural Gas Fuel Tender Technical Advisory Group prior to taking action on the revisions which are the subject of the comments.</p>	<p>Car Type: Locomotives</p> <p>Car Owner: No</p> <p>Repair Shop: No</p> <p>Comments: Interested parties should review the attachments to this circular and provide any comments you may have to the AAR within the 30-days requested comment period.</p>
<p>C-12979 Oct. 30, 2017</p>	<p>Subject: Solicitation of Comments for Revisions to MSRP Section S, Casting Details, Specifications M-211 and M-215.</p> <p>Summary: The purpose of this circular letter is to solicit comments for revisions proposed to Section S, Casting Details, Specifications M-211 and M-215, regarding coupling system casting marks used to identify the specification under which a component was approved.</p> <p>Implementation Date: All comments received within 30 days of the issuance of this circular will be considered by the CSTCC prior to taking action on the revisions which are the subject of the comments.</p>	<p>Car Type: Freight</p> <p>Car Owner: No</p> <p>Repair Shop: No</p> <p>Comments: The CSTCC is also seeking feedback from manufacturers regarding the effective date for the proposed changes.</p>
<p>C-12969 Oct. 25, 2017</p>	<p>Subject: Solicitation of Comments for New Standard S-5030 Tender-Fill Control Cable (FC-20).</p> <p>Summary: The purpose of this circular letter is to solicit comments for a new Standard S-5030 Tender-Fill Control Cable (FC-20).</p> <p>Implementation Date: All comments received within 30 days of the issuance of this circular will be considered by the Natural Gas Fuel Tender Technical</p>	<p>Car Type: Locomotives</p> <p>Car Owner: No</p> <p>Repair Shop: No</p> <p>Comments: The resulting M-1004 Specification and accompanying standards apply to new natural gas fuel tenders to be qualified for free, unrestricted interchange in</p>

Circular No.	Subject and Summary	Impact Statement
	<p>Advisory Group prior to taking action on the revisions which are the subject of the comments.</p>	<p>freight service. The AAR documents identify the tender's structural design requirements, operating performance, crashworthiness, and fuel interfaces needed to supply natural gas to dual-fuel locomotives, and interfaces needed to load the tender with fuel.</p>
General Information for the Industry		
<p>C-12967 Oct. 17, 2017</p>	<p>Subject: Correction to Office Manual Price Matrices Retroactive to July 1, 2017 (Job Code 2632).</p> <p>Summary: A recent review of the July 2017 Price Master conducted by the Car Repair Billing Committee revealed a pricing error for Job Code 2632, NACO Retaining Pin. The pricing has been corrected in the October 2017 Price Master.</p> <p>Implementation Date: In accordance with AAR Office Manual Rule 112.D.2, all parties involved in the issuance or receipt of erroneous charges are given the authority to counter bill for charges incurred during the July 1, 2017 to September 30, 2017 time period.</p>	<p>Car Type: Industry, OM Price Master update</p> <p>Car Owner: No</p> <p>Repair Shop: Possible</p> <p>Comments: A chart with detailed information regarding the material overcharges is included within this circular.</p>
<p>C-12980 Oct. 31, 2017</p>	<p>Subject: AAR MSRP Section J, M-1003 Quality Assurance Program Update: 2018 AAR Quality Assurance Auditor and Industry Conference & 2018 M-1003 Training Class Schedule.</p> <p>Summary: This circular provides the industry notice of (AAR) Quality Assurance Committee (QAC) upcoming 2018 AAR Quality Assurance Auditor and Industry Conference & Conference Sponsorship. Also 2018 M-1003 Training Class Schedule: Basic Auditor Class, Advanced Auditor Class and Root Cause Analysis Class</p> <p>Implementation Date: See this circular for the specific dates and sign up information.</p>	<p>Car Type: Industry Information</p> <p>Car Owner: No</p> <p>Repair Shop: Possible</p> <p>Comments: The 30th Annual AAR Quality Assurance Auditor and Industry Conference will be held the week of January 22, 2018 in Fort Worth, Texas.</p>

Federal Railroad Administration Tank Car Safety Initiatives

FRA Staffing

Hazmat HQ Division is fully staffed.



One Time Movement Approvals

2017 OTMA Counts (Jan 1 - Sept. 30) - Total OTMAs = 6237

OTMA 1 = 464

OTMA 2 = 98

OTMA 3 = 5,675

Mechanical vs. Hazmat

Hazmat Division only processes OTMAs for the tank, associated components and stub sills.

Some are still mis-applying for OTMA 3, if found, privileges will be revoked.

E System

E-OTMA is operational. All of industry is encouraged to use the system and report and bugs or problems to RSISspSupport@dot.gov.

We have received few complaints due to functionality from industry. User error and web browser type are two common issues.

Training Issues

Persons filling out the OTMA application are not properly identifying the tank car component when filling out the OTMA application narrative.

Lack of the required general tank car knowledge in describing the nonconformance.

Several instances when the Grantee's logistics company is filling out the OTMA application who have no training and or have never seen HMG-127.

Key Information to provide

Photos of the affected area(s) of nonconformance.

Tank car shop reports, tank car owner documents, drawings, COC, etc. (if applicable).

Demonstration as to the car being safe for transportation to shop.

Explain what you have done to make the move safe for transportation.

(E.g. Pressure blown down, plug inserted in place of defective part, etc.)

Remember, all parties listed in the application have responsibilities, not just the grantee!

Quality Assurance Team Activities

2017 Audits (Jan 1 – Sept. 30)

38 Facility audits by QA Team.

~35 Facilities need inspected, New(er) never audited by FRA QA Team.

Major Findings

Deviating from car owners QMP and shop QA procedures.

Training - function specific.

Owners not providing all applicable information (e.g. drawings, COCs)

{This is required by 180.517(a) / Protection under 180.513(b)}

QA Team is currently working with AAR when gross noncompliance is found during AAR audit.

FRA is handling enforcement actions to correct.

Other Investigations

(1) Pending case referred to OIG for investigation.

(3) Open investigations with OIG for criminal activity.

(1) case has been referred to DOJ for prosecution.

RWD(s)

FRA RWD Notice No. 1 – 3/13/2015
McKenzie Valve – Still monitoring.

FRA RWD Notice No. 2016-01 – 11-18-2016 (REVISED)
Identification and inspection of ARI/ACF built tank cars w/ cast sump/skid and outlet saddle welds.

Tank Car Issues

Midland 720/721 angle valves.
Some valves self-actuate open once closed.
Working w/ AAR on corrective measures.

ARI top nozzle welds.
~3k tank cars identified may be suspect of having welds that have discontinuities.
Working w/ AAR on corrective measures.

Tank car and component manufacturing.
Manufacturing of tank car tanks and components (e.g. valves, manway covers) covered by the HMR, are all considered functions of a tank car facility and require an approved QAP by the AAR (179.7).
(Position vetted w/ FRA RRS, RCC & PHMSA)

Who can perform tank car maintenance = Attachment A
E.g. tank car jackets and repairs.

Other Projects

2018 National Safety Program Plan (NSPP)
Shipper loading process.
Audit shipper loading locations to ensure compliance with outage calculations, proper use of computerized loading equipment and verify reference temperatures relative to tank car designs.
Tank car specification compliance.
Review tank cars “as found” condition during field inspections and compare against COC, original drawings and approved modifications/conversions (R1s).
Training audits or RRs.
Audit RRs for compliance with HMR training requirements.

Manway cover project

Looking at in-service performance of MW covers, eyebolts, etc. (SYSTEM)

FRA Expectations

Compliance w/ HMR

AAR TCC

Approvals of designs

Tank car facility QAP approvals

Tank Car and TC Component manufacturers

Proper design w/ approvals

Cars/Components manufactured following all process and procedures

HM Shippers

Proper use of tank cars

Car Owners

QMP that meets the requirements

Collect and analyze data to set appropriate qualification intervals

Provide required documents to shippers and tank car facilities

Tank Car Repair Facilities

QAP that meets the HMR and AAR requirements

Adhere to QAP, procedures, HMR and AAR requirements

**Federal Railroad Administration
Tank Car Safety Initiatives**

**Attachment A
Tank Car Maintenance (Repair) and Qualification**

Maintenance, repair, and qualification of tank cars, including their components covered in 49 CFR 179 Subpart A, Subpart B, Subpart C, Subpart D and Subpart F, must be performed by a tank car facility as specified by 49 CFR 180.501(a) and as defined in 49 CFR 179.2(10). Specifically, as required by 49 CFR 180.513(b), the tank car facility that performs maintenance, repair, and qualification of tank cars must first obtain the equipment (tank car, service equipment and coating/lining) owner's permission and perform those functions in accordance with the owner's qualification and maintenance program (QMP) and report the maintenance and repair of nonconforming conditions to the equipment owner. The nonconforming information is then utilized by the owner to develop appropriate qualification intervals. Additionally, the tank car facility must have an AAR approved quality assurance program (QAP) as required by 49 CFR 179.7. The QAP is intended to ensure that the facility performs maintenance, repairs, and qualifications in accordance with the Hazardous Materials Regulations (HMR), AAR standards, and the equipment owner's QMP.

When nonconforming conditions are repaired by other than tank car facilities without an AAR approved QAP, the repair is not in accordance with the equipment owner's QMP and nonconformities do not get reported to the equipment owner. Equipment owners are therefore unaware of the nonconformity and cannot consider such defects in their data analysis when establishing effective qualification intervals. Without effective qualification intervals there is no way to ensure the original design level of reliability and safety of the tank car, meaning in-service failures will potentially occur before the next qualification is due.

Additionally, the HMR contain the specification design requirements for tank cars and their components at 49 CFR 179 Subpart A, Subpart B, Subpart C, Subpart D and Subpart F. Tank cars meeting these design specifications must meet a quantified design level of reliability and safety. Under normal conditions incidental to transportation they should remain railworthy between qualification events. Accordingly, a tank car that is not in strict conformance with the approved design does not have a demonstrated design level of reliability and safety, and is no longer approved to transport hazardous materials.

Summary:

All maintenance, repairs, and qualifications of a specification tank car, and its associated components covered by the HMR and of an approved design, must be performed by a tank car facility with an AAR approved QAP utilizing the equipment owner's QMP.

Exceptions:

Some tank car components may be maintained by other than tank car facilities. (e.g. shippers, railroads) As such, the following components are commonly used during the operations of tank cars and maintenance/repair of these components does not need to be performed by a certified tank car facility and do not require qualification when performed as a maintenance activity by those entities.

- ❖ Coupler replacement
 - (Replacement of couplers must be made in accordance with AAR Field Manual Rules)
- ❖ Markings/Stencils – Other than the qualification markings required by 49 CFR 180.515 and specification markings.
 - (All markings/stencils must be made in accordance with the AAR Specifications for Tank Cars, Appendix C)
- ❖ Hinged and bolted manway cover gasket replacement
 - (Gasket must be the correct size as specified by the original or alternative approved design and compatible with the lading)
- ❖ Fill port cover gasket replacement
 - (Gasket must be the correct size as specified by the original or alternative approved design and compatible with the lading)
- ❖ Bottom outlet cap gasket replacement
 - (Gasket must be the correct size as specified by the original or alternative approved design and compatible with the lading)
- ❖ Quick disconnect dust cap gasket replacement
 - (When used as secondary closures. Gasket must be the correct size as specified by the original or alternative approved design and compatible with the lading)
- ❖ Gage device cap O-ring replacement
 - (O-ring must be the correct size as specified by the original or alternative approved design and compatible with the lading)
- ❖ Thermometer well cap O-ring replacement
 - (O-ring must be the correct size as specified by the original or alternative approved design and compatible with the lading)
- ❖ Rupture disk replacement
 - (Disk must be the correct size and pressure rating as specified by the original or alternative approved design, compatible with the lading.)
- ❖ Emergency response repairs.
 - (Emergency response repairs are considered to be temporary and do not conform the tank car to the HMR, but are necessary to abate a safety issue. Unless the emergency response repair is one of the five service equipment related exceptions listed above, then the repair requires follow-up permanent repairs and qualification once the tank car is unloaded and prior to its return to service, unless performed by a certified tank car facility. Additionally, tank cars with these repairs require an OTMA prior to continuing in transportation. Refer to FRA's Hazardous Materials Guidance document HMG-127 for instructions on how to procure an OTMA.)

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Status of North American Flammable Liquid Fleet as June 30, 2017

September 12, 2017



There Has Been Over a 99% Reduction in the Number of DOT-111 Tank Cars Making at Least One Shipment Of Petroleum Crude Oil from 2013 – 2nd Quarter of 2017

Number of Unique Tank Cars Making at Least One Shipment in the Year

Type of Tank Car	2013	2014	2015	2016	2017Q1-Q2
DOT 111	21,340	16,349	6,998	791	156
<i>Non-Jacketed</i>	18,212	13,711	6,188	543	60
<i>Jacketed</i>	3,128	2,638	810	248	96
CPC1232	18,480	34,283	39,909	20,086	12,622
<i>Non-Jacketed</i>	11,966	17,163	17,962	8,498	4,404
<i>Jacketed</i>	6,514	17,120	21,947	11,588	8,218
DOT 117	0	0	1,950	3,383	2,884
117J	0	0	1,818	2,731	1,923
117R	0	0	132	652	961
DOT 115	0	10	6	0	0
AAR 211	513	171	59	7	0
Total Non-Pressure	40,333	50,813	48,922	24,267	15,662
DOT 105	5	0	0	0	0
DOT 112	3	78	53	47	0
DOT 114	0	0	0	0	0
DOT 120	0	0	4	598	733
Total Pressure Cars	8	78	57	645	733
GRAND TOTAL	40,341	50,891	48,979	24,912	16,395

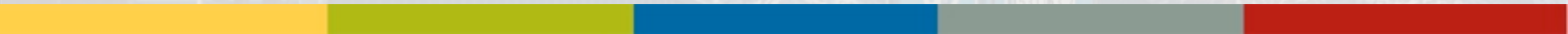
The baseline fleet only include tank cars that shipped FL during 2013-2015. In past reports (prior to 1st 4 2017) it including tank cars that "potentially shipped flammable liquids." This report corrects the numbers for the current and previous years.

Fast Act deadlines 1/1/18 non-jacketed DOT-111's (11/1/16 in Canada)
for unrefined 3/1/18 jacketed DOT-111's (11/1/16 in Canada)
petroleum products 4/1/20 non-jacketed CPC-1232's
 5/1/25 jacketed CPC-1232's





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There Has Been Over a 8% Reduction in the Number of DOT-111 Tank Cars Making at Least One Shipment Of Ethanol from 2013 – 2nd Quarter of 2017

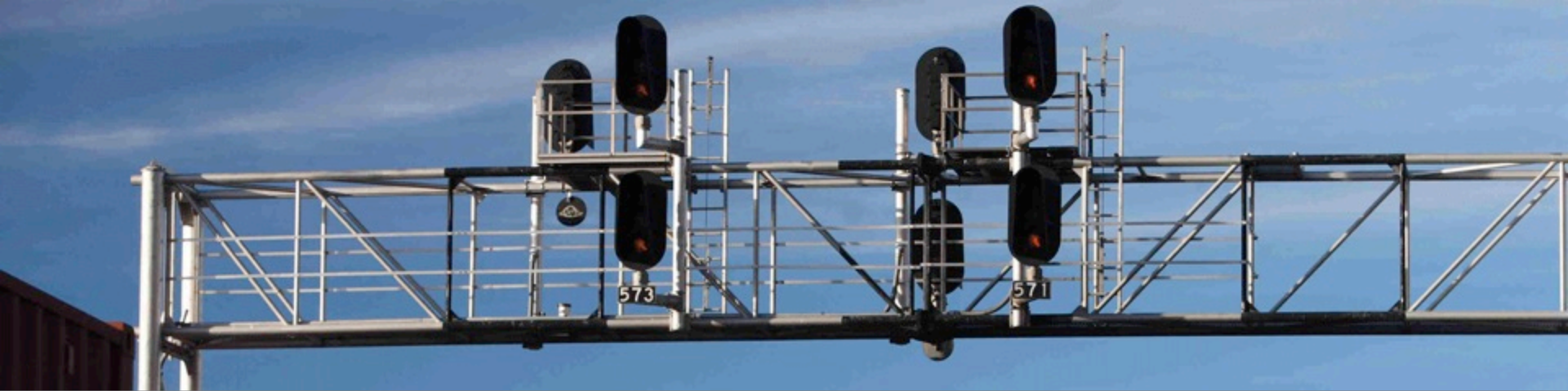
Number of Unique Tank Cars Making at Least One Shipment in the Year

Type of Tank Car	2013	2014	2015	2016	2017Q1-Q2
DOT 111	26,628	28,609	30,688	29,045	24,520
<i>Non-Jacketed</i>	26,423	28,484	30,529	28,870	24,382
<i>Jacketed</i>	205	125	159	175	138
CPC1232	456	2,077	3,763	3,485	3,200
<i>Non-Jacketed</i>	456	1,709	2,598	2,638	2,543
<i>Jacketed</i>	0	368	1,165	847	657
DOT 117	0	0	348	3,385	6,493
117J	0	0	341	2,133	4,191
117R	0	0	7	1,252	2,302
DOT 115	0	0	3	3	3
AAR 211	25	48	111	23	18
Total Non-Pressure	27,109	30,734	34,913	35,941	34,234
DOT 105	0	0	0	0	1
DOT 112	0	0	1	0	0
DOT 114	0	0	0	0	0
DOT 120	0	0	0	131	176
Total Pressure Cars	0	0	1	131	177
GRAND TOTAL	27,109	30,734	34,914	36,072	34,411

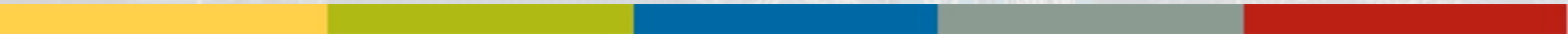
The baseline fleet only include tank cars that shipped FL during 2013-2015. In past reports (prior to 1st 4 2017) it including tank cars that "potentially shipped flammable liquids." This report corrects the numbers for the current and previous years.

Fast Act deadlines: 5/1/23 non-jacketed & jacketed DOT-111's
for ethanol 7/1/23 non-jacketed CPC-1232's
 5/1/25 jacketed CPC-1232's





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There Has Been Over a 26% Reduction in the Number of DOT-111 Tank Cars Making at Least One Shipment Of Other Flammable Liquids from 2013 – 2nd Quarter of 2017

Number of Unique Tank Cars Making at Least One Shipment in the Year

Type of Tank Car	2013	2014	2015	2016	2017Q1-Q2
DOT 111	27,392	26,404	26,643	25,321	20,183
<i>Non-Jacketed</i>	20,864	20,389	21,030	19,695	15,617
<i>Jacketed</i>	6,528	6,015	5,613	5,626	4,566
CPC1232	3,245	5,118	6,185	7,600	7,304
<i>Non-Jacketed</i>	1,956	3,302	3,405	3,745	3,310
<i>Jacketed</i>	1,289	1,816	2,780	3,855	3,994
DOT 117	0	0	131	1,448	2,468
117J	0	0	125	1,060	1,671
117R	0	0	6	388	797
DOT 115	18	19	12	12	10
AAR 211	1,233	773	1,030	816	690
Total Non-Pressure	31,888	32,314	34,001	35,197	30,655
DOT 105	2,900	3,000	2,943	2,913	2,614
DOT 112	5,411	5,613	4,935	4,383	2,905
DOT 114	1	3	3	2	1
DOT 120	23	23	23	66	38
Total Pressure Cars	8,335	8,639	7,904	7,364	5,558
GRAND TOTAL	40,223	40,953	41,905	42,561	36,213

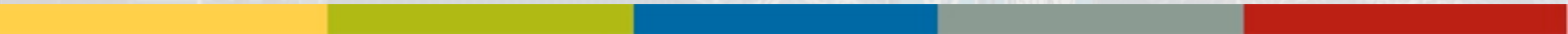
The baseline fleet only include tank cars that shipped FL during 2013-2015. In past reports (prior to 1st 4 2017) it including tank cars that "potentially shipped flammable liquids." This report corrects the numbers for the current and previous years.

Fast Act Deadlines: 5/1/25 for Packing Group I
 For other FL's 5/1/29 Packing Groups II & III





ASSOCIATION OF AMERICAN RAILROADS



Current Status for Baseline Fleet (Jan 1, 2013 to Dec 31, 2015) as of 2nd Quarter

2017

Unconverted Equipment

	Jacketed DOT 111	Non-Jacketed DOT 111	Jacketed CPC1232	Non-Jacketed CPC1232	DOT 117J	112, 114, 115, 120, & AAR 211	Row Total
In crude oil service*	11	56	6,048	2,974	512	4	9,605
In ethanol service*	113	22,126	575	2,368	395	19	25,596
In other flammable liquid service*	2,692	11,176	2,059	2,444	121	3,080	21,572
In petroleum distillates service*	141	861	657	99	2	338	2,098
In flammable liquid NOS service*	716	757	22	32	24	409	1,960
Total Flammable Liquid Service	3,654	34,831	9,186	7,889	1,054	3,800	60,414
In non-flammable liquid hazmat service*	1,640	2,124	2,912	232	0	6,314	13,222
In non-hazmat service*	1,261	1,852	1,137	195	0	466	4,911
Inactive in UMLER	31	126	0	0	0	20	177
Removed from UMLER	1,151	3,640	71	148	0	499	5,509
Idle**	4,173	19,981	15,181	13,929	800	5,232	59,296
Total Number of Cars	11,896	62,072	27,808	22,338	1,854	16,186	142,154

* Made at least one shipment in the 2nd quarter of 2017

** Unknown means the tank cars are active in the UMLER database but did not make any shipment in the 2nd quarter of 2017

- This table shows the current status of baseline fleet in Q2 2017. Baseline fleet is defined as tank cars that transported at least one flammable liquid (FL) shipment between January 2013 and December 2015. Current status includes what commodity did these baseline fleet tank cars ship in the particular quarter of the year and, if they did not ship anything, whether or not they are inactive, removed or idle.

- Tank cars that shipped FL after December 2015 and their current status are not shown in this table as this table only presents the status of baseline fleet.

- Each numbers in the cell represents the unique tank car count. For example, if the column is "Jacketed DOT 111" and the row is "In crude oil service", the number in this cell means the number of unique Jacketed DOT 111 tank cars from baseline fleet that shipped at least one petroleum crude oil shipment in this quarter.

- Numbers in the same column are non-additive because tank cars transport one commodity may also transport another. Therefore, numbers in the total or subtotal rows should be equal or less than the sum of previous rows. For example, numbers for "Total Flammable Liquid Service" should be equal or less than the sum of crude oil, ethanol, other flammable liquid, petroleum distillates and flammable liquid NOS services in the same column.

- Numbers in the same row are additive because one tank car can only have one car spec at the same time

- The baseline fleet only include tank cars that shipped FL during 2013-2015. In past reports (prior to Q4 2016) it including tank cars that "potentially shipped flammable liquids".



Current Status for Baseline Fleet (Jan 1, 2013 to Dec 31, 2015) as of 2nd Quarter

2017

Converted Equipment (DOT 117R)

	Jacketed DOT 111	Non-Jacketed DOT 111	Jacketed CPC1232	Non-Jacketed CPC1232	DOT 117J	DOT 105, 112, 114,	Row Total
In crude oil service*	0	0	773	14	0	0	787
In ethanol service*	5	1,023	0	1,172	0	0	2,200
In other flammable liquid service*	0	308	25	32	0	0	365
In petroleum distillates service*	0	92	96	124	0	0	312
In flammable liquid NOS service*	0	0	28	0	0	0	28
Total Flammable Liquid Service	5	1,386	915	1,332	0	0	3,638
In non-flammable liquid hazmat service*	0	5	43	0	0	0	48
In non-hazmat service*	0	4	149	0	0	0	153
Inactive in UMLER	0	0	0	0	0	0	0
Removed from UMLER	0	0	0	0	0	0	0
Idle**	35	320	694	58	0	0	1,107
Total Number of Cars	40	1,712	1,800	1,390	0	0	4,942

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- The baseline fleet only include tank cars that shipped FL during 2013-2015. In past reports (prior to Q4 2016) it including tank cars that "potentially shipped flammable liquids".



Current Status for Baseline Fleet (Jan 1, 2013 to Dec 31, 2015) as of 2nd Quarter 2017

Total Baseline Fleet

	Jacketed DOT 111	Non-Jacketed DOT 111	Jacketed CPC1232	Non-Jacketed CPC1232	DOT 117J	DOT 105, 112, 114,	Row Total
In crude oil service*	11	56	6,821	2,988	512	4	10,392
In ethanol service*	118	23,149	575	3,540	395	19	27,796
In other flammable liquid service*	2,692	11,484	2,084	2,476	121	3,080	21,937
In petroleum distillates service*	141	953	753	223	2	338	2,410
In flammable liquid NOS service*	716	757	50	32	24	409	1,988
Total Flammable Liquid Service	3,659	36,217	10,101	9,221	1,054	3,800	64,052
In non-flammable liquid hazmat service*	1,640	2,129	2,955	232	0	6,314	13,270
In non-hazmat service*	1,261	1,856	1,286	195	0	466	5,064
Inactive in UMLER	31	126	0	0	0	20	177
Removed from UMLER	1,151	3,640	71	148	0	499	5,509
Idle**	4,208	20,301	15,875	13,987	800	5,232	60,403
Total Number of Cars	11,936	63,784	29,608	23,728	1,854	16,186	147,096

* Made at least one shipment in the 2nd quarter of 2017

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- This table shows the current status of baseline fleet in Q2 2017. Baseline fleet is defined as tank cars that transported at least one flammable liquid (FL) shipment between January 2013 and December 2015. Current status includes what commodity did these baseline fleet tank cars ship in the particular quarter of the year and, if they did not ship anything, whether or not they are inactive, removed or idle.

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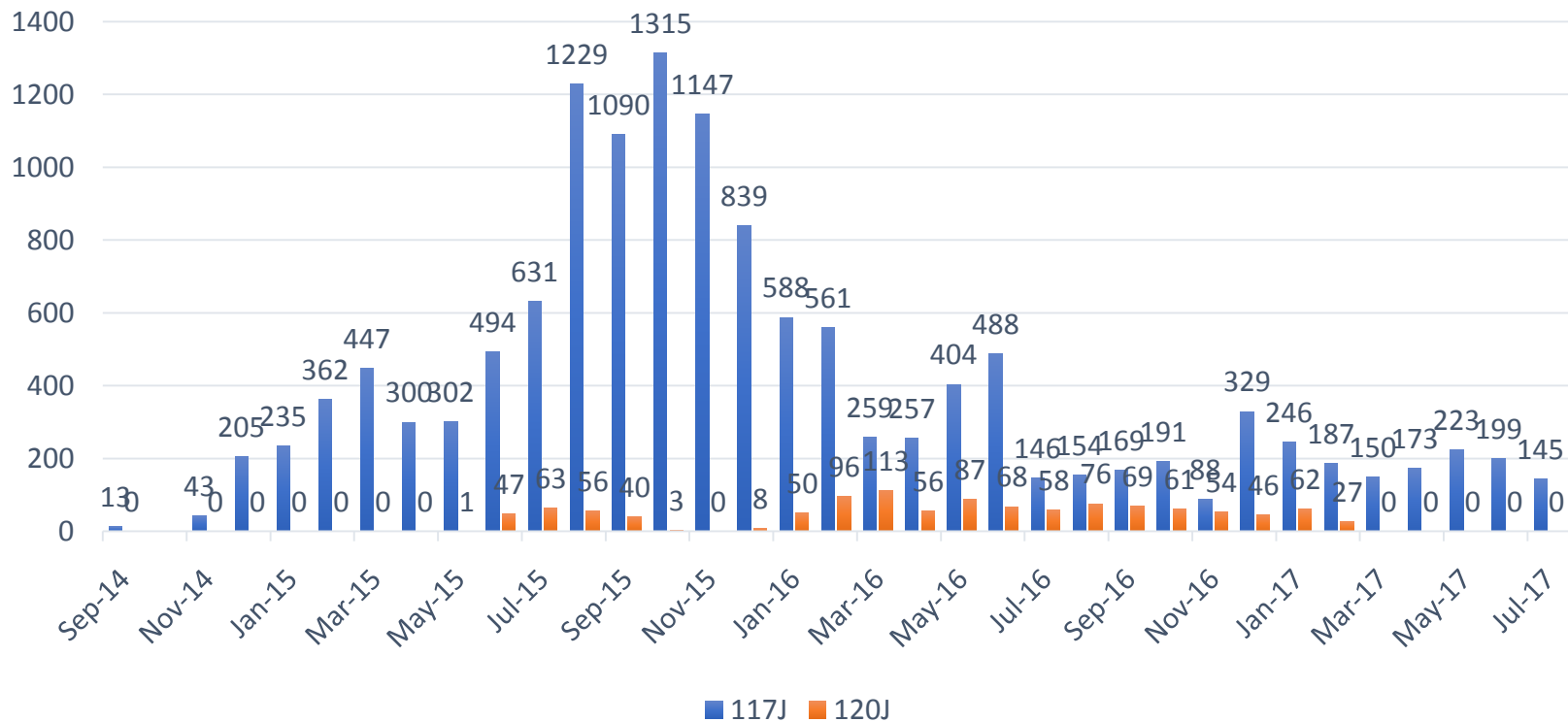
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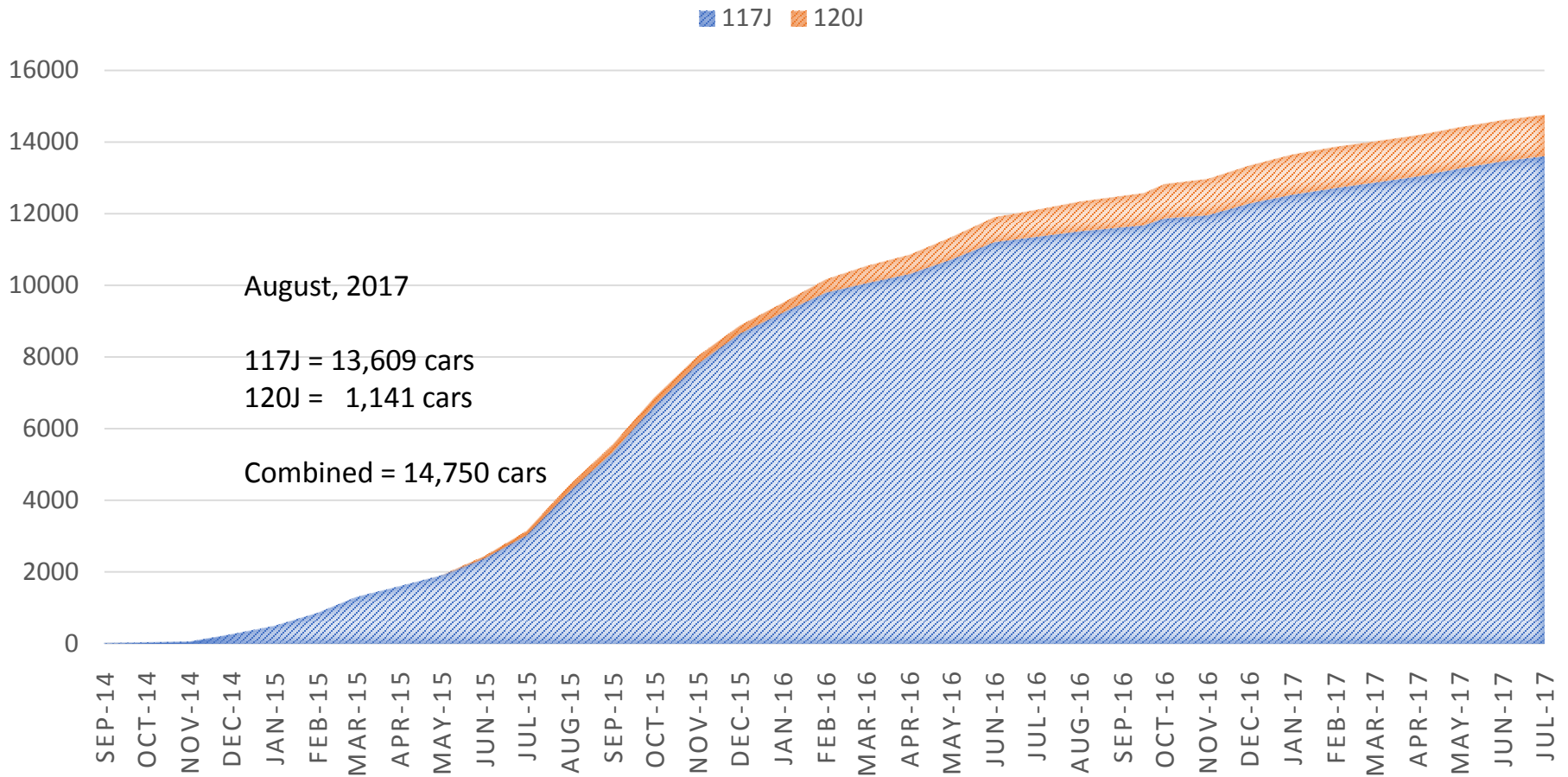
DOT 117J & 120J200 Monthly Production



Based on 8/1/2017 UMLER

Source: Railway Supply Institute 9/12/17

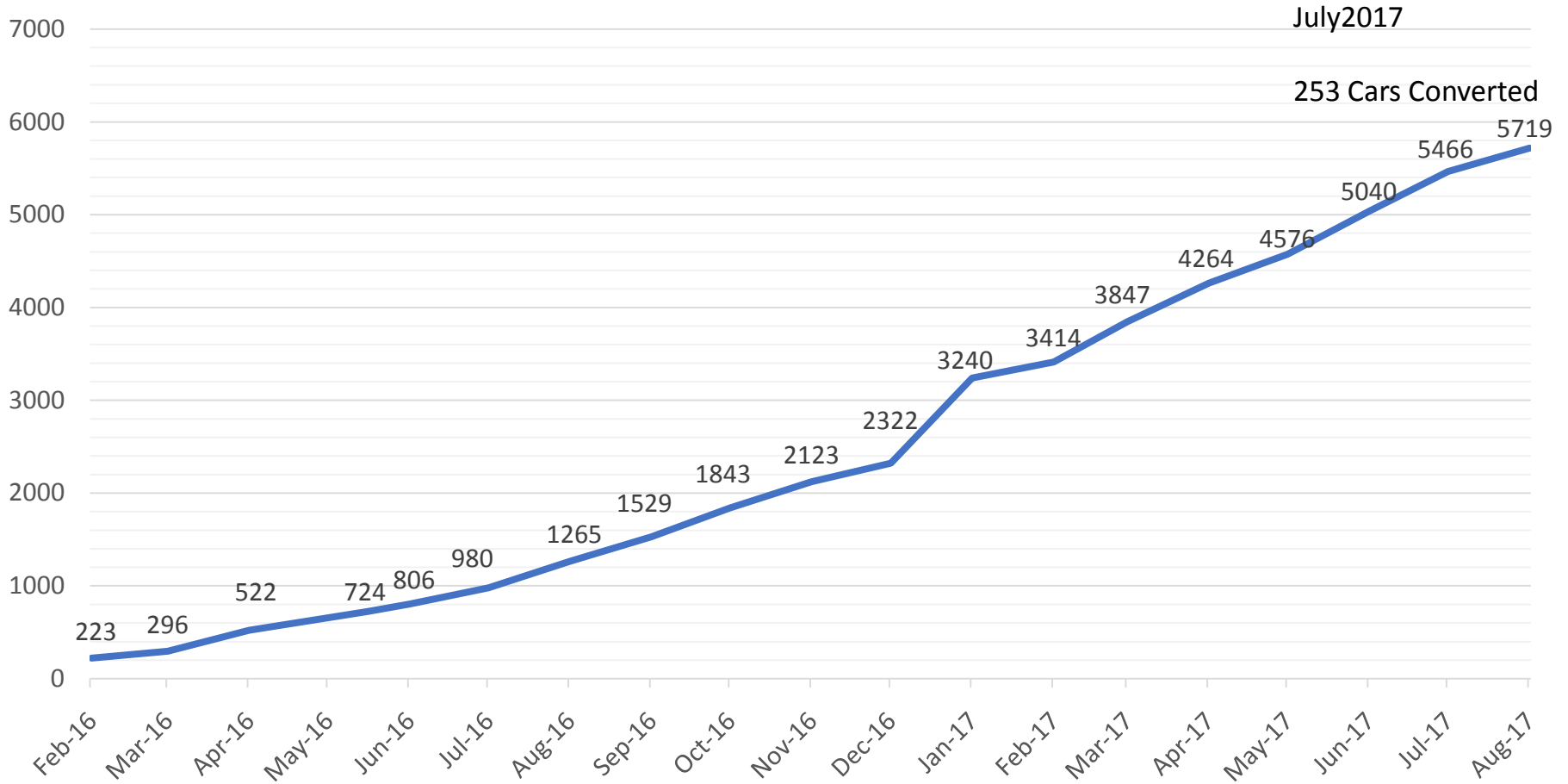
DOI 117J & 120J200 Fleet Growth



Based on 8/1/2017 UMLER

Source: Railway Supply Institute 9/12/17

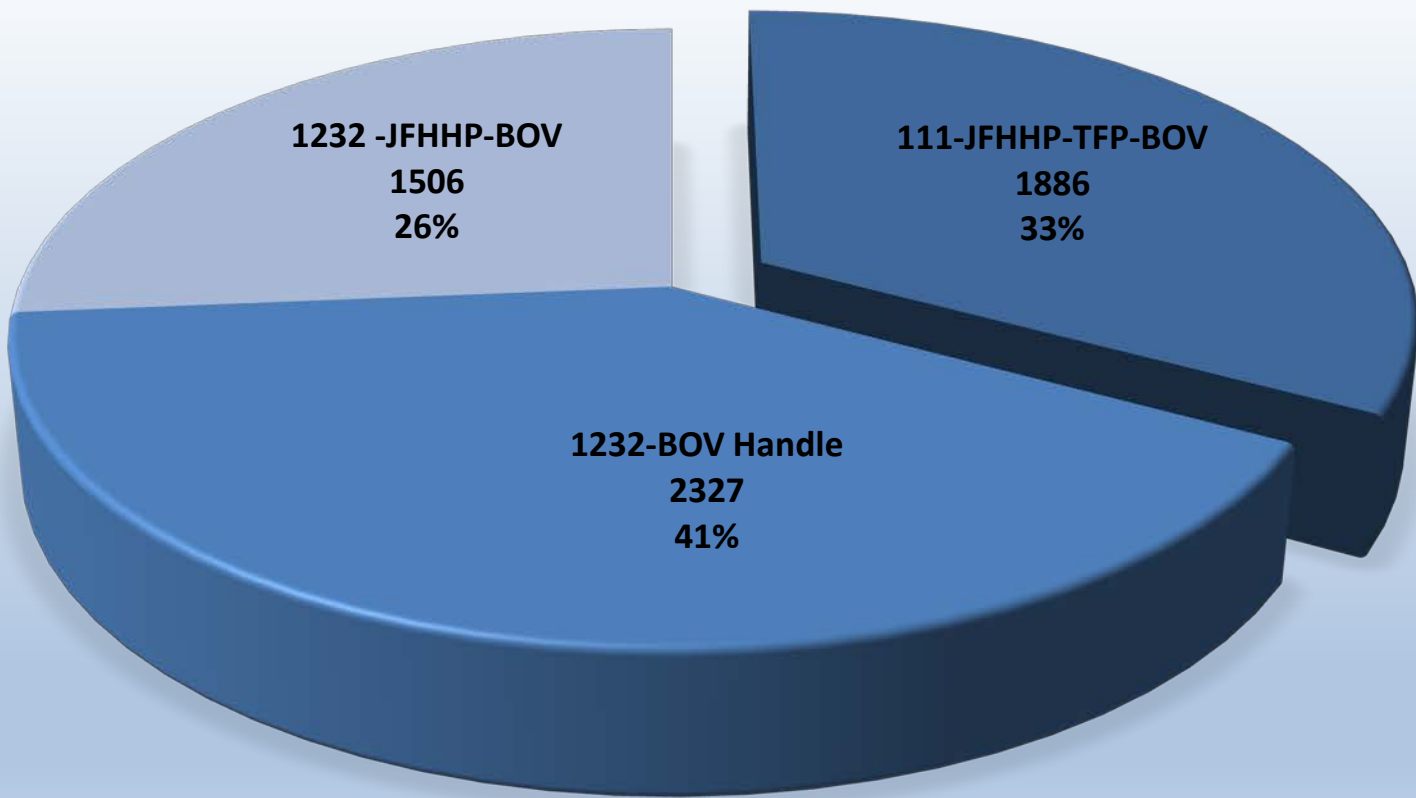
DOT 117R Fleet Growth



Based on 8/1/2017 UMLER

Source: Railway Supply Institute 9/12/17

DOT 117R Fleet Composition



Based on 8/1/2017 UMLER

Source: Railway Supply Institute 9/12/17

Based on 2nd Quarter 2017 Numbers the Number of Cars that Need to be Replaced/Retrofit to DOT-111J or DOT-117R by Service/Date

Commodity Category	Compliance Date	Number of Cars	Cars per Month
Crude Oil			
Non-Jacketed DOT-111's	1/1/2018	60	10
Jacketed DOT-111's	3/1/2018	96	12
Non-Jacketed CPC-1232's	4/1/2020	4,404	133
Jacketed CPC-1232's	5/1/2025	8,218	87
Total Crude Oil		12,778	242
Ethanol			
JKT & Non-JKT DOT-111's	5/1/2023	24,520	350
Non-Jacketed CPC-1232's	7/1/2023	2,543	35
Jacketed CPC-1232's	5/1/2025	657	6
Total Ethanol		26,795	391
Other Flammable Liquids			
Packing Group I	5/1/2025		
Packing Groups II & III	5/1/2029		255-385
Total Other Flammable Liquids		36,213	
Total All		76,711	
Average of between 888 - 1,018 cars per month to 5/1/29			

