

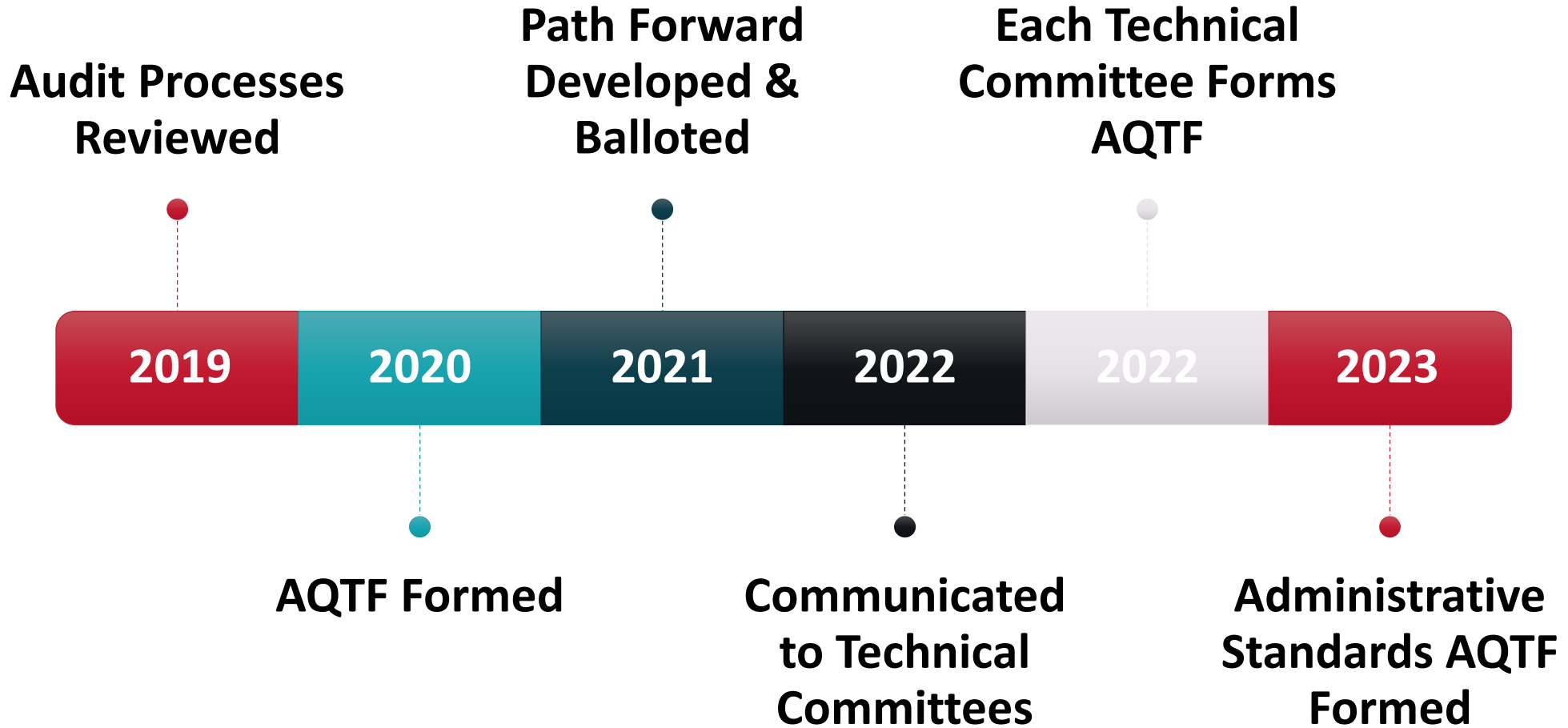


# Audit Quality Task Force (AQTF)

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# Audit Quality Task Force - Timeline



# Why was the AQTF formed?

- Industry identified differences in audit philosophies and methods between committees.
- Majority of Technical Committees separate the QA audit & and technical audit/inspection for activity codes.
- Goal to encourage consistency across technical committees as well as standards & specifications



# Mechanical Committee Path Forward

## ***Recommendation made and Mechanical Committee approved:***

*“For all Activity Codes, the AAR considers M-1003 Quality Assurance Program Audits and Technical Approvals as distinct committee responsibilities (QA Committee and appropriate technical committee respectively).”*

***Path Forward: Further, the AQTF identified the path forward to considering the **QA audits** and **technical approvals** as distinct responsibilities as stated in the recommendation.***

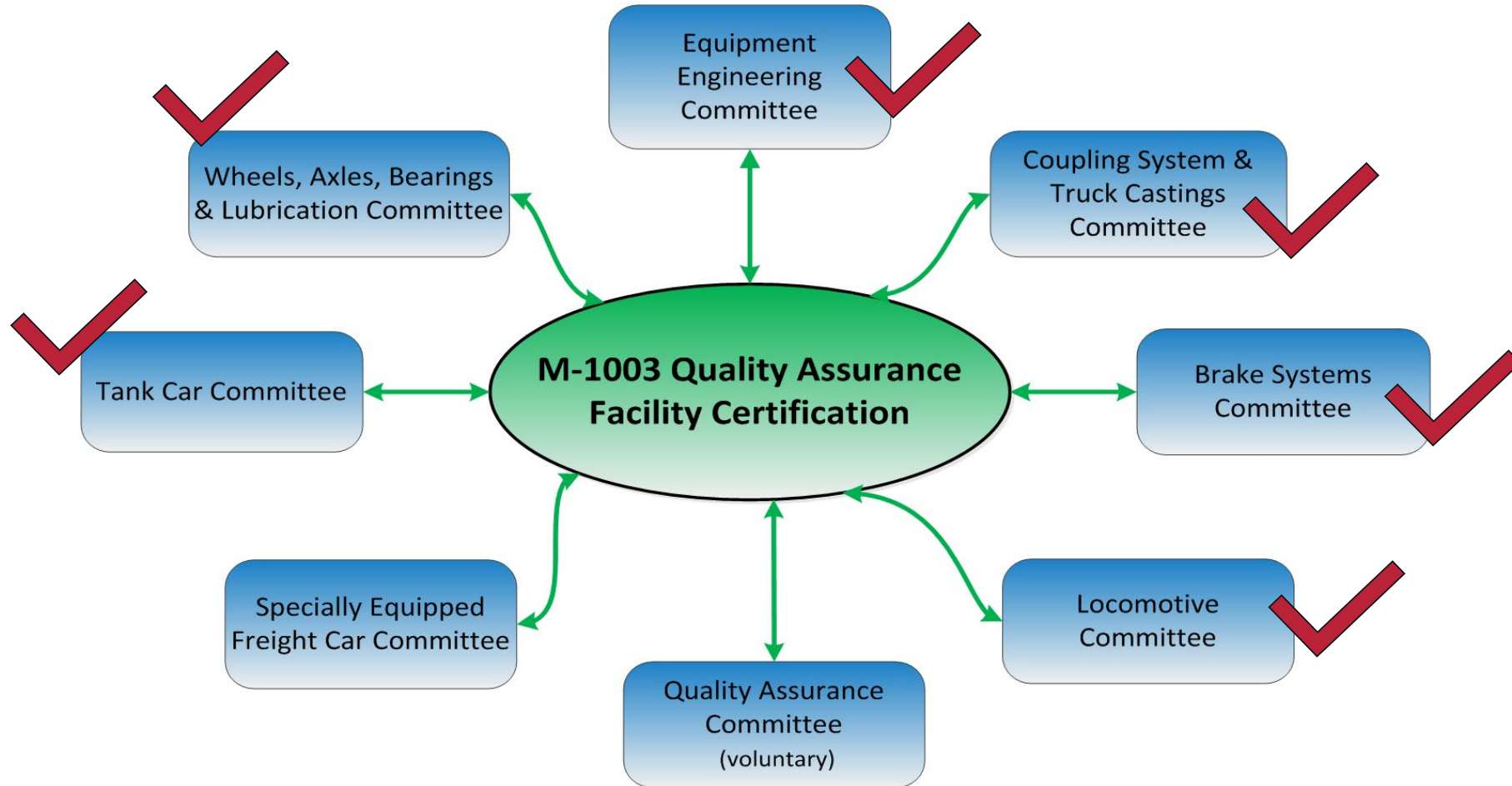
- Audit review and approval process should be more transparent and, if needed, improved.

# Activity Codes by Committee

- 129 Activity Codes
- Minimum of 33 Standards/ Specifications

Committee	Number of Activity Codes	Level of Technical Approval Oversight
Quality Assurance	1	Facility Approval
Special Equipped Freight Car	2	Facility Approval
Coupling Systems & Truck Castings	8	Design, Product, Facility Approval
Brake Systems	11	Design, Product, Facility Approval
Equipment Engineering	13	Design, Product, Facility Approval
Tank Car	18	Design, Product, Facility Approval
Wheels, Axles, Bearings	26	Design, Product, Facility Approval
Locomotive	50	None

# The Quality Relationship



# Executing the Path Forward - Key Definitions

**Technical Approval** - means design approval, product approval, and facility approval as required by the AAR technical committee with oversight for the activity.

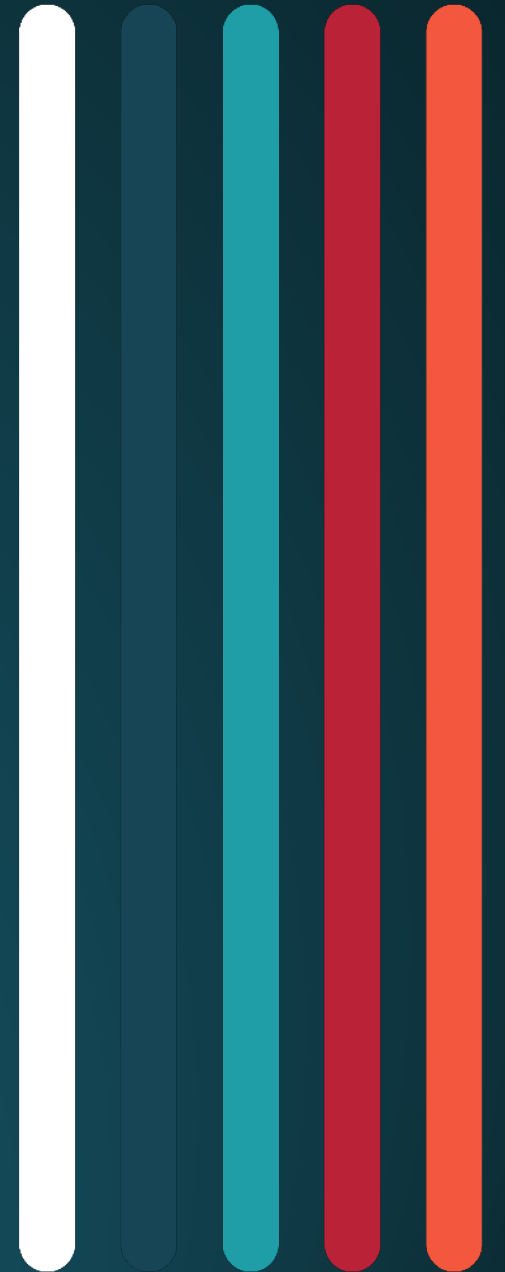
**Design Approval** - Technical Committee approval of engineering documentation, analyses and physical testing (i.e. fatigue, mechanical, microstructural, dimensional, gauging).

**Product Approval** – monitoring and continued evaluation of a design in interchange service (i.e. field trials, service trials, conditional approval and allotments), up to and including unconditional approval.

**Facility Approval** - Demonstrated compliance to technical requirements associated with an activity code in the MSRP(s).

# Administrative Standards Taskforce

AQTF Update





# Administrative Standards AQTF

Standard	Title/Description	Standard	Title/Description
S-010	Field Test Requirements for Materials, Devices, and Products Manufactured to AAR Specifications but Having No Previous Service Experience on AAR Member Roads	S-051	Conditions Governing Withdrawal of AAR Approval of Freight Car and Locomotive Components and Products
S-046	Definitions of Terms for the AAR Manual of Standards and Recommended Practices	S-060	Application for Component Approval Procedure
S-050	Procedures for Considering Proposals Regarding Revisions to the Manual of Standards and Recommended Practices		

<https://aarpublications.com/msrp.html>

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 ADMINISTRATIVE STANDARDS

 TABLE OF CONTENT FOR ALL MSRP



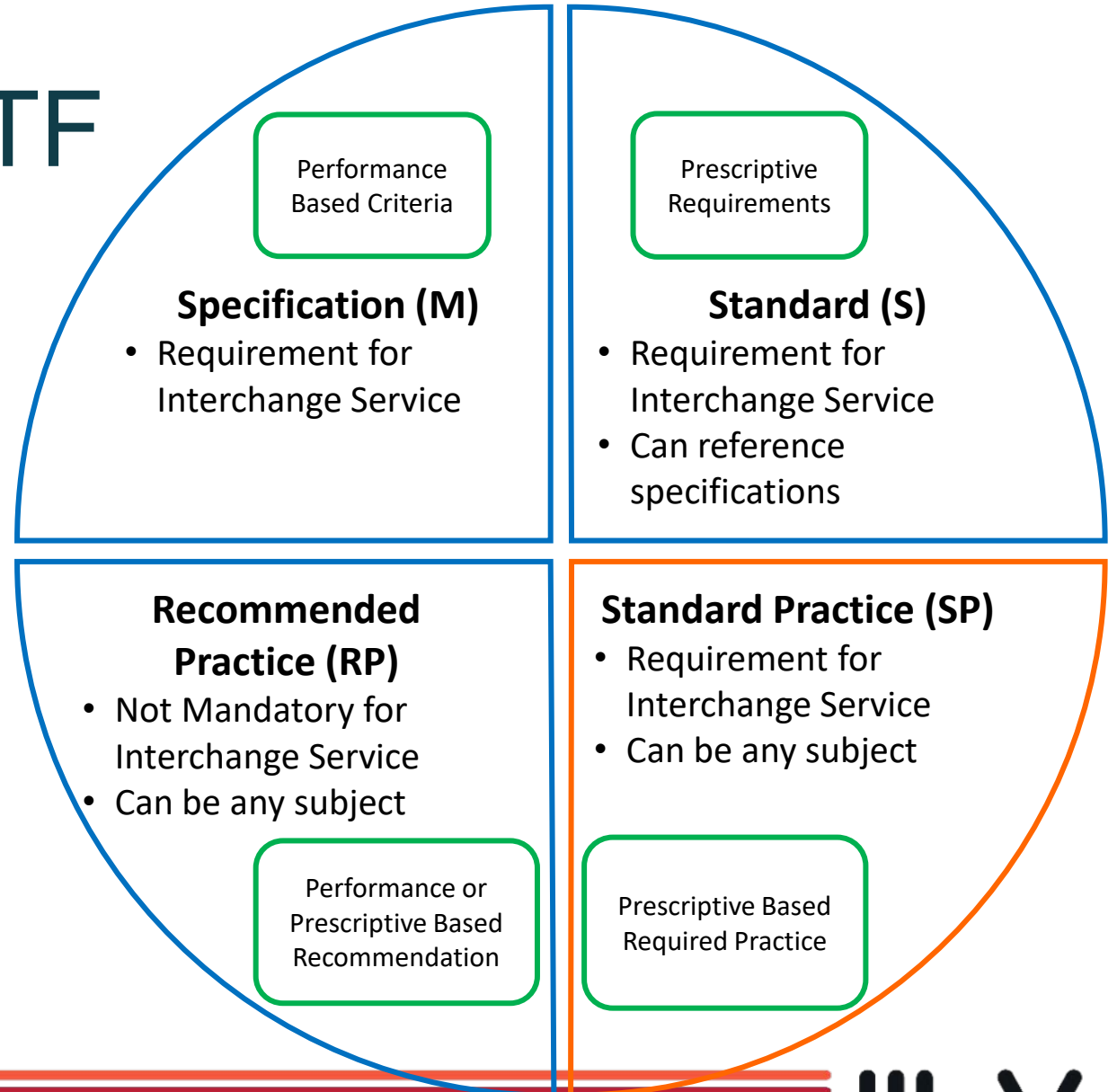
# Admin Standards AQTF

## • AS-046 – Definitions

- Specification (M)
- Standard (S)
- Recommended Practice (RP)

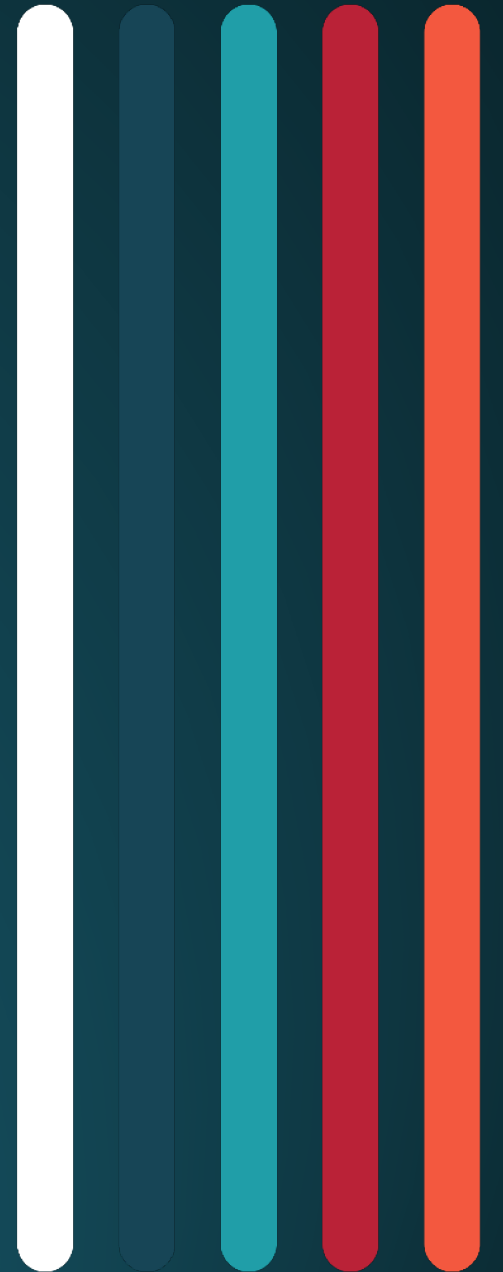
## • Proposed Changes

- Standardize definitions for the above categories
- Add new category
  - Standard Practice (SP)



# Coupling System and Truck Castings Committee

AQTF Update



# CSTCC AQTF

- **Docket CSTC-0.0.02**
  - Addresses specifications in *MSRP S “Casting Details”*
- **Taskforce meets at least twice monthly (2 hrs. each)**

Activity Code	Activity Description	Applicable Specification (note the Activity Code)
A3	Manufacturer of Freight Couplers	M-211, M-215
A5	Manufacturer of Freight Knuckles	M-211, M-215
A7	Manufacturer of Freight Yokes	M-211, M-215
A9	Manufacturer of Freight Side Frames and Bolsters	M-210
B12	Reconditioner of Freight Couplers	M-212
B16	Reconditioner of Freight Yokes	M-212
B18	Reconditioner of Freight Side Frames and Bolsters	M-214

# CSTCC AQTF

- M-211
  - Work continues on updating appendixes
  - M-211, M-205, and M-216 – Changed to centralize approval criteria in M-211
- M-212
  - Parts were separated out to separate specification M-212A
- New Approach is to work on multiple specifications to update the scope (Section 1.0)
  - M-210
  - M-215
  - M-214

# Wheels, Axles, Bearings, and Lubrication Committee

AQTF Update



# WABL A Q T F

- Docket TWBL-31.7
  - Addresses specifications in *MSRP G, G-II, H, and H-II*
- Taskforce meets at least twice monthly
- 27 Activity Codes

Activity Code - Activity Description	Applicable Specification (note the Activity Code)
A1 - Manufacturer of Journal Roller Bearings	M-934
A13 - Manufacturer of Wheels	M-107/M-208
A15 - Manufacturer of Axles	M-101
A16 - Manufacturer of Journal Roller Bearing Adapters	M-924
B1 - Manufacturer of Roller Bearing Grease	M-942
B23 - Reconditioner of Locomotive Journal Roller Bearings	MSRP H-II
B33 - Wheel and Axle Shop	MSRP G-II, H-II
B33-1 - Status Code 1 Wheel mounting shop-freight car (complete with wheel press and boring mill)	MSRP G-II
B33-2b - Status Code 2B Approved roller bearing repair shop-freight and Amtrak passenger car	MSRP H-II
B33-2e - Roller Bearing Cone Bore and Outer Ring Counterbore Plating	MSRP H-II
B33-2f - Status Code 2F Approved roller bearing repair shop-freight car	MSRP H-II
B33-2g - Cone Face Grinding	
B33-2p - Status Code 2P Approved roller bearing repair shop-Amtrak passenger car	MSRP H-II
B33-2s - Status Code 2S Roller bearing cone stress relieving approval	MSRP H-II
B33-3a - M-967 Axle repair shop-journal, seal wear ring groove and water etch repairs-freight car	MSRP G-II, M-967
B33-3b - M-967 Axle repair shop-journal repairs only-freight car	MSRP G-II, M-967
B33-3c - Status Code 3C M-967 Axle repair shop-dust guard repairs only-freight car	MSRP G-II, M-967
B33-4 - Wheel and axle shop-locomotive	
B33-5 - Wheel and axle lathe(s)-freight car	MSRP G-II
B33-6 - Wheel lathe(s)-freight car	MSRP G-II
B33-6a - Status Code 6A Wheel lathe(s) Amtrak passenger car	MSRP G-II
B33-7 - Axle lathe(s)-freight car	MSRP G-II
B33-7a - Status Code 7A Axle lathe(s)-Amtrak passenger car	MSRP G-II
B33-8 - Wheel and axle shop-passenger car	MSRP G-II
B33-8a - Status Code 8A Wheel and axle shop-Amtrak passenger car	MSRP G-II
B33-9 - Roller bearing mounting-freight and Amtrak passenger car	MSRP G-II
B33-10 - Manufacturer of Freight Wheel Bearing Seals	

# WABLAQTF

Specification  
M-107/M-208

Adopted: 1962; Last Revised: 2020

- M-107/M-208
- Currently in final stages of Committee review
- Working on:
  - an MSRP Compliance Checklist
  - Defining the three wheel test requirements for facility approval
- M-101
  - Started AQTF review

## 1.0 SCOPE

### 1-01.1

~~These~~ This specifications covers the following for use in North American interchange service:

- Facility requirements for manufacture of wheels
- Design and product requirements for locomotive and freight car wheels including one-wear, two-wear, and multiple-wear, wrought and cast carbon steel wheels for locomotives and cars—Classes L, A, B, C, and D (heat-treated) wheels used in interchange service.  
~~All freight car wheels manufactured for AAR interchange service must be heat-treated and of a low-stress design.~~

1.2 Prior to use in North American interchange service, all designs, products, and facilities shall have technical approval by the AAR Wheels, Axles, Bearings, and Lubrication (WABL) Committee.

1.3 This specification outlines the basis for technical approval for the following activities:

<u>Activity code (MSRP J, Appendix A)</u>	<u>Description</u>
<u>A13</u>	<u>Manufacturer of Wheels</u>

## 1.4 Definitions

<u>Term or Phrase</u>	<u>Definition</u>
<u>Blank</u>	<u>Synonymous with Facility Approval</u>

## 1.5 References

The documents listed below are referenced within this specification and are mandatory to the extent specified herein. For undated references, the latest edition of the referenced standard shall apply. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply.

- AAR Manual of Standards and Recommended Practices (MSRP), Section J, Specification M-1003
- MSRP, Section AS, Standards S-046 and S-060



# Brake System Committee

AQTF Update



# BSC AQTF

- Task Force convened in January 2023
- Started with B70
  - S-423 Reclamation of Slack Adjusters
- Currently working on B22
  - S-475 Hand Brakes

Activity Code	Activity Description	Applicable Specification (note the Activity Code)
A17	Manufacturer of Freight Brake Valves	S-462
B9	Manufacturer of Brake Hoses	M-601/M-618
B10	Manufacturer of Rubber Goods, Including Gaskets, Packing Cups and Diaphragms	S-4001
B11	Manufacturers of (Rubber) Repair Kits	S-4001
B21	Manufacturer of Freight Car Brake Shoes	M-926/M-997
B22	Recondition Freight Car Hand Brakes	S-475
B29	Manufacturer of Brake Beams	S-344
B30	Reconditioner of Brake Beams	M-300
B31	Freight Air Brake Repair Facility	S-477
B70	Reconditioner of Slack Adjusters	S-423
C1	Brake Hose Assembler	M-927/S-458

# BSC AQTF

## Activity Code B70 – Reconditioner of Slack Adjusters

- **S-423 Reclamation of Slack Adjusters**
- **Added requirements for:**
  - Approval for specific models no longer a blanket approval for all slack adjusters
  - Application must include intent to utilize OEM or non-OEM parts
  - Application must include the rebuild specifications either OEM or in house specified
  - Added requirement for non-OEM components to be BSC approved
  - Added requirements for S-920 Compliance (Component Identification)
- **Removed**
  - “Certified” language and Replaced with “Approval”
  - “Reclamation” and replaced with Reconditioning
- **To be published for comment early 2024**

# BSC AQTF

## Activity Code B22 - Recondition Freight Car Hand Brakes

- **S-475 Hand Brakes**
  - Split S-475 into a separate MSRP (S-4033) to remove the reclamation requirements from the component approval standard to be consistent with other standards.
- **Added requirements for:**
  - Approval for specific models must be specified no longer a blanket approval for all hand brakes
  - Application must include intent to utilize OEM or non-OEM parts
  - Application must include the rebuild specifications either OEM or in house specified
  - Added requirement for non-OEM components to be BSC approved
- **Removed**
  - “Certified” language and Replaced with “Approval”
  - “Reclamation” and replaced with Reconditioning
- **To be published for comment middle 2024**

# Equipment Engineering Committee

AQTF Update



# EEC AQTF

- Task Force formed to execute path forward.
- Assigned Sbragia and Hannafious to create a draft of Standard S-2034, Car Builder Certification. Efforts were tabled until this year, work is being restarted.
- EEC is reconsidering the proposal to update Activity Codes in S-2034 per chart.

Activity Code	S-2034	M-1003	M-1002
A19	Remove	Construction of Tank Cars by Manufacturing	Construction of Tank Cars by Manufacturing
A20	Manufacturer of Freight Cars ( <u>Except the tank car tank</u> )	Manufacturer of Freight Cars	-
A22	Manufacturer of Freight Car Major Subassemblies	Manufacturer of Freight Car Major Subassemblies	-
B73	Freight Car Assembler ( <u>Except the tank car tank</u> )	Freight Car Assemblers	-
B78	Remove	Construction of Tank Cars by Assembly	Construction of Tank Cars by Assembly

# EEC AQTF

- EEC is planning to revise Specification M-901 B, Draft Gear, Secondhand and Reconditioned
- Goal is to separate the approval of the reconditioned draft gear from the approval of the facility.
- EEC will review additional Standards/Specifications once S-2034 and M-901B efforts are complete.

AAR Manual of Standards and Recommended Practices  
Freight Car Draft Components

M-901B

**DRAFT GEAR, SECONDHAND AND RECONDITIONED**

**Specification  
M-901B**

**Adopted: 1954; Last Revised: 2015**

**1.0 SCOPE**

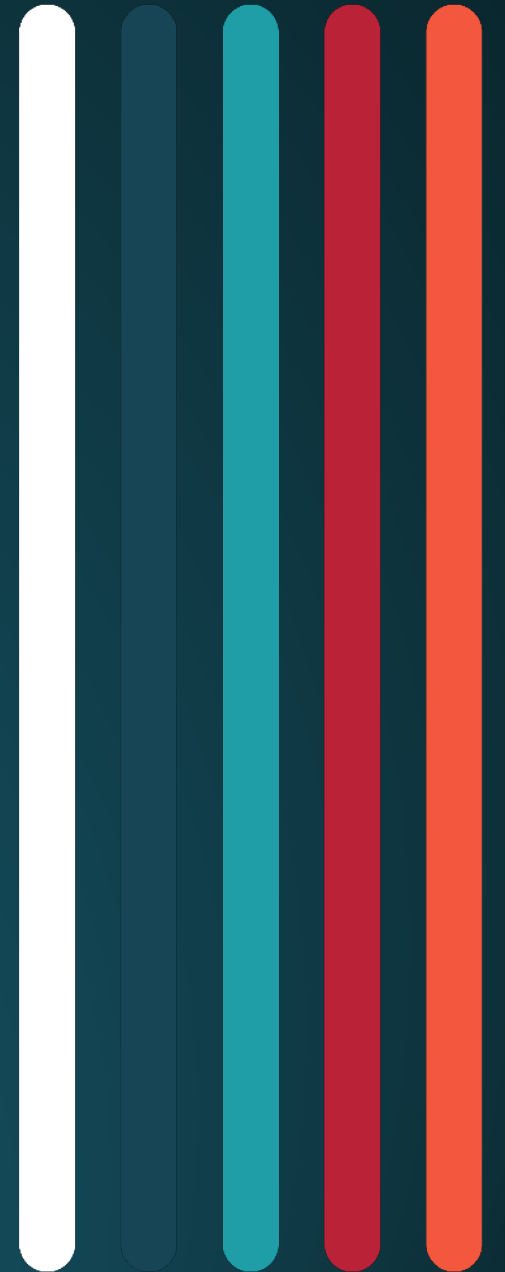
This specification contains the requirements for qualifying used draft gears as secondhand or reconditioned. Only draft gears listed in the *Field Manual of the AAR Interchange Rules*, Rule 21, with current AAR Certificates of Approval are eligible in qualification. Only facilities approved by the AAR Equipment Engineering Committee (EEC) under the provisions of this specification shall be authorized to recondition and/or test draft gears for interchange service. Also, only specific draft gear models for each facility approved by the EEC under the provisions of this specification shall be authorized to be considered secondhand or reconditioned for interchange service. Any draft gear that cannot qualify for further service under this specification must be scrapped.

**2.0 APPROVED FACILITY**

**2.1** Application for status as an approved facility shall be submitted in accordance with Appendix A.

# Compliance

AQTF Update







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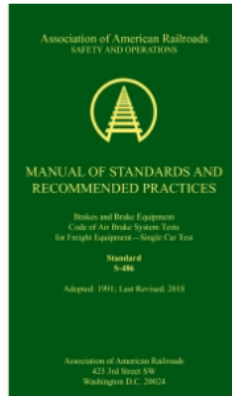
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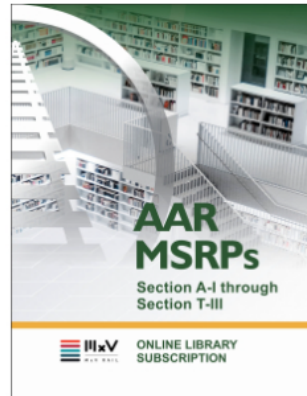
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  24 Items

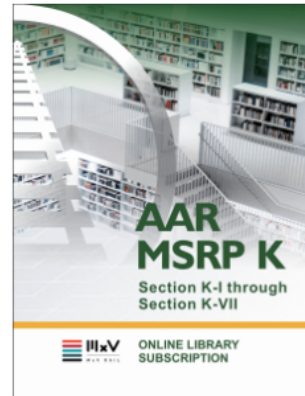
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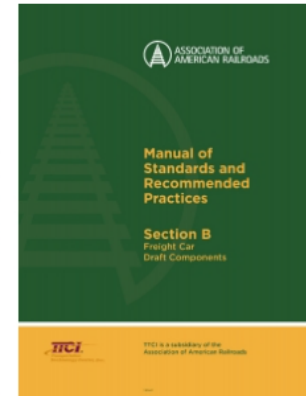
Code of Air Brakes S-486 (Section E Pamphlet)



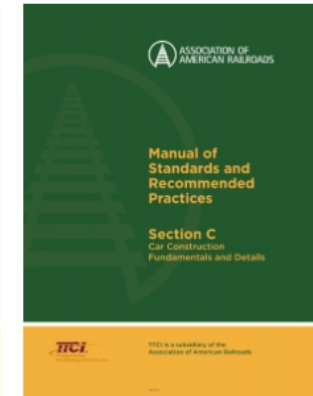
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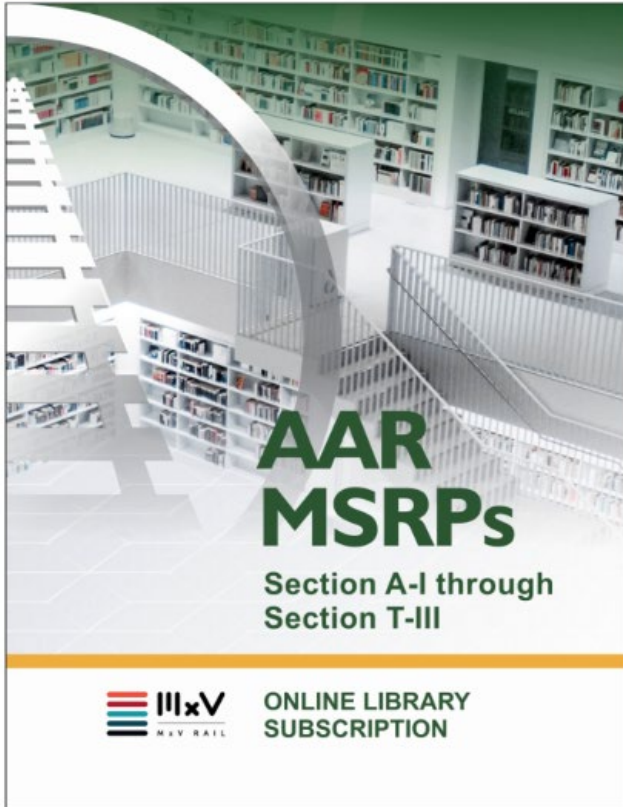
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- Section A Part I Tables of Content for all MSRP
- Section B Couplers and Freight Car Draft Components
- Section C Car Construction Fundamentals and Details
- Section C Part II Design, Fabrication, and Construction of Freight Cars, M-1001
- Section C Part III Specifications for Tank Cars, M-1002
- Section D Trucks and Truck Details
- Section E Brakes and Brake Equipment
- Section E Standard S-486 Code of Air Brakes
- Section E Part II Electronically Controlled Brake Systems
- Section F Sensors
- Section G Wheels and Axles
- Section G Part II Wheel and Axle (Shop) Manual
- Section H Journal Bearings and Lubrication
- Section H Part II Roller Bearing (Shop) Manual
- Section I Intermodal Equipment Manual
- Section J Specification for Quality Assurance, M-1003
- Section K Part I Railway Electronics Systems Architecture and Concepts of Operation





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