

Association of American Railroads

SAFETY AND OPERATIONS

MANUAL OF STANDARDS AND RECOMMENDED PRACTICES SECTION A-I

TABLES OF CONTENT

EFFECTIVE 10/28/2024

Compiled under the direction of the Committees responsible for the subjects shown herein.

Published by
The Association of American Railroads
425 Third Street, SW., Washington, D.C. 20024

© 2023 Copyright Association of American Railroads

Printed in U.S.A.

Copyright © 2024 by the Association of American Railroads (AAR)
Safety and Operations
425 Third Street SW
Suite 1000
Washington, DC 20024

All rights reserved, including the right to reproduce this book in any form. It is the AAR's intention that this publication be used to promote the objectives of the AAR and its members for the safe, efficient, and uniform interchange of rail equipment in North America. To this end, only excerpts of a rule or specification may be reproduced by the purchaser for their own use in promoting this objective. No portion of this publication may be displayed or otherwise made available to multiple users through any electronic distribution media including but not limited to a local area network or the Internet. No portion may be sold or used for advertisement or gain by any entity other than the AAR and its authorized distributor(s) without written permission from the AAR.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

ORDERING INFORMATION

Copies of the various sections of this manual can be obtained as follows:

- | | |
|--|--|
| ORDERS FOR PUBLICATIONS | AAR Publications at MxV Rail: https://www.mxvrail.com/
Online ordering: http://www.aarpublications.com/ |
| CIRCULAR LETTER SUBSCRIPTIONS | Circular Letters of the AAR Safety and Operations' Technical Services are available by online subscription at https://my.aar.org/circulars . Circulars include general industry updates, and notification of revisions to rules and standards. Subscriptions are valid for one year.
For ordering information, email: publications@aar.com |
| MSRP A-I TABLES OF CONTENT | The Section A-I Tables of Content lists the standards, specifications, and recommended practices that are contained in each volume of the AAR <i>Manual of Standards and Recommended Practices (MSRP)</i> . This information is updated every week, and is available for no cost at https://aar.com/standards/MSRPs/MSRP-A1.pdf . |
| MSRP-AS ADMINISTRATIVE STANDARDS SUPPLEMENT | MSRP-AS serves as a supplement to all MSRP sections and is available as a free download at https://aarpublications.com/msrp.html . All subscribers are governed by the administrative standards in MSRP-AS in addition to the standards and specifications in each section of the MSRP. |
| TECHNICAL QUESTIONS | For technical questions regarding this manual, use the email address appropriate to this manual from the following list. |

EFFECTIVE 10/28/2024

**AAR Manual of Standards and Recommended Practices
Tables of Content**

TECHNICAL QUESTIONS AND APPLICATIONS CONTACT LIST

Section A-I - Tables of Content	publications@aar.com
Section AS - Administrative Standards Supplement	techstds@aar.com
Section B - Freight Car Draft Components	eec@aar.com
Section C (C-I) - Car Construction Fundamentals and Details	eec@aar.com
Section C-II - Design/Fab/Const. Of Freight Cars, M-1001	eec@aar.com
Section C-III - Specifications for Tank Cars, M-1002	tcc@aar.org
Section D - Trucks and Truck Details	eec@aar.com
Section E (E-I) - Brakes and Brake Equipment	bsc@aar.com
Section E-II - Electronically Controlled Brake Systems	bsc@aar.com
Section F - Sensors	ehmc@aar.org
Section G (G-I)- Wheels and Axles	wabl@aar.com
Section G-II - Wheels and Axle Shop Manual	wabl@aar.com
Section H (H-I)- Bearings and Lubrication	wabl@aar.com
Section H-II - Roller Bearing Shop Manual	wabl@aar.com
Section I - Intermodal Equipment Manual	imodal@aar.com
Section J - Quality Assurance, M-1003	qa@aar.com
Section K-I - Railway Electronics Systems Architecture and Concepts of Operations	iowc@aar.org
Section K-II - Locomotive Electronics and Train Consist Systems Architecture	iowc@aar.org
Section K-III - Wayside Electronics and Mobile Worker Communications Architecture	iowc@aar.org
Section K-IV - Office Architecture and Railroad Electronics Messaging	iowc@aar.org
Section K-V - Electronics Environmental Requirements and System Management	iowc@aar.org
Section K-VI - Railway Data Management and Communications	iowc@aar.org
Section M - Locomotives and Locomotive Equipment	locomotive@aar.org
Section N - Multi Level Manual	sefcc@aar.com
Section S (S-I)- Casting Details	cstcc@aar.com
Section S-II - Truck Details and Casting Codes	cstcc@aar.com
Section S-III - Coupler and Yoke Details	cstcc@aar.com
Section T-I - Interoperable Fuel Tenders for Locomotives, M-1004	locomotive@aar.org
Section T-II - Interoperable Battery Tenders for Locomotives, M-1005	locomotive@aar.org
Section T-III - Interchange Standards for Fuel Tender Components	locomotive@aar.org

AAR Manual of Standards and Recommended Practices

Tables of Content

TO THE USER

The *Manual of Standards and Recommended Practices* of the Safety and Operations Department, Association of American Railroads, is issued by authority of the Management Committee and includes all regularly adopted specifications, standards, and recommended practices of the Association of American Railroads.

Section A, Part I contains a comprehensive index of the entire AAR *Manual of Standards and Recommended Practices*, Sections A through S. This index is arranged in three sections:

- A numerical list of all “M” specifications, “RP” recommended practices, and “S” standards.
- An alphabetical list by subject.
- A list organized by the MSRP section.

Each list shows the standard, recommended practice, or specification number, the subject, and the section of the *Manual of Standards and Recommended Practices* in which that document is located. In addition, all Circular Letters that affect a document since its most recent publication are also identified.

In addition, this manual provides for historical reference a list of documents that have been archived or renumbered.

Note: Each individual section of the *Manual of Standards and Recommended Practices* also includes a table of contents for that particular section.

HOW TO USE THIS INDEX

This index of the *Manual of Standards and Recommended Practices* contains a list of every document contained in the individual sections (AS through S). You can search this index in one of three ways:

1. Locate a document by its number using the Numeric Index on page A-I-1.
2. Locate a document by its title using the Alphabetic Index on page A-I-31.
3. Locate a document by searching a particular section in the Section Index on page A-I-61.

The right-hand column of each index contains the words “Update Available” if a document is affected by a Circular Letter that was issued subsequent to the release of the manual containing the document. You may click the link (if viewing the PDF) or go to the section entitled “Current Circular Letters” to view a list of Circular Letters issued for each affected document.

DISCLAIMER

The “Current Circular Letters” section lists the Circular Letters that have been issued subsequent to the release of the MSRP specifications, standards, and recommended practices shown in MSRP-A1. This list is intended to improve accessibility to the users. It is the responsibility of the user to ensure that individual MSRP sections reflect interim revisions implemented via Circular Letter. This list of Circular Letters is current as of the date printed in the margin. Any changes issued via AAR Circular Letter after that date will not be included.

EFFECTIVE 10/28/2024

**AAR Manual of Standards and Recommended Practices
Tables of Content**

EFFECTIVE 10/28/2024

THIS PAGE LEFT BLANK INTENTIONALLY

**AAR Manual of Standards and Recommended Practices
Tables of Content**

TABLE OF CONTENTS

<u>Description</u>	<u>Page</u>
Numeric Index	A-I-1
Alphabetic Index	A-I-31
Section Index	A-I-61
Archived/Renumbered Documents	A-I-91
Current Circular Letters	A-I-97

EFFECTIVE 10/28/2024

**AAR Manual of Standards and Recommended Practices
Tables of Content**

EFFECTIVE 10/28/2024

THIS PAGE LEFT BLANK INTENTIONALLY

**AAR Manual of Standards and Recommended Practices
Tables of Content**

NUMERIC INDEX

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
M-101	Axles, Carbon Steel, Heat-Treated	2020	G	
M-105	Forgings, Carbon Steel Blooms, Billets, and Slabs	1964	S	
M-107/ M-208	Wheels, Carbon Steel	2020	G	
M-114	Spring—Heat-Treated Steel	2024	D	
M-118	Pin, Coupler Knuckle Pivot and Coupler Shank Connecting, Steel	2018	B	
M-119	Retaining Pin and Keeper for F-Type Cushion Yoke	2009	B	
M-126	Forgings, Carbon Steel	1968	S	
M-127	Forgings, Alloy Steel	1964	S	
M-131	Blooms, Billets, and Slabs—Alloy Steel	2021	S	
M-201	Castings, Steel	2024	S	Update Available
M-202	Truck Bolsters, Cast or Structural—Design and Testing	2021	S	
M-203	Truck Side Frames, Cast Steel—Design and Testing	2024	S	Update Available
M-203A	Bolster Design Loads	1997	S	
M-204	Truck, Freight Car, with Car Body/Side Frame Load Path—Design and Testing	2011	S	
M-205	Yoke, Coupler—Test Requirements	2023	S	Update Available
M-210	Side Frame and Bolsters Manufacture	2024	S	Update Available
M-211	Foundry and Product Approval Requirements for the Manufacture of Couplers, Coupler Yokes, Knuckles, Follower Blocks, and Coupler Parts	2023	S	Update Available
M-212	Couplers and Yokes, Secondhand—Classification and Reconditioning Procedure	2023	S	Update Available
M-212A	Coupler Parts, Knuckles, Vertical Connection Pins, Follower Blocks, and Draft Keys—Secondhand Classification	2024	S	
M-213	Truck Frames, Fabricated Steel	2021	S	
M-214	Side Frames and Bolsters, Used and Reconditioned—Classification and Repair Procedure	2024	S	Update Available
M-215	Coupling Systems	2018	S	
M-216	Knuckles, Types E and F—Fatigue Test	2023	S	Update Available
M-220	Casting Component Nondestructive Testing Requirements	2022	S	Update Available
M-269	Wear Plate, Coupler Carrier, Performance Specification—Non Metallic	2003	B	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
M-300	Reconditioned Brake Beams	2012	E	
M-402	Brake Shoe, Cast Iron, High-Phosphorus Type	2002	E	
M-601	Hose, Wrapped, Air—Brake, “End Hose”	2006	E	
M-602	Gaskets, Air Hose	2023	E	Update Available
M-618	Hose, Air, Wire-Reinforced	2011	E	
M-619	Brake Cylinder Line Hose Assemblies— Performance Requirements	2005	E	
M-620	Hose, Air, Fabric-Reinforced	2011	E	
M-800	Hopper Car, Covered—For Transport of Oxidizing Commodities	2012	C	Update Available
M-801	Hopper Car, Covered—Pressurized During Unloading and In-Transit	2023	C	Update Available
M-901B	Draft Gear, Secondhand and Reconditioned	2015	B	
M-901E	Draft Gears with a Minimum Capacity of 36,000 ft·lb at a Reaction of 500,000 lb	2023	B	Update Available
M-901F	Draft Gear Reaction Forces, Measuring and Recording, Instrumentation Requirements	2003	B	
M-901G	Draft Gear, Rated by Impact Testing	2023	B	Update Available
M-901K	Draft Gear, All-Hydraulic, Rated by Impact Testing	2015	B	
M-902	End-of-Car Energy Management Systems	2024	B	
M-908	Flat Steel Floor for Freight Cars 50,000, 60,000, 70,000 or 80,000 lb Capacities	2006	C	
M-912	Oil, Control Valve	2002	E	
M-914	Brake Cylinder Lubricant	2003	E	
M-915	Quality Assurance Requirements for Locomotives and Locomotive Components	2023	M	Update Available
M-916	Sand for Traction	2017	M	
M-921A	Cushioning Devices, Sliding Sill	2018	B	
M-921B	Cushioning Devices, End-of-Car	2024	B	Update Available
M-921C	Cushioning Devices, Reconditioned—Approved for Freight Service	2024	B	Update Available
M-921D	Cushioning Devices, End-of-Car—Motor-Vehicle- Carrying	2024	B	Update Available
M-921E	Cushioning Devices, Active Draft End	2024	B	Update Available
M-921F	Cushioning Devices, Active Draft End of Car	2024	B	Update Available
M-921G	Facility Inspection Requirements for Manufacturers of New and Reconditioned Cushioning Devices for Freight Service	2024	B	Update Available
M-921H	Cushioning Devices, End-of-Car, General Requirements	2024	B	Update Available

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
M-923	Hose Cement	1983	E	
M-924	Journal Roller Bearing Adapters for Freight Cars	2018	H	
M-926	Brake Shoe, High-Friction Composition or Metal Type	2015	E	
M-927	Hose Fittings and Hose Assemblies, Air, Wire-Reinforced	2007	E	
M-928	Highway Trailer Hitches for Freight Cars	2018	I	
M-928A	Highway Trailer Hitches for Freight Cars with 90,000-lb Maximum Gross Vehicle Weight Capacity	2018	I	
M-929	Grease for Lubrication of Trailer Hitches on Flatcars	2004	I	
M-930	Containers for Domestic Intermodal Service	2019	I	Update Available
M-931	Trailers for Intermodal Service	2019	I	Update Available
M-932	Coupler Centering Device Specification	2003	S-III	
M-933	Intermodal Trailer and Container Securement	2018	I	
M-934	Freight Car Journal Roller Bearings	2021	H	
M-934A	Interchangeable Spacers for Freight Car Tapered-Roller Journal Bearings	2011	H	
M-934B	Interchangeable Seal Wear Rings for Freight Car Tapered-Roller Journal Bearings	2011	H	
M-934C	Interchangeable End Caps for Freight Car Tapered-Roller Journal Bearings	2018	H	
M-934D	Interchangeable Backing Rings for Freight Car Tapered-Roller Journal Bearings	2007	H	
M-934E	Universal Fitted Backing Rings For Freight Car Tapered-roller Journal Bearings	2019	H	
M-935	Standard Operating Procedures for Intermodal Securement	2017	I	
M-941	End Enclosure for Fully Enclosed Multi-Level Auto Rack Cars	2023	N	
M-942	Journal Roller Bearing Grease	2020	H	
M-947	Adhesive-Backed Films for Marking Cars—Performance-Based Requirements	2015	C	
M-948	Truck Side Bearing	2024	D	
M-949	Slack Adjuster Grease	2002	E	
M-950	Universal Wide-Body Tri-Level Fully Enclosed Autorack Car (Low Deck)	2023	N	Update Available
M-950-A	Universal Wide-Body Bi-Level Fully Enclosed Autorack Car (Standard Deck)	2023	N	Update Available
M-951	Portable Bridge Plates for Multi-Level Autorack Cars	2023	N	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
M-952	Intermodal Container Support and Securement System for Freight Cars	2008	I	
M-956	Requirements Governing Superstructures to Cars Equipped With Sliding Sill or End-of-Car Cushioning Devices	2023	N	
M-957	Tie-Down Tracks, Winches, and Chains	2023	N	
M-959	Lubrication Seals for Freight Car Journal Roller Bearings	2019	H	
M-961	Uncoupling Devices, Special	2003	S-III	
M-964	Floor, Nailable Steel—Freight Cars 50,000-, 60,000-, 70,000- or 80,000-lb Capacities	2006	C	
M-965	Truck Systems to Control Roll Stability of Freight Cars	2024	D	
M-966	TOFC Portable Bridge Plates	2004	I	
M-967	Electrochemical Metal Deposition for Repairing Roller Bearing Axle Journals	2008	G	
M-968	Design Requirements for Rigid Open-Top Freight Car Covers	2024	C	
M-970	Condition-Based Certification of Multi-Level Auto Rack Cars	2023	N	Update Available
M-971	Non-Grease Lubricant for Autorack Equipment	2023	N	
M-975	Span Bolsters	2020	S	
M-976	Truck Performance for Rail Cars	2024	D	
M-979	Center Bowl Liner—Requirements for Approval	2024	D	
M-980	Friction Wedge Performance for Railcars—Dynamic Wear Test	2024	D	
M-985	Bad Order Device for Identification of Defective Hitches	2004	I	
M-990	Tie-Down Tracks, Wheel Chocks, and Straps (Tri-Level Autoracks)	2023	N	
M-991	Vehicle Door Edge Protection System for Multi-Level Autorack Cars	2023	N	
M-992	Designated Satellite Shop Repair Specifications for Multi-Level Autorack Cars	2023	N	
M-992	Designated Satellite Shop Repair Specifications for Multi-Level Autorack Cars	2024	N	Update Available
M-993	Mechanical Certification of Flatcars for Autorack Service	2023	N	
M-996	Brake Shoe, Low-Friction Composition Type	2015	E	
M-997	Brake Shoe—High-Friction Tread Conditioning, High Capacity	2008	E	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
M-998	Intermodal Container Support and Interbox Connector (IBC) Securement Systems for Freight Cars	2022	I	Update Available
M-1001	Design, Fabrication, and Construction of Freight Cars	2023	C-II	
M-1002	Specifications for Tank Cars	2024	C-III	
M-1003	Specification for Quality Assurance	2024	J	Update Available
M-1004	Interoperable Fuel Tenders for Locomotives	2023	T-I	
M-1005	Locomotive Electronics Safety Assessments and Analyses	2022	M	Update Available
M-1006	Passenger Equipment Performance Specification	2019	M	
M-9154A	Intra-Consist Communications (ICC) Routing Functionality	2013	K-II	
M-9154B	Intra-Consist Communications (ICC) Layer 2	2015	K-II	Update Available
M-9155.V1	Locomotive Command and Control Module (LCCM)—Functional Requirements	2014	K-II	
M-9155.V2	Locomotive Command and Control Module (LCCM)—Functional Requirements	2015	K-II	Update Available
M-9155.V2.1	Locomotive Command and Control Module (LCCM)—Functional Requirements	2015	K-II	Update Available
M-9155.V2.2	Locomotive Command and Control Module (LCCM)—Functional Requirements	2016	K-II	Update Available
M-9155.V2.3	Locomotive Command and Control Module (LCCM)—Functional Requirements	2018	K-II	Update Available
M-9155.V2.4	Locomotive Command and Control Module (LCCM)—Functional Requirements	2019	K-II	Update Available
M-9155.V2.4.1	Locomotive Command and Control Module (LCCM)—Functional Requirements	2021	K-II	Update Available
M-9155.V2.5	Locomotive Command and Control Module (LCCM)—Functional Requirements	2021	K-II	Update Available
M-9453	ITCSM Asset User Interface Requirements for Interoperable Train Control	2014	K-V	
RP-101	Draft Gear Inspection	2011	B	
RP-110	Cushioning Device Inspection	2003	B	
RP-200	Hopper Car, Open Top, in Shaker Service—Design Features	1976	C	
RP-206	Decking, Wood—for Open Top Cars	1981	C	
RP-208	Stake Pocket—Permanent	1998	C	
RP-209	Stake Pocket—for Flatcars	1998	C	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
RP-227	Universal Pocket, 15-in. Cushion, E69 Coupler	1975	C	
RP-228	Universal Pocket, 10-in. Cushion, Low Deck—E69 Coupler	1975	C	
RP-231	Universal Pocket—Typical Sections and Notes	1975	C	
RP-232	Ladder, End and Side—Configuration	1981	C	
RP-233	Hold-Down Clips—Gondolas, Side Sheet Mounted	1948	C	
RP-234	Hold-Down Clips—Gondolas, Top Cord Mounted	1982	C	
RP-258	Hopper Car—Grain Service	1992	C	
RP-306	Spring Test Machine, Pneumatic	2024	D	
RP-307	Spring Test Machine, Electro-Hydraulic	2024	D	
RP-308	Design Dimensions for Brake Hanger Bracket	1937	E	
RP-322	Brake Beam Strut Keyway Gauge	1992	E	
RP-323	Stop Lugs for Clip-On-Type Pedestal Roof Liners—Application	2024	D	
RP-400	Slack Adjuster—General Information	2002	E	
RP-401	Brake Control Valves—Mount-Configuration Designs as Related to Field Vibration	2014	C	
RP-503	Locomotive Diesel Fuel Additives and Fuel Savings Devices—Evaluation Procedure	2016	M	
RP-505	Typical 26-L Type Brake Equipment Piping Diagrams for Locomotives	2001	M	
RP-508	Air Brake Exhaust Piping	2001	M	
RP-509	Braking Ratios for Locomotives	2024	M	Update Available
RP-512	Color Code for Identifying Fluids on Locomotive	2001	M	
RP-514	Designation of Sides and Ends of Locomotives	2001	M	
RP-518	Brake Shoe Unflanged	2001	M	
RP-545	Testing Electrical Components (RETIRED 01/04/2021)	2001	M	Update Available
RP-546	Minimum Requirements for Main Reservoir System on New and Rebuilt Diesel-Electric, Electric, and Gas Turbine Locomotives of 800-hp Capacity and Greater	2001	M	
RP-548	Locomotive Rating Train/Track Resistance	2001	M	
RP-557	Spark Arrester	2001	M	
RP-585	Wiring and Cable Specification	2001	M	
RP-586	Wire and Cable Insulating Material—Moisture-Resisting Jacketed	2005	M	
RP-587	Wire and Cable Insulating Material—Silicone Rubber Insulated	2005	M	
RP-588	Wire and Cable Insulating Material	2001	M	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
RP-589	Rating for Specific Fuel Consumption of Diesel Electric Locomotives	2022	M	Update Available
RP-590	Lead-Acid Batteries and Compartments	2001	M	
RP-599	Brake Shoes—High-Friction Composition Type for Locomotives	2001	M	
RP-608	Gauge, Wheel—Reference Master Disk for Verifying Wheel Circumference Gauges S-612 and S-613	2004	G	
RP-609	Inspection Stand for Use with Master Disks	2004	G	
RP-612	Mounting Pressures for Wrought and Cast Steel Wheels on Gear-Driven and Idler Axles of Locomotives Other than Steam	2004	G	
RP-613	Gauge, Axle—Master Gauge for Verifying Axle Journal and Fillet Gauge S-614	2004	G	
RP-614	Gauge, Wheel—Master Gauge for Verifying Wheel Gauges S-617 and S-618	2004	G	
RP-615	Gauge, Wheel—Simplified	2004	G	
RP-622	Axle, Weight—Machined Finish, Raised Wheel Seat	2007	G	
RP-629	Gauge, Wheel—for Measuring Condemnable Overheated Wheels	2004	G	
RP-630	Gauge, Wheel—Application for Measuring Condemnable Overheated Wheels	2004	G	
RP-631	Recommended Wheel Shop Practices	2022	G-II	
RP-632	General Requirements and Information	2022	G-II	
RP-633	Figures	2022	G-II	
RP-634	Gauges—Wheel and Axle Shop	2022	G-II	
RP-636	Gauge, Wheel—Application Drawing for AAR 1B Wheel Gauges S-662 and S-667	1991	G	
RP-637	Gauge, Wheel—Application Drawing for AAR 1B Wheel Gauges S-661 and S-665	1991	G	
RP-638	Gauge, Wheel—Application Drawing for Reference Gauge to Verify Wheel Gauges S-661, S-662, S-663, S-664, S-665, S-666, S-667, and S-668	1991	G	
RP-750	Wheel-Mounting Compound Approval Test Procedure	2015	G-II	
RP-802	Wheel Chock Strap Assembly Replacement	2023	N	
RP-803	Ride Quality Performance Requirements for Motor Vehicle Shipments	2023	N	
RP-804	Measurement Requirements for Remote Ride Quality Monitoring	2023	N	
RP-810	Handling and Inspection of Vehicles Before Loading	2023	N	
RP-811	Loading of Vehicles	2023	N	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
RP-812	Handling and Inspection of Multi-Level Cars and Equipment After Loading	2023	N	
RP-813	Handling of Multi-Level Cars in Trains and Yards	2023	N	
RP-814	Inspection of Multi-Levels and Vehicles En Route	2023	N	
RP-815	Railroad Police Protection	2023	N	
RP-816	Unloading of Vehicles	2023	N	
RP-817	Destination Inspections	2023	N	
RP-818	Handling of Multi-Level Cars and Equipment After Unloading	2023	N	
RP-830	Form Preparation for Vehicle Inspection	2023	N	
RP-831	Standard Vehicle Nomenclature	2023	N	
RP-851	Double-Stack Container Cars	2004	I	
RP-852	Intermodal Equipment Cars	2003	I	
RP-853	Trailer Repair and Modification	2022	I	Update Available
RP-899	Car Owner's Manual for the Inspection and Maintenance of Double-Stack Container Cars	2018	I	
RP-905	Performance Requirements for Refrigerated Boxcar Fuel Tanks	2006	C	
RP-906	Methodology: Multi-Car Drifting Simulations	2024	B	
RP-940	Electronic Distribution Format For Engineering Drawings	2005	C	
RP-2001	Interoperability Requirements—Movement of Passenger Equipment on Freight Railroads	2019	M	
RP-2002	Interoperability Requirements—Operation of Regularly Scheduled Revenue Passenger Service	2019	M	
RP-2017	Striker Casting, Cast Steel	1991	C	
RP-2018	Handholds, Steps, and Ladders for Interior Access	2023	C	Update Available
RP-5107	Access Doors to Light Boxes for Road Number, Headlight, or Warning Lights—Outside Cab	2001	M	
RP-5115	Cushion Pad—Locomotive Cab Door Frame	2001	M	
RP-5117	Door Closure Bar—Locomotive Cab	2001	M	
RP-5120	Flexible Hinge Guard on Locomotive Cab Door	2001	M	
RP-5122	Locomotive Horn Valve Handle with Soft, Resilient-Type Rubber Cover	2001	M	
RP-5124	Padded Sun Visor in Locomotive Cab—Engineer's Side Only	2001	M	
RP-5126	Recessed Windshield Wiper Valve, Train-Order Light Switch, and Flush-Mounted Train-Order Light	2001	M	
RP-5127	Rounded Cab Window Latch in Locomotive Cabs	2001	M	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
RP-5128	Rounding All Possible Exposed Convex Edges and Corners	2001	M	
RP-5132	Diesel Locomotive Control Stand for New Locomotives	2001	M	
RP-5136	Windshield Wiper Motor Handle with Soft-Rubber-Type Grip	2001	M	
RP-5137	Windshield Wiper Motor Protective Cover	2001	M	
RP-5209	Basic Brake Design Data for Freight Locomotives (RETIRED 05/20/2024)	2024	M	Update Available
RP-5503	Locomotive Fueling Interface	2001	M	
RP-5523	Axle Nomenclature Arrangement—Locomotives	2001	M	
RP-5595	Main Reservoir Equalizing End Hose Coupling	2001	M	
RP-5596	Brake Shoes—Metal Type	2001	M	
RP-5599	Hook and Eye Brake Rigging—Lever Angularity Inspection	2007	E	
RP-9203	AEI Reader Equipment Requirements	2010	K-III	
RP-9457.V1	Positive Train Control Interoperable Electronic Train Management System (I-ETMS) Master Test Strategy (MTS)	2012	K-V	
RP-9457.V2	Interoperable Train Control / Positive Train Control Master Test Strategy (MTS)	2021	K-V	Update Available
RP-9511	Interoperable Train Control (ITC) Onboard Track Database Field Survey and Validation	2019	K-VI	Update Available
S-010	Field Test Requirements for Materials, Devices, and Products Manufactured to AAR Specifications but Having No Previous Service Experience on AAR Member Roads		AS	
S-046	Definitions of Terms for the <i>AAR Manual of Standards and Recommended Practices</i>	2015	AS	Update Available
S-050	Procedures for Considering Proposals Regarding Revisions to the Manual of Standards and Recommended Practices	2014	AS	
S-051	Conditions Governing Withdrawal of AAR Approval of Freight Car and Locomotive Components and Products	2000	AS	
S-060	Application for Component Approval Procedure	2015	AS	Update Available
S-100	Bushings, Seamless Steel Tube—Coupler Shanks and Yokes	2010	B	
S-101	Field Service Experience—Reporting Requirements	2003	B	
S-102	Coupler, E Type, E60EE	2024	S-III	Update Available
S-103	Coupler, E Type, Top and Bottom Shelf, SE60EE	2024	S-III	Update Available

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
S-105	Coupler, E Type, Detail Parts	2021	S-III	Update Available
S-106	Coupler, E Type, No. 10-A Contour and Detail of Pivot Pin Hole	2003	S-III	
S-107	Coupler, E Type, E67DE	2020	S-III	
S-108	Coupler, E/F Type, E68DE	2020	S-III	
S-109	Coupler, E/F Type, E69DE	2020	S-III	
S-110	Coupler, F Type, Standard F Coupler, F70DE	2009	S-III	
S-111	Coupler, F Type, with Top Shelf, Standard, SF70DE	2003	S-III	
S-112	Coupler, F Type, Standard, F73BE	2003	S-III	
S-114	Coupler, F Type, Standard, F79DE	2003	S-III	
S-115	Coupler, F Type, with Top Shelf, Standard, SF79DE	2003	S-III	
S-116	Coupler, F Type, Interlocking, Coupler and Yoke Parts	2003	S-III	
S-117	Coupler Contour, F Type, Interlocking	2003	S-III	
S-119	Draft Gear Follower, Y44A	2012	B	
S-120	Draft Key Retainers, Locks, Keepers, and Washer	2011	B	
S-121	Draft Key	2017	B	
S-125	Immobilization of Sliding Sill on Cushion Underframe Cars Having Damaged or Defective ACF Freight Saver 20- or 30-in. Travel Units—Plate No. 526-1	2003	B	
S-126	Immobilization of Sliding Sill on Cushion Underframe Cars Having Damaged or Defective Keystone 20-in. Travel Unit, Santa Fe Shock Control, A.O. Smith Cushion Ride, and Rockwell Cargo Cushion—Plate No. 526-2	2003	B	
S-127	Immobilization of Sliding Sill on Cushion Underframe Cars Having Damaged or Defective Hydra Cushion 10-, 12-, or 20-in. Travel Units or Evans Cushion Pak Wide Tunnel Units—Plate No. 526-3	2003	B	
S-128	Immobilization of Sliding Sill on Cushion Underframe Cars Having Damaged or Defective Hydra Pullman Standard Hydroframe 40 and 60 Units or National 3C Wide Tunnel Units—Plate No. 526-4	2003	B	
S-129	Couplers—Arrangement of Operating Mechanisms	2000	S-III	
S-130	Coupler, E Type, Articulated Rotor Lever Assembly	2003	S-III	
S-131	Coupler (Rotary), Type E60, Operating Rod, use with up to 6 1/2-in. Total Draft Gear Travel	2016	S-III	
S-132	Operating Mechanism, Type No. 6, Interlocking	2003	S-III	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
S-133	Coupler (Rotary), Type F70, Operating Rod, use with up to 6 1/2-in. Total Draft Gear Travel	2016	S-III	
S-134	Coupler (Rotary), Types E60, E67, and F70, Operating Rod for Use with Standard Draft Gear or End-of-Car Cushioning up to 15-in. Total Travel	2016	S-III	
S-137	Coupler Shank Wear Plates and Application	2000	S-III	
S-139	Yokes, Relief Fillets	2003	S-III	
S-141	Yoke, E Type, Y40AE, Standard, for 24 5/8-in. Draft Gear Pocket	2009	S-III	
S-142	Yoke, E Type, Y41AE for 36-in. Draft Gear Pocket	2009	S-III	
S-143	Yoke, E Type, SY40AE or YS93AE, Standard, for 24 5/8-in. Draft Gear Pocket	2009	S-III	
S-149	Yoke, E/F and F Type, Y45AE, Standard, for 24 5/8-in. Draft Gear Pocket	2003	S-III	
S-151	Yoke, E/F Type, Y49AE, Standard, for 36-in. Draft Gear Pocket	2003	S-III	
S-154	Coupler, E Type, Top and Bottom Shelf, SE67DE	2020	S-III	
S-155	Coupler, E/F Type, Top and Bottom Shelf, SE68DE	2020	S-III	
S-156	Immobilization of Freightmaster Types SP-E and SP-C	2003	B	
S-157	Immobilization of Freightmaster Types F, FS, and B	2003	B	
S-158	Immobilization of Freightmaster	2003	B	
S-159	Immobilization of Freightmaster Types HD and AR-F	2003	B	
S-160	Immobilization of Keystone Type E Miner SR-12	2003	B	
S-161	Immobilization of Freightmaster 10-in. Type E Miner M-12S	2003	B	
S-162	Immobilization of Keystone F Shank	2003	B	
S-163	Coupler, E Type, Bottom Shelf, SBE60EE	2024	S-III	Update Available
S-164	Coupler, E Type, Bottom Shelf, SBE67DE	2020	S-III	
S-165	Coupler, E/F Type, Bottom Shelf, SBE68DE	2020	S-III	
S-170	Coupler, E/F Type, Bottom Shelf, SBE69CE	2020	S-III	
S-171	Immobilization of Pullman Standard, ACF, or Keystone Center-of-Car Cushioning Devices (“Dummy Cylinder Method”)	2003	B	
S-172	Coupler, E/F Type, Top and Bottom Shelf, SE69CE	2020	S-III	
S-173	Coupler, E Type, Guard Arm Lightener Hole Openings and Knuckle Flag Hole—Standard Dimensions	2003	S-III	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
S-174	Coupler, F Type, Guard Arm Lightener Hole Openings and Knuckle Flag Hole—Standard Dimensions	2003	S-III	
S-176	Yoke, E Type, Cushioning, for Pocket EOC-7	2020	S-III	
S-177	Yoke, E Type, Cushioning, for Pocket EOC-8	2020	S-III	
S-178	Yoke, F Type, Cushioning, for Pocket EOC-9	2020	S-III	
S-179	Yoke, F Type, Cushioning, for Pocket EOC-10 and EOC 26	2020	S-III	
S-180	Yoke, F Type, Cushioning, for Pocket EOC-1, EOC-2, and EOC-16	2020	S-III	
S-181	Cushioning Pocket Identification Guide—AAR Rule 59	2003	B	
S-182	Pocket Tolerances—EOC-8	2011	B	
S-183	Pocket Tolerances—EOC-9	2011	B	
S-184	Pocket Tolerances—EOC-10	2011	B	
S-203	Coupler, Height Adjustment (RETIRED 07/20/2023)	1962	C	Update Available
S-204	Body Center Plate, Separable—Surface Finish	2014	C	
S-206	Body Center Plate, Cast Steel or Forged—for Freight Cars with 14 in. Center Plates	1978	C	
S-207	Body Center Plate, Cast Steel or Forged—for Freight Cars with 16 in. Center Plates	2014	C	
S-211	Body Center Plate Gauge—14-in. and 16-in. Diameter	1976	C	
S-212	Side Door, Boxcar—Sliding Type	2012	C	
S-213	Side Door and Door Frames, Boxcar—Plug Type	2024	C	Update Available
S-215	Safety Hangers and Retainers—for Freight Car Doors	1964	C	
S-217	Identification Plate—Boxcar Doors	2009	C	
S-219	Safety Appliances for Bulkhead Flatcars, Including Pulpwood Cars and Center Beam Cars	2017	C	
S-220	Safety Appliances for Special Service High-Side Gondolas with Fixed Ends	2017	C	
S-224	Handholds, Safety Railings, and Ladder Treads	2015	C	
S-225	Spark Shield—Wooden Deck Cars with Cast Iron Brake Shoes	1980	C	
S-226	Running Board, End Platform, and Brake Step—Design Approval	2020	C	
S-227	Walkways, Alternate—at Sides of Double-Stack Car Wells	2020	C	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
S-229	DOT Placard Location	2013	C	
S-230	Lading Strap Anchor Arrangement and Use—for Flatcars	1973	C	
S-233	Gravity Outlet Gates, New—for Covered Hopper Cars	2014	C	
S-234	Lifting Freight Cars	1982	C	
S-235	Side Bearing Wear Plate—Car Body	2012	C	
S-236	Striker, Cast Steel, F70 Coupler Design, 24 5/8-in. Draft Gear Pocket—Welded Application	2024	C	Update Available
S-238	Striker, Cast Steel, F70 Coupler Design, 24 5/8-in. Draft Gear Pocket—Parts and Assembly	1978	C	Update Available
S-239	Arrangement E60 Coupler Design 24 5/8 in. Draft Gear Pocket Striker Applied by Welding (RETIRED 7/18/2024)	2012	C	Update Available
S-243	Draft Arrangement, E68 Coupler, 24 5/8-in. Pocket (RETIRED 7/18/2024)	1983	C	Update Available
S-244	Draft Arrangement, E69 Coupler, 24 5/8-in. Pocket	1983	C	
S-245	Draft Arrangement, F70 Coupler, 24 5/8-in. Pocket—Striker Applied by Welding (RETIRED 7/18/2024)	1978	C	Update Available
S-247	Draft Arrangement, F79 Coupler, 24 5/8-in. Pocket	1978	C	
S-249	Door Puller Bracket, Application to Intermediate Post	1978	C	
S-252	Door Air Lines—Location of End Cocks	1978	C	
S-253	Train Coal Car, 100-Ton Nominal Capacity, with Train Positioner—Clearance Diagram	1982	C	
S-254	Draft Pocket Tolerances	1974	C	
S-255	Combined Striker and Front Draft Lug Tolerances	1974	C	
S-258	Body Center Plate Relief	1980	C	
S-259	Rail Car, 286,000-lb Gross Weight	1994	C	
S-265	Center Pin—Freight Car	1989	C	
S-266	Center Sill Section, Rolled Steel	2012	C	
S-267	Center Sill Section—Welding Notes	1979	C	
S-269	Coupler Carrier Wear Plate	2003	B	
S-270	Wear Plate, Used in Cushion Unit and Draft Systems that Employ the Y-47 Pin for an F Shank	2024	B	Update Available
S-286	Free/Unrestricted Interchange for 286,000 lb Gross Rail Load Cars	2022	C	Update Available
S-300	Truck, Freight Car—Design Data	2016	S-II	
S-301	Truck, 33-in. Wheels—Design Dimensions	2018	S-II	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
S-302	Truck, 36 in. Wheels—Design Dimensions	2018	S-II	
S-304	Truck, 38 in. Wheels—Design Dimensions	2018	S-II	
S-306	Center Bowl Vertical Wear Liner	2024	D	
S-307	Center Bowl Horizontal Wear Liner	2024	D	
S-308	Center Bowl Wear Liner Application	2024	D	
S-310	Bolster, 14 in. Center Plate—Limiting Outline	1979	S-II	
S-311	Bolster, 16 in. Center Plate—Limiting Outline	2009	S-II	
S-312	Bolster, Truck—Marking Diagram	2014	S-II	
S-314	Side Frame, Truck—Marking Diagram	2014	S-II	
S-316	Bolster—Tolerances	1981	S-II	
S-317	Side Frame—Tolerances	1981	S-II	
S-318	Side Frame—Bolster Rotation Stop Lug	1965	S-II	
S-319	Side Frame—Wide Land Rotation Stop Lug Column	1968	S-II	
S-320	Side Frame—Column Wear Plate, Application	2024	D	
S-325	Side Frame, Narrow Pedestal—Limiting Dimensions	2009	S-II	
S-327	Side Frame—Roof Repair	2012	S-II	
S-329	Side Frame, Narrow Pedestal—Roller Bearing	1997	S-II	
S-332	Spring—D2, 1 5/8-in. Travel	2024	D	
S-333	Spring—D3, 2 1/2-in. Travel	2024	D	
S-334	Spring—D4, 3 1/16-in. Travel	2024	D	
S-335	Spring—D5, 3 11/16-in. Travel	2024	D	
S-336	Spring—D6, 3 3/8-in. Travel	2024	D	
S-337	Spring—D6A, 3 15/16-in. Travel	2024	D	
S-338	Spring—D7, 4 1/4-in. Travel	2024	D	
S-339	Spring—Groups for D2	2024	D	
S-340	Spring—Groups without Load-Carrying Snubbers	2024	D	
S-341	Spring—Groups with Load-Carrying Snubbers (Single-Side Springs)	2024	D	
S-342	Spring—Groups with Load-Carrying Snubber (Double-Side Springs)	2024	D	
S-343	Spring—Groups with Hydraulic Snubber	2024	D	
S-344	Brake Beam Specifications and Tests	2007	E	
S-345	Brake Beam—Tolerance, Hangerless Type	1979	E	
S-346	Brake Beam—Outline, Hanger Type	1953	E	
S-348	Brake Beam Gauges for Standard Brake Beams	1992	E	
S-349	Brake Beam—Outline, Hangerless Type	1979	E	
S-352	Brake Beam Gauge Assembly—Hangerless Type	1979	E	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
S-353	Brake Beam Gauge Details—Hangerless Type	1981	E	
S-355	Brake Beam Gauge Application—Hangerless Type	1979	E	
S-358	Go Gauge for Brake Head, Metal or High-Friction Shoe	2009	E	
S-359	Go and No-Go Gauge for Brake Head for Limiting Contour of Face, Metal or High-Friction Shoe	1990	E	
S-360	Gauges for End of Hangerless-Type Brake Beam	1979	E	
S-361	Go Gauges for Brake Shoe	1944	E	
S-362	No-Go Gauge for Brake Shoe	1944	E	
S-365	Standard Location of Brake Hanger Brackets and Unit Guide Brackets	1979	E	
S-366	Unit Guide Bracket, EC-2055—Design Dimensions	2009	S-II	
S-367	Wear Plate for Unit-Type Brake Beam Guide in Side Frame	2003	E	
S-368	Brake Beam Hangers and Attachments	1965	E	
S-369	Brake Beam Hangers and Attachments	1965	E	
S-370	Limiting Contour of Face of Brake Heads for Hanger-Type Brake Beams	2009	E	
S-371	Limiting Contour of Face of Brake Heads for Hangerless-Type Brake Beams	2009	E	
S-372	Brake Head Conversion—Metal Shoe-Type to High-Friction Composition	1972	E	
S-373	Peep Hole—Location for Checking Brake Cylinder Piston Travel on Cars with Deep Side Sills	2024	D	
S-374	Badge Plate for Showing Proper Dimensions for Body and Truck Brake Levers	1964	E	
S-375	Brake Pin Tolerance	1975	E	
S-376	Brake Shoe Keys	2003	E	
S-377	Side Frame Keys for AAR Standard and Alternate Standard Pedestal-Type Side Frames	2024	D	
S-378	Side Frame, Cast Steel—Marking and Mating	2010	S-II	
S-379	Application Tolerances for Hanger-Type Brake Beams	unk	E	
S-380	Hangerless Brake Beam Extension Functional Gauge (Parallelism)	1979	E	
S-392	Truck—Design Drawings	2018	S-II	
S-393	Side Frames and Bolsters—Produced Prior to 1978	2001	S-II	
S-394	Side Bearing Pad for Two-Hole Application	2024	D	
S-399	Specification for Bottom Rod Safety Supports	1992	E	
S-400	Brake Equipment—Installation Specifications	2018	E	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
S-401	Brake Design Requirements.	2020	E	Update Available
S-402	Welding of Air Brake Pipe and Fittings for Railroad Cars—Welding Procedure	2020	E	Update Available
S-419	Slack Adjuster, Mechanical, Double-Acting, Automatic Tension	2017	E	
S-420	Slack Adjuster—Limiting Design Dimensions (Group E)	2002	E	
S-420A	Slack Adjuster, Tension—Limiting Design Dimensions	2002	E	
S-421	Slack Adjuster, Center Rod Application (Group E)	2002	E	
S-422	Slack Adjuster, Top Rod Application (Group E)	2002	E	
S-423	Slack Adjuster Reclamation—Automatic, Double-Acting, Mechanical Slack Adjusters	2010	E	
S-424	Angle Cock Location	2018	E	
S-425	Angle Cock Location on Cars Equipped with AAR Type F Coupler	2002	E	
S-426	Angle Cock Location on Cars with Floating Sills	2005	E	
S-427	Angle Cock and Air Brake Hose Location on Cars with Excessive Overhang Preventing Compliance with AAR Standards S-424, S-425, and S-426	2005	E	
S-428	Angle Cock Location on Cars Equipped with AAR Type F Coupler and Cushioned Underframe	2005	E	
S-429	Angle Cock Locking Lugs—Minimum Permissible Engagement	2002	E	
S-430	Brake Shoe, Metal, Reinforced	2002	E	
S-431	Brake Shoe, High-Friction Composition Type—Limiting Contour	2017	E	
S-432	Hose Support, S Hook	2002	E	
S-436	Hose Coupling, Dummy	2002	E	
S-437	Hose, Other than Armored Type—Mounting Procedure	2002	E	
S-438	Hose, Armored Type—Mounting Procedure	1949	E	
S-439	Hose Clamps	2002	E	
S-440	End Hose Gaskets, Couplings, and Nipples—Annual Test Requirements	1999	E	
S-441	Air Brake and Signal Hose—Mounting of Coupling and Nipple	2002	E	
S-443	Brake Cylinder Release Valve and Release Rod	2002	E	
S-444	Brake Cylinder Release Valve Rod Handles—Location	2002	E	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
S-445	Retaining Valve—Location	2002	E	
S-446	Retaining Valve, 1967-Type, Three-Position	2002	E	
S-447	Hose Coupling Gasket Gauge	2002	E	
S-448	Brake Shoe Go Gauge	2002	E	
S-449	Brake Shoe No-Go Gauge	2002	E	
S-455	Hose Coupling Condemning Gauges for Checking the Beads and Shanks on New and Used Hose Couplings and Nipples	2002	E	
S-456	Hose Coupling Gauges for Gauging New and Used Couplings	2002	E	
S-457	Hose Coupling Tester, Air Brake, Type A-1-B—Modification to Permit Testing of Pinless-Type Couplings	2002	E	
S-458	Hose Assemblies—Reclamation Procedures	2002	E	
S-461	Single-Capacity Freight Brakes—Performance Specification	2019	E	Update Available
S-462	Control Valve—Approval Procedure	2019	E	Update Available
S-463	Test Rack, Multiple-Car, Freight Brake	2019	E	Update Available
S-464	Test Rack, Multiple-Car—Performance Testing Procedure	2019	E	Update Available
S-465	Test Rack, Single-Car	2002	E	
S-466	Test Rack, Single-Car, for Individual Valve Portions—Performance Testing Procedure	2005	E	
S-467	Control Valve, Freight Brake—Environmental Tests	2002	E	
S-468	Control Valve Pipe Bracket	2009	E	
S-469	Performance Specification for Freight Brakes	2006	E	
S-470	Angle Cock, Ball Type—Specification for Approval	2002	E	
S-471	Brake Pipe Restriction Test	2010	E	
S-472	End Cock Location on Cars Arranged for Rotary Dump Service	2002	E	
S-473	Brake Equipment—Application Form for AAR Approval of New and Untried Freight Cars	2003	E	
S-475	Hand Brakes	2024	E	Update Available
S-476	Angle Cocks and Brake Pipe End Cocks—Repair Specification	1981	E	
S-477	Control Valve—Shop Certification Requirements for Approved Valves	2002	E	
S-486	Code of Air Brake System Tests for Freight Equipment—Single Car Test	2018	E	
S-488	End Cock and Air Brake Hose Location on Long Cars	2002	E	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
S-489	Dirt Collector and Cutout Cock, Combined—Repair Specification	1981	E	
S-490	Vent Protector Performance and Approval	2002	E	
S-491	Hose Coupling	2005	E	
S-492	Field Service Reports—Requirements	2002	E	
S-493	Dirt Collector and Cutout Cock—Test Specification	2002	E	
S-494	Reservoir, Steel Fabricated, Combined Auxiliary and Emergency	2005	E	
S-495	Angle Cock Location on Cars Arranged for Rotary Dump Service	2002	E	
S-512	27-Point Control Plug and Receptacle	2007	M	
S-580	Locomotive Crashworthiness Requirements	2020	M	
S-591	Locomotive System Integration Operating Display	2020	M	
S-601	Wheels—Manufacturing Facility Inspection by Technical Services	2004	G	
S-611	Wheels—Measuring Wheel Circumference (Tape) Using Wheel Gauges S-612 and S-613	2004	G	
S-612	Circumference Measure (Tape) for 27 in. to 38 in. Steel Wheels	2004	G	
S-613	Circumference Measure (Tape) for 38 in. to 52 in. Steel Wheels	2004	G	
S-614	Wheel Defect—Worn Journal Collar and Journal Fillet Gauge	2004	G	
S-615	Wheel Defect—Worn Journal Collar and Journal Fillet Gauge	2004	G	
S-616	Limit Wear Gauge for Condemning Wheel Defect—Worn Journal Collar and Journal Fillet Gauge	2004	G	
S-617	Gauge, Wheel—Former Standard 1980	1980	G	
S-618	Gauge, Wheel—Former Standard 1976	1976	G	
S-619	Reference Groove for Multiple-Wear Diesel Wheels	2015	G	
S-627	Combined Wheel Gauge	1998	G	
S-628	Combined Wheel Gauge	1998	G	
S-629	Limit Wear Gauge for Condemning Wheel Defect—Worn Journal Collar and Journal Fillet Gauge	1998	G	
S-630	Steel Wheel Gauge	2013	G	
S-649	Axles—Manufacturing Facility Inspection by Technical Services	2004	G	
S-657	Wheel, Passenger Car (Amfleet)	1980	G	
S-658	Axle for Passenger Cars (Amfleet) Inboard Roller Bearing—Raised Wheel Seat	2020	G	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

**AAR Manual of Standards and Recommended Practices
Tables of Content**

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
S-659	Mandatory Rules Governing Wheel Shop Practices as Required by Interchange Rules	2022	G-II	
S-660	Wheel Designs, Locomotive and Freight Car—Analytic Evaluation	2009	G	
S-661	Gauge, Wheel—Maximum Flange Thickness, Height, and Throat Radii Gauge for AAR-1B Narrow-Flange Steel Wheel	1991	G	
S-662	Gauge, Wheel—Minimum Flange Thickness, Height, and Throat Radii Gauge for AAR-1B Narrow-Flange Steel Wheel	1991	G	
S-663	Gauge, Wheel—Reference Limit Gauge for Verifying AAR 1B Narrow Flange Wheel Gauge S-661	1991	G	
S-664	Gauge, Wheel—Reference Limit Gauge for Verifying AAR 1B Narrow Flange Wheel Gauge S-662	1991	G	
S-665	Gauge, Wheel—Maximum Flange Thickness, Height, and Throat Radii Gauge for AAR-1B Wide-Flange Steel Wheels	1991	G	
S-666	Gauge, Wheel—Reference Limit Gauge for Verifying AAR 1B Wide Flange Wheel Gauge S-665	1991	G	
S-667	Gauge, Wheel—Minimum Flange Thickness, Height, and Throat Radii Gauge for AAR-1B Wide-Flange Steel Wheels	1991	G	
S-668	Gauge, Wheel—Reference Limit Gauge for Verifying AAR 1B Wide Flange Wheel Gauge S-667	1991	G	
S-669	Analytic Evaluation of Locomotive Wheel Designs	2020	G	
S-701	Locking Plate for Journal Roller Bearing Assemblies	1997	H	
S-701A	Locking Plate for Journal Roller Bearing Assemblies	2012	H	
S-702	Component Parts for Journal Roller Bearing Assemblies	1998	H	
S-703	Cap Screws for Journal Roller Bearing Assemblies	2021	H	
S-704	Adapter for Use with AAR Standard Pedestal-Type Side	1968	H	
S-705	Wear Gauge for Journal Roller Bearing Adapters	1978	H	
S-706	Wear Gauge for Journal Roller Bearing Adapters	1975	H	
S-720	Tabulation of Adapters and Frame Keys for AAR-Approved Roller Bearings	2008	H	
S-727	Appendix A Approved Materials	2015	G-II	
S-732	Inspection and Lubrication of Trailer Hitches on Flatcars	2016	I	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
S-735	Approval Requirements for Reconditioners and Remanufacturers of Roller Bearings	2024	H-II	
S-736	Minimum Acceptance and Rejection Criteria	2024	H-II	
S-737	Requirements for Roller Bearing Reconditioning	2024	H-II	
S-738	Repair Procedure Spalls, SWR, and Press Fit	2024	H-II	
S-739	Interchangeable Roller Bearing Requirements	2024	H-II	
S-740	Requirements for Remanufacture of Roller Bearing Components	2024	H-II	
S-741	Information on Amtrak Passenger Car Bearings	2024	H-II	
S-742	Car Repair Track Information Specific to Roller Bearings	2024	H-II	
S-810	Field Impact and Over-the-Road Tests of Multi-Level Tie-down Equipment and/or Methods	2023	N	
S-815	Tie-Down Chain Assemblies for Multi-Level and Other Flat Cars, Refurbished High Test Grade 43 or Alloy Grade 80	2023	N	
S-910	Marking of Freight Cars	2023	C	Update Available
S-9103	Precision Navigation Module Interface Control Document (ICD)	2021	K-II	Update Available
S-916	Retroreflective Comparator Panel Requirements	2018	C	
S-920	AAR Component Identification (CID) Bar Code Standard	2023	F	Update Available
S-2008	Card Holder—Bad Order	2013	C	
S-2009	Push Rod, Brake Cylinder	1964	E	
S-2025	Hopper Car—End for Door Operating Shaft	1914	C	
S-2034	Car Builder Certification	2019	C	
S-2035	Side Handhold, Additional—Hopper and High-Side Gondola Cars	2017	C	
S-2036	Temperature—for Car Structures and Components	1983	C	
S-2037	Trough Hatch Cover	2015	C	
S-2038	Rack Car, Multilevel, with or without Door or Roof, Enclosed—Safety Appliance Standards	2017	C	
S-2039	Batten Bars	2014	C	
S-2042	Performance Specification for Sill Steps	2017	C	
S-2043	Performance Specification for Trains Used to Carry High-Level Radioactive Material	2024	C	Update Available
S-2044	Safety Appliance Requirements for Freight Cars	2020	C	
S-2045	Remote Monitoring Equipment, Installation	2022	C	Update Available

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
S-2046	Accelerated Fatigue Test Specification for Increased Life Status Applications	2006	C	
S-2049	Anti-Pilferage Device—Boxcar Sliding Door	2007	C	
S-2050	Anti-Pilferage Device—Boxcar Plug Door	2007	C	
S-2053	Container Interface—Well Car, 53 ft	2009	C	
S-2054	Clearance Diagram—Interface Between a Well Car and a Container Equipped with a Refrigerator/ Heater Unit	2016	C	
S-2055	Body Center Plate, Low Profile	2014	C	
S-2056	Clearance Plate Diagrams for Interchange Service	2024	C	Update Available
S-3001	Approval of AAR-Approved Brake Beam Safety Supports	1984	E	
S-3005	Universal Brake Beam Gauge	1985	E	
S-3006	Spring—“D” Series, Recertified	2024	D	
S-3007	Hot Bearing Detection—Compatability Certification for New Truck Designs	2024	D	
S-3008	Hot Bearing Detection—Compatability Certification for New Truck Designs	2024	D	
S-3009	Specification for Self-Locking Cotter Keys	1992	E	
S-3010	Side Frame, Standard Pedestal-Type with Side Frame Key—Limiting Dimensions	1947	S-II	
S-3011	Side Frame, Standard Pedestal-Type Size 6 in. × 11 in. with Side Frame Key—Limiting Dimensions	1997	S-II	
S-3012	Side Frame, Alternate Standard Pedestal-Type with Side Frame Key—Application of Roller Bearing Unit	1994	S-II	
S-3013	Side Bearing Mounting Pad—Surface Requirements	2024	D	
S-3014	Freight Car Truck Springs—with Load-Carrying Snubber	2024	D	
S-3015	Freight Car Truck Springs—without Load-Carrying Snubber	2024	D	
S-3016	Spring—Groups for Free, Unrestricted Interchange for 286,000 GRL Cars (M-976 and S-286 Approved Trucks)	2024	D	
S-4000	Brake Pipe Reduction Devices, Freight Auxiliary—Environmental Tests	1984	E	
S-4001	Rubber Products—Performance	2018	E	
S-4002	Empty/Load Devices—Performance Testing	2005	E	
S-4003	Train Line Arrangement for Cars with F-Shank Couplers	2005	E	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
S-4004	Brake Cylinder—Performance Testing	2002	E	
S-4005	Brake Systems, Truck-Mounted—Performance Testing	2002	E	
S-4006	Hose Supports—Performance Testing	2008	E	
S-4007	Reservoir, Combined Auxiliary and Emergency—Reclamation Procedure	2002	E	
S-4008	Slack Adjuster, Mechanical, Double-Acting, Automatic Compression	2017	E	
S-4009	Compression Slack Adjusters and Piston Travel Adjustment—Inspection, Testing, Removal, and Application	2009	E	
S-4010	Slack Adjuster, Tension—Inspection, Testing, Removal, and Application	2018	E	
S-4013	Train Line Hoses—Coupling Extension Adapter	2002	E	
S-4020	Brake Cylinder Pressure Measurement Taps	2005	E	
S-4021	Angle Cock and Brake Hose Location on Cars with EOCC	2009	E	
S-4022	Pipe, Other than Schedule 80 Iron (RETIRED 04/16/2020)	2006	E	Update Available
S-4023	Brake Shoe Limiting Contour, Low-Friction Composition Type	2009	E	
S-4024	Brake Shoe Force Measurement Devices—Performance Specification	2002	E	
S-4025	Brake Beam Wear Liners, Non-Metallic	2004	E	
S-4026	Brake Rod Connector—Design Requirements	2003	E	
S-4027	Automated Single-Car Test Equipment, Conventional Brake Equipment—Design and Performance Requirements	2018	E	
S-4028	Train Line Arrangement with Displaceable Union on Cars with EOCC and Couplers Not Exceeding 45 in. in Length	2008	E	
S-4029	Train Line Arrangement with Displaceable Union on Cars with EOCC and Couplers Exceeding 45 in. in Length	2008	E	
S-4030	Trolley Arrangement on Cars with EOCC and E Shank Couplers	2008	E	
S-4031	Trainline Arrangement for Cars with E-Type Couplers and with Draft System Buff Travel of 6 to 10 Inches	2024	E	
S-4032	Trainline Arrangement for Cars with E/F-Type Couplers and Draft System Buff Travel of 6 to 10 Inches	2024	E	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
S-4045	Passenger Equipment Maintenance Requirements (formerly S-045)	2013	E	
S-4046	Date Markings for Rubberized Components	2016	E	
S-4047	Positive Train Control—Locomotive Air Brake Interface Requirements	2017	E	
S-4200	Electronically Controlled Pneumatic (ECP) Cable-Based Brake Systems—Performance Requirements	2014	E-II	
S-4210	ECP Cable-Based Brake System Cable, Connectors, and Junction Boxes—Performance Specification	2014	E-II	
S-4220	ECP Cable-Based Brake DC Power Supply—Performance Specification	2002	E-II	
S-4230	Intratrain Communication Specification for Cable-Based Freight Train Control Systems	2014	E-II	
S-4240	ECP Brake Equipment—Approval Procedure	2007	E-II	
S-4250	Performance Requirements for ITC-Controlled Cable-Based Distributed Power Systems	2014	E-II	
S-4260	ECP Brake and Wire Distributed Power Interoperability Test Procedures	2008	E-II	
S-4270	ECP Brake System Configuration Management	2008	E-II	
S-4286	Single-Car Test for Testing Electronically Controlled Pneumatic Braking Systems—Design and Performance Requirements	2009	E-II	
S-5018	Dynamic Braking Control	2020	M	
S-5019	Locomotive Definitions	2019	M	
S-5020	Color Code for Identifying Fluids on Locomotive	2015	M	
S-5021	Wheel Size and Speed Pickup Axle Identification	2016	M	
S-5022	Ultra-Low Sulfur Diesel (ULSD) Identification Label/Decal	2015	M	
S-5025	Gaseous Supply Hose Unit for Fuel Tenders	2023	T-III	
S-5026	Heat Exchange Fluid Hose Unit for Fuel Tenders	2023	T-III	
S-5027	21-Point Control Plug, Cable Assembly, and Receptacle (TC-21 Tender Control Cable)	2023	T-III	
S-5028	Safety Appliance Requirements for Tank Car-style Fuel Tenders	2023	T-III	
S-5029	Safety Appliance Requirements for Intermodal Car-style Fuel Tenders	2023	T-III	
S-5030	Safety Appliance Requirements for Enclosed Car Body-style Fuel Tenders	2023	T-III	
S-5031	Tender-fill Control Cable FC-18	2023	T-III	
S-5032	Tender-fill Ethernet Cable (FC-8)	2023	T-III	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
S-5101	Locomotive Cab Window Glazing Material	2002	M	
S-5500	Locomotive Interchange Agreement	2007	M	
S-5502	Automatic Engine Start/Stop System	2011	M	
S-5506	Performance Requirements for Diesel Electric Locomotive Fuel Tanks	2001	M	
S-5507	Remote Control Locomotives	2002	M	
S-5509	Locomotive Dynamic Brake Status Reporting	2018	M	
S-5512	Locomotive Event Recorder Download Standard (RETIRED 02/22/2021)	2021	M	Update Available
S-5513	Locomotive Alerter Requirements	2021	M	Update Available
S-5514	Locomotive Operator Control Symbols	2011	M	
S-5515	LED Lighting for Locomotives	2017	M	
S-5516	LED Headlights and Auxiliary Lighting for Locomotives	2020	M	
S-5520	Locomotive Cab Securement	2014	M	
S-5529	Multiple Unit Pneumatic Brake Equipment for Locomotives	2008	M	
S-5530	Locomotive Headlight Control	2018	M	
S-5531	Remote Monitoring Equipment, Locomotive—Installation	2019	M	
S-5597	Air Flow Indicators	2007	M	
S-5598	Calibration Procedure for AFM Type Air Flow Indicators	2007	M	
S-6000	Acoustic Roller Bearing Detector Level-1 Indications	2021	F	Update Available
S-6001	Bearing Temperature Performance	2023	F	Update Available
S-6002	Data Summary Definitions	2021	F	Update Available
S-6003	Data Summary—Truck Hunting	2021	F	Update Available
S-6004	Data Summary—TADS®	2021	F	Update Available
S-6005	Data Summary—RailBAM®	2021	F	Update Available
S-6006	Data Summary—Brake Health Truck	2021	F	Update Available
S-6007	Data Summary—Brake Health Car	2015	F	
S-6008	Data Summary—Salient Wheel Impact	2022	F	Update Available
S-6009	Data Summary—Automatic Equipment Identification (AEI)	2021	F	Update Available
S-6010	Data Summary—Wheel Profile Detector (WPD)	2019	F	
S-6020	Data Summary Definition—Line-of-Road Failure	2019	F	
S-6021	Data Summary Definition—Line-of-Road Failure—Air Hose Separation	2021	F	Update Available

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
S-6022	Data Summary Definition—Line-of-Road Failure—Train Separation	2016	F	
S-6023	Data Summary Definition—Line-of-Road Failure—Brake System/Other	2016	F	
S-6030	Wheel Performance—Dynamic Impact and Rim Thickness	2016	F	
S-6031	Inoperative Brake Indications as Determined by Wayside Detector	2016	F	
S-6100	Wayside Detector Data Processing	2016	F	
S-6101	Detector Calibration and Validation Requirements	2024	F	Update Available
S-6102	Wayside Passing Data Format	2021	F	Update Available
S-6103	Wheel Profile Detector	2022	F	Update Available
S-6200	Machine Vision Detector	2021	F	Update Available
S-9001	ITC System Reference Architecture	2012	K-I	
S-9002	Railroad Electronics Standards Configuration Management	2009	K-I	
S-9008.V1.0	PTC Security Architecture 2 (PSA 2)	2024	K-I	
S-9010	Data Protection	2019	K-I	Update Available
S-9053	Positive Train Control ITC System Requirements—Level 0	2018	K-I	Update Available
S-9054	Positive Train Control ITC System Requirements—Level 1	2018	K-I	Update Available
S-9055	Positive Train Control ITC Communications Segment Requirements—Level 1	2013	K-I	
S-9056	Positive Train Control ITC Wayside System Requirements—Level 1	2012	K-I	
S-9057	Positive Train Control ITC Systems Management Requirements—Level 1	2012	K-I	
S-9058	Interoperable Train Control Ticket Management (ITCTM) Requirements and Use Cases	2021	K-I	Update Available
S-9070	I-ETMS Human Machine Interface Standard	2012	K-I	
S-9074	Federated Network Requirements	2020	K-I	Update Available
S-9075	ISMP Design Considerations	2022	K-I	Update Available
S-9076	ITC Systems Management Interoperable Gateway Requirements	2021	K-I	Update Available
S-9080.V3	Positive Train Control Interoperability Committee Policy	2022	K-I	Update Available
S-9080.V4	Positive Train Control Interoperability Committee Policy	2022	K-I	Update Available

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
S-9080.V5	Positive Train Control Interoperability Committee Policy	2024	K-I	Update Available
S-9081.V1.1	Positive Train Control (PTC) – Interoperable Train Control (ITC) – Electronic Data Interchange (EDI) Rules Governing the Use of EDI 161, EDI 824 & EDI 418J	2021	K-I	Update Available
S-9081.V1.2	Positive Train Control (PTC) – Interoperable Train Control (ITC) – Electronic Data Interchange (EDI) Rules Governing the Use of EDI 161, EDI 824 & EDI 418J	2021	K-I	Update Available
S-9101.V1.2	Locomotive Electronics System Architecture	2019	K-II	Update Available
S-9101.V1.2.1	Locomotive Electronics System Architecture	2022	K-II	Update Available
S-9101B.V1.0	Locomotive Data Acquisition and Recording System Architecture	2011	K-II	
S-9101C.V1.0	Locomotive Data Acquisition and Recording System (LDARS)—Event Data Acquisition Processor	2018	K-II	Update Available
S-9101E.V1.1	Locomotive System Integration Communications	2016	K-II	Update Available
S-9101F.V1.2	Appendix F-Version 1.2 Locomotive Interface Gateway (LIG) Segment and Locomotive Application (LAPP) Segment Subsystems Addresses	2022	K-II	Update Available
S-9101G.V1.0	Locomotive Data Acquisition and Recording System (LDARS)—Common File Format Standard	2018	K-II	Update Available
S-9102.V1.0	Locomotive Electronics and Train Control System Architecture	2022	K-II	Update Available
S-9152	End-of-Train Communications	2016	K-II	Update Available
S-9153	Common Air Interface (CAI-12) Communications FOR Remote Control Locomotive Systems (RCL) Operating AT 220 Mhz	2012	K-II	
S-9202	Interoperable Train Control Wayside Interface Unit Requirements	2012	K-III	
S-9202A	Integrated Wayside Messaging Server Hardware Requirements	2011	K-III	
S-9202B	Stand-alone Wayside Messaging Server Hardware Requirements	2012	K-III	
S-9203	Automatic Equipment Identification	2010	K-III	
S-9203.V1.1	Automatic Equipment Identification	2020	K-III	Update Available
S-9203A	AEI Site-to-Host Consist Report Format	2009	K-III	
S-9203A.V1.1	AEI Site-to-Host Consist Report Format	2020	K-III	Update Available
S-9203B	AEI Site-to-Host Wayside Report Format	2010	K-III	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
S-9353. V1.0	Railroad Electronics Standards Committee (RESC) Data Dictionary	2019	K-IV	Update Available
S-9353. V1.1	Railroad Electronics Standards Committee (RESC) Data Dictionary	2021	K-IV	Update Available
S-9354	Edge Message Protocol	2018	K-IV	Update Available
S-9355 V1.0	Class C Messaging	2010	K-IV	
S-9355 V2.0	Class C Messaging	2022	K-IV	Update Available
S-9355 AppA.V1.0	Appendix A Version 1.0 Class C Messaging Class C Multicast Message Groups	2022	K-IV	Update Available
S-9356	Class D Messaging	2018	K-IV	Update Available
S-9357	Mutually Authenticated Key Exchange	2019	K-IV	Update Available
S-9358	Anonymous Key Exchange	2019	K-IV	Update Available
S-9359	Interoperable Certificate Revocation Responder Service	2019	K-IV	Update Available
S-9361 V3.0	Positive Train Control Office-Locomotive Segment— Interface Control Document (ICD)	2020	K-IV	Update Available
S-9361 V3.1	Positive Train Control Office-Locomotive Segment— Interface Control Document (ICD)	2021	K-IV	Update Available
S-9362	Interoperable Train Control (ITC) Wayside- Locomotive Interface Control Document (ICD)	2014	K-IV	
S-9362 V2.0	Interoperable Train Control (ITC) Wayside- Locomotive Interface Control Document (ICD)	2023	K-IV	
S-9363	Interoperable Train Control (ITC) Time and Location—Interface Control Document (ICD)	2012	K-IV	
S- 9363.V1.1	Interoperable Train Control (ITC) Time and Location—Interface Control Document (ICD)	2024	K-IV	
S-9364	I-ETMS® Onboard Segment Data Distribution Messages Interface Control Document (ICD)	2017	K-IV	Update Available
S-9365	Locomotive Interface Gateway (LIG) to Positive Train Control (PTC) Interface Control Document (ICD)	2019	K-IV	Update Available
S-9370.V1.0	Interoperable Event and Status Service	2022	K-IV	Update Available
S-9371.V1.0	PTC Onboard Segment—Energy Management Interface Control Document (ICD)	2014	K-IV	Update Available
S-9371.V2.0	PTC Onboard Segment—Energy Management Interface Control Document (ICD)	2018	K-IV	Update Available
S-9371.V3.0	PTC Onboard Segment—Energy Management Interface Control Document (ICD)	2021	K-IV	Update Available

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
S-9371.V4.0	PTC Onboard Segment—Energy Management Interface Control Document (ICD)	2022	K-IV	Update Available
S-9372.V1.0	PTC Back Office Segment—Energy Management interface Control Document (ICD)	2014	K-IV	Update Available
S-9372.V1.1	PTC Back Office Segment—Energy Management interface Control Document (ICD)	2016	K-IV	Update Available
S-9372.V2.0	PTC Back Office Segment—Energy Management interface Control Document (ICD)	2018	K-IV	Update Available
S-9372.V3.0	PTC Back Office Segment—Energy Management interface Control Document (ICD)	2023	K-IV	Update Available
S-9375	Centralized Traffic Control (CTC) over Interoperable Train Control Management (ITCM)—Interface Control Document	2018	K-IV	Update Available
S-9376	Edge Message Protocol (EMP) Subscribe Message Interface Control Document (ICD)	2016	K-IV	Update Available
S-9378.V1.0	Interoperable Train Control Ticket Management (ITCTM) Interface Control Document (ICD)	2021	K-IV	Update Available
S-9379	Requirements for Using an ITC EMP Application Gateway	2018	K-IV	Update Available
S-9382.V1	Interoperable Asset Access Service	2022	K-IV	Update Available
S-9401	Railroad Electronics Environmental Requirements	2009	K-V	
S-9410.V1.0	SMIA-2 Event and Status Service	2024	K-V	
S-9411.V1.0	SMIA-2 Architecture, Principles and Common Requirements	2024	K-V	
S-9412.V1.0	SMIA-2 Identity Services	2024	K-V	
S-9414.V1.0	SMIA-Service Registry	2024	K-V	
S-9415.V1.0	Automated Certificate Update	2024	K-V	
S-9416.V1.0	ITCSM Agent Requirements to Support PSA-2	2024	K-V	
S-9417	SMIA-2 Service Template	2023	K-V	
S-9419.V1	PSA-2 Back Office Application Requirements	2023	K-V	
S-9418.V1.0	PSA-2 Gateway Requirements	2024	K-V	
S-9420.V1.0	ITC Key Management Service	2024	K-V	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

**AAR Manual of Standards and Recommended Practices
Tables of Content**

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
S-9421.V1.0	WIU ITCSM Agent Requirements to Support PSA-2	2024	K-V	
S-9451	ITCSM Common Systems Management Requirements	2014	K-V	
S-9451A.V1	ITCSM WIU Asset-Specific Requirements for Interoperable Train Control	2012	K-V	
S-9451A.V2	ITCSM WIU Asset-Specific Requirements for Interoperable Train Control	2021	K-V	Update Available
S-9452	ITCSM Common Data Dictionary for Interoperable Train Control	2018	K-V	Update Available
S-9452.V3.1	ITCSM Common Data Dictionary for Interoperable Train Control	2024	K-V	Update Available
S-9452A.V2	ITCSM WIU Asset-specific Data Dictionary for Interoperable Train Control	2021	K-V	Update Available
S-9454	ITC System Management (ITCSM) Back Office Requirements for Interoperable Train Control	2014	K-V	
S-9460	ITCSM Interface Control Document for Interoperable Train	2018	K-V	Update Available
S-9501	Positive Train Control Data Model Definition	2018	K-VI	Update Available
S-9501.V4.0	Positive Train Control Data Model Definition	2024	K-VI	Update Available
S-9501 Appendix A.V1.0	Positive Train Control Data Model Definition	2024	K-VI	Update Available
S-9502.V1.0	PTC Track Data Exchange	2020	K-VI	Update Available
S-9502.V1.1	PTC Track Data Exchange	2020	K-VI	Update Available
S-9502.V2.0	PTC Track Data Exchange	2024	K-VI	Update Available
S-9503	Interoperable Electronic Train Management System® (I-ETMS) Subdivision File	2015	K-VI	Update Available
S-9503.V3.0	ITC Track Data File Format	2022	K-VI	Update Available
S-9504	PSA-2 W-OPK File Service Requirements	2023	K-VI	
S-9552	Railroad Communications Network	2004	K-VI	
S-9553	Communications System Architecture	2002	K-VI	
S-9553A	Mobile Communications Package	2002	K-VI	
S-9553B	Front End Processor	2002	K-VI	
S-9553C	Cluster Controller	2002	K-VI	
S-9553D	Base Communications Package	2002	K-VI	
S-9555	Railroad Use of IEEE 802.11	2015	K-VI	Update Available

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

**AAR Manual of Standards and Recommended Practices
Tables of Content**

NUMERIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars</u>
S-9556	AAR Channel Plan for VHF Frequencies from 160.215 MHz to 161.565 MHz	2013	K-VI	
S-9557	Interoperable Train Control (ITC) Radio Identification Format	2015	K-VI	Update Available
S-9558.V1.0	Interoperable IP Network Address Allocations	2021	K-VI	Update Available

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

THIS PAGE LEFT BLANK INTENTIONALLY

**AAR Manual of Standards and Recommended Practices
Tables of Content**

ALPHABETIC INDEX

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-5027	21-Point Control Plug, Cable Assembly, and Receptacle (TC-21 Tender Control Cable)	2023	T-III	
S-512	27-Point Control Plug and Receptacle	2007	M	
S-9556	AAR Channel Plan for VHF Frequencies from 160.215 MHz to 161.565 MHz	2013	K-VI	
S-920	AAR Component Identification (CID) Bar Code Standard	2023	F	Update Available
S-2046	Accelerated Fatigue Test Specification for Increased Life Status Applications	2006	C	
RP-5107	Access Doors to Light Boxes for Road Number, Headlight, or Warning Lights—Outside Cab	2001	M	
S-6000	Acoustic Roller Bearing Detector Level-1 Indications	2021	F	Update Available
M-947	Adhesive-Backed Films for Marking Cars—Performance-Based Requirements	2015	C	
RP-9203	AEI Reader Equipment Requirements	2010	K-III	
S-704	Adapter for Use with AAR Standard Pedestal-Type Side	1968	H	
S-9203A	AEI Site-to-Host Consist Report Format	2009	K-III	
S-9203A. V1.1	AEI Site-to-Host Consist Report Format	2020	K-III	Update Available
S-441	Air Brake and Signal Hose—Mounting of Coupling and Nipple	2002	E	
RP-508	Air Brake Exhaust Piping	2001	M	
S-5597	Air Flow Indicators	2007	M	
S-669	Analytic Evaluation of Locomotive Wheel Designs	2020	G	
S-427	Angle Cock and Air Brake Hose Location on Cars with Excessive Overhang Preventing Compliance with AAR Standards S-424, S-425, and S-426	2005	E	
S-4021	Angle Cock and Brake Hose Location on Cars with EOCC	2009	E	
S-424	Angle Cock Location	2018	E	
S-495	Angle Cock Location on Cars Arranged for Rotary Dump Service	2002	E	
S-425	Angle Cock Location on Cars Equipped with AAR Type F Coupler	2002	E	
S-428	Angle Cock Location on Cars Equipped with AAR Type F Coupler and Cushioned Underframe	2005	E	
S-426	Angle Cock Location on Cars with Floating Sills	2005	E	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-429	Angle Cock Locking Lugs—Minimum Permissible Engagement	2002	E	
S-470	Angle Cock, Ball Type—Specification for Approval	2002	E	
S-476	Angle Cocks and Brake Pipe End Cocks—Repair Specification	1981	E	
S-9358	Anonymous Key Exchange	2019	K-IV	Update Available
S-2050	Anti-Pilferage Device—Boxcar Plug Door	2007	C	
S-2049	Anti-Pilferage Device—Boxcar Sliding Door	2007	C	
S-727	Appendix A Approved Materials	2015	G-II	
S-9355	Appendix A Version 1.0 Class C Messaging Class C AppA.V1.0 Multicast Message Groups	2022	K-IV	Update Available
S-9101F V1.2	Appendix F-Version 1.2 Locomotive Interface Gateway (LIG) Segment and Locomotive Application (LAPP) Segment Subsystems Addresses	2022	K-II	Update Available
S-060	Application for Component Approval Procedure	2015	AS	Update Available
S-379	Application Tolerances for Hanger-Type Brake Beams	unk	E	
S-3001	Approval of AAR-Approved Brake Beam Safety Supports	1984	E	
S-9415.V1.0	Automated Certificate Update	2024	K-V	
S-735	Approval Requirements for Reconditioners and Remanufacturers of Roller Bearings	2024	H-II	
S-239	Arrangement E60 Coupler Design 24 5/8 in. Draft Gear Pocket Striker Applied by Welding	2012	C	
S-4027	Automated Single-Car Test Equipment, Conventional Brake Equipment—Design and Performance Requirements	2018	E	
S-5502	Automatic Engine Start/Stop System	2011	M	
S-9203	Automatic Equipment Identification	2010	K-III	
S-9203.V1.1	Automatic Equipment Identification	2020	K-III	Update Available
S-658	Axle for Passenger Cars (Amfleet) Inboard Roller Bearing—Raised Wheel Seat	2020	G	
RP-5523	Axle Nomenclature Arrangement—Locomotives	2001	M	
RP-622	Axle, Weight—Machined Finish, Raised Wheel Seat	2007	G	
S-649	Axles—Manufacturing Facility Inspection by Technical Services	2004	G	
M-101	Axles, Carbon Steel, Heat-Treated	2020	G	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
M-985	Bad Order Device for Identification of Defective Hitches	2004	I	
S-374	Badge Plate for Showing Proper Dimensions for Body and Truck Brake Levers	1964	E	
S-9553D	Base Communications Package	2002	K-VI	
RP-5209	Basic Brake Design Data for Freight Locomotives (RETIRED 05/20/2024)	2024	M	Update Available
S-2039	Batten Bars	2014	C	
S-6001	Bearing Temperature Performance	2022	F	Update Available
M-131	Blooms, Billets, and Slabs—Alloy Steel	1964	S	
S-211	Body Center Plate Gauge—14-in. and 16-in. Diameter	1976	C	
S-258	Body Center Plate Relief	1980	C	
S-206	Body Center Plate, Cast Steel or Forged—for Freight Cars with 14 in. Center Plates	1978	C	
S-207	Body Center Plate, Cast Steel or Forged—for Freight Cars with 16 in. Center Plates	2014	C	
S-2055	Body Center Plate, Low Profile	2014	C	
S-204	Body Center Plate, Separable—Surface Finish	2014	C	
M-203A	Bolster Design Loads	1997	S	
S-316	Bolster—Tolerances	1981	S-II	
S-310	Bolster, 14 in. Center Plate—Limiting Outline	1979	S-II	
S-311	Bolster, 16 in. Center Plate—Limiting Outline	2009	S-II	
S-312	Bolster, Truck—Marking Diagram	2014	S-II	
S-355	Brake Beam Gauge Application—Hangerless Type	1979	E	
S-352	Brake Beam Gauge Assembly—Hangerless Type	1979	E	
S-353	Brake Beam Gauge Details—Hangerless Type	1981	E	
S-348	Brake Beam Gauges for Standard Brake Beams	1992	E	
S-368	Brake Beam Hangers and Attachments	1965	E	
S-369	Brake Beam Hangers and Attachments	1965	E	
S-344	Brake Beam Specifications and Tests	2007	E	
RP-322	Brake Beam Strut Keyway Gauge	1992	E	
S-4025	Brake Beam Wear Liners, Non-Metallic	2004	E	
S-346	Brake Beam—Outline, Hanger Type	1953	E	
S-349	Brake Beam—Outline, Hangerless Type	1979	E	
S-345	Brake Beam—Tolerance, Hangerless Type	1979	E	
RP-401	Brake Control Valves—Mount-Configuration Designs as Related to Field Vibration	2014	C	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
M-619	Brake Cylinder Line Hose Assemblies— Performance Requirements	2005	E	
M-914	Brake Cylinder Lubricant	2003	E	
S-4020	Brake Cylinder Pressure Measurement Taps	2005	E	
S-443	Brake Cylinder Release Valve and Release Rod	2002	E	
S-444	Brake Cylinder Release Valve Rod Handles— Location	2002	E	
S-4004	Brake Cylinder—Performance Testing	2002	E	
S-401	Brake Design Requirements.	2020	E	Update Available
S-473	Brake Equipment—Application Form for AAR Approval of New and Untried Freight Cars	2003	E	
S-400	Brake Equipment—Installation Specifications	2018	E	
S-372	Brake Head Conversion—Metal Shoe-Type to High- Friction Composition	1972	E	
S-375	Brake Pin Tolerance	1975	E	
S-4000	Brake Pipe Reduction Devices, Freight Auxiliary— Environmental Tests	1984	E	
S-471	Brake Pipe Restriction Test	2010	E	
S-4026	Brake Rod Connector—Design Requirements	2003	E	
S-4024	Brake Shoe Force Measurement Devices— Performance Specification	2002	E	
S-448	Brake Shoe Go Gauge	2002	E	
S-376	Brake Shoe Keys	2003	E	
S-4023	Brake Shoe Limiting Contour, Low-Friction Composition Type	2009	E	
S-449	Brake Shoe No-Go Gauge	2002	E	
RP-518	Brake Shoe Unflanged	2001	M	
M-997	Brake Shoe—High-Friction Tread Conditioning, High Capacity	2008	E	
M-402	Brake Shoe, Cast Iron, High-Phosphorus Type	2002	E	
M-926	Brake Shoe, High-Friction Composition or Metal Type	2015	E	
S-431	Brake Shoe, High-Friction Composition Type— Limiting Contour	2017	E	
M-996	Brake Shoe, Low-Friction Composition Type	2015	E	
S-430	Brake Shoe, Metal, Reinforced	2002	E	
RP-599	Brake Shoes—High-Friction Composition Type for Locomotives	2001	M	
RP-5596	Brake Shoes—Metal Type	2001	M	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-4005	Brake Systems, Truck-Mounted—Performance Testing	2002	E	
RP-509	Braking Ratios for Locomotives	2024	M	Update Available
S-100	Bushings, Seamless Steel Tube—Coupler Shanks and Yokes	2010	B	
S-5598	Calibration Procedure for AFM Type Air Flow Indicators	2007	M	
S-703	Cap Screws for Journal Roller Bearing Assemblies	2021	H	
S-2034	Car Builder Certification	2019	C	
RP-899	Car Owner’s Manual for the Inspection and Maintenance of Double-Stack Container Cars	2018	I	
S-742	Car Repair Track Information Specific to Roller Bearings	2024	H-II	
S-2008	Card Holder—Bad Order	2013	C	
M-220	Casting Component Nondestructive Testing Requirements	2022	S	Update Available
M-201	Castings, Steel	2024	S	Update Available
S-307	Center Bowl Horizontal Wear Liner	2017	D	
M-979	Center Bowl Liner—Requirements for Approval	2024	D	
S-265	Center Pin—Freight Car	1989	C	
S-267	Center Sill Section—Welding Notes	1979	C	
S-266	Center Sill Section, Rolled Steel	2012	C	
S-9375	Centralized Traffic Control (CTC) over Interoperable Train Control Management (ITCM)—Interface Control Document	2018	K-IV	Update Available
S-612	Circumference Measure (Tape) for 27 in. to 38 in. Steel Wheels	2004	G	
S-613	Circumference Measure (Tape) for 38 in. to 52 in. Steel Wheels	2004	G	
S-9355 V1.0	Class C Messaging	2010	K-IV	
S-9355 V2.0	Class C Messaging	2022	K-IV	Update Available
S-9356	Class D Messaging	2018	K-IV	Update Available
S-2054	Clearance Diagram—Interface Between a Well Car and a Container Equipped with a Refrigerator/ Heater Unit	2016	C	
S-2056	Clearance Plate Diagrams for Interchange Service	2024	C	Update Available
S-9553C	Cluster Controller	2002	K-VI	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-486	Code of Air Brake System Tests for Freight Equipment—Single Car Test	2018	E	
RP-512	Color Code for Identifying Fluids on Locomotive	2001	M	
S-5020	Color Code for Identifying Fluids on Locomotive	2015	M	
S-255	Combined Striker and Front Draft Lug Tolerances	1974	C	
S-627	Combined Wheel Gauge	1998	G	
S-628	Combined Wheel Gauge	1998	G	
S-9153	Common Air Interface (CAI-12) Communications FOR Remote Control Locomotive Systems (RCL) Operating AT 220 Mhz	2012	K-II	
S-9553	Communications System Architecture	2002	K-VI	
S-702	Component Parts for Journal Roller Bearing Assemblies	1998	H	
S-4009	Compression Slack Adjusters and Piston Travel Adjustment—Inspection, Testing, Removal, and Application	2009	E	
M-970	Condition-Based Certification of Multi-Level Auto Rack Cars	2023	N	Update Available
S-051	Conditions Governing Withdrawal of AAR Approval of Freight Car and Locomotive Components and Products	2000	AS	
S-810	Field Impact and Over-the-Road Tests of Multi-Level Tie-down Equipment and/or Methods	2023	N	
S-2053	Container Interface—Well Car, 53 ft	2009	C	
M-930	Containers for Domestic Intermodal Service	2019	I	Update Available
S-468	Control Valve Pipe Bracket	2009	E	
S-462	Control Valve—Approval Procedure	2019	E	Update Available
S-477	Control Valve—Shop Certification Requirements for Approved Valves	2002	E	
S-467	Control Valve, Freight Brake—Environmental Tests	2002	E	
S-131	Coupler (Rotary), Type E60, Operating Rod, use with up to 6 1/2-in. Total Draft Gear Travel	2016	S-III	
S-133	Coupler (Rotary), Type F70, Operating Rod, use with up to 6 1/2-in. Total Draft Gear Travel	2016	S-III	
S-134	Coupler (Rotary), Types E60, E67, and F70, Operating Rod for Use with Standard Draft Gear or End-of-Car Cushioning up to 15-in. Total Travel	2016	S-III	
S-269	Coupler Carrier Wear Plate	2003	B	
M-932	Coupler Centering Device Specification	2003	S-III	
S-117	Coupler Contour, F Type, Interlocking	2003	S-III	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-137	Coupler Shank Wear Plates and Application	2000	S-III	
S-130	Coupler, E Type, Articulated Rotor Lever Assembly	2003	S-III	
S-163	Coupler, E Type, Bottom Shelf, SBE60EE	2024	S-III	Update Available
S-164	Coupler, E Type, Bottom Shelf, SBE67DE	2020	S-III	
S-105	Coupler, E Type, Detail Parts	2021	S-III	Update Available
S-102	Coupler, E Type, E60EE	2024	S-III	Update Available
S-107	Coupler, E Type, E67DE	2020	S-III	
S-173	Coupler, E Type, Guard Arm Lightener Hole Openings and Knuckle Flag Hole—Standard Dimensions	2003	S-III	
S-106	Coupler, E Type, No. 10-A Contour and Detail of Pivot Pin Hole	2003	S-III	
S-103	Coupler, E Type, Top and Bottom Shelf, SE60EE	2024	S-III	Update Available
S-154	Coupler, E Type, Top and Bottom Shelf, SE67DE	2020	S-III	
S-165	Coupler, E/F Type, Bottom Shelf, SBE68DE	2020	S-III	
S-170	Coupler, E/F Type, Bottom Shelf, SBE69CE	2020	S-III	
S-108	Coupler, E/F Type, E68DE	2020	S-III	
S-109	Coupler, E/F Type, E69CE	2020	S-III	
S-155	Coupler, E/F Type, Top and Bottom Shelf, SE68DE	2020	S-III	
S-172	Coupler, E/F Type, Top and Bottom Shelf, SE69CE	2020	S-III	
S-174	Coupler, F Type, Guard Arm Lightener Hole Openings and Knuckle Flag Hole—Standard Dimensions	2003	S-III	
S-116	Coupler, F Type, Interlocking, Coupler and Yoke Parts	2003	S-III	
S-110	Coupler, F Type, Standard F Coupler, F70DE	2009	S-III	
S-112	Coupler, F Type, Standard, F73BE	2003	S-III	
S-114	Coupler, F Type, Standard, F79DE	2003	S-III	
S-111	Coupler, F Type, with Top Shelf, Standard, SF70DE	2003	S-III	
S-115	Coupler, F Type, with Top Shelf, Standard, SF79DE	2003	S-III	
S-203	Coupler, Height Adjustment (RETIRED 07/20/2023)	1962	C	Update Available
M-212A	Coupler Parts, Knuckles, Vertical Connection Pins, Follower Blocks, and Draft Keys—Secondhand Classification	2024	S	
M-212	Couplers and Yokes, Secondhand—Classification and Reconditioning Procedure	2023	S	Update Available
S-129	Couplers—Arrangement of Operating Mechanisms	2000	S-III	
M-215	Coupling Systems	2018	S	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
RP-5115	Cushion Pad—Locomotive Cab Door Frame	2001	M	
RP-110	Cushioning Device Inspection	2003	B	
M-921E	Cushioning Devices, Active Draft End	2024	B	Update Available
M-921F	Cushioning Devices, Active Draft End of Car	2024	B	Update Available
M-921B	Cushioning Devices, End-of-Car	2024	B	Update Available
M-921D	Cushioning Devices, End-of-Car—Motor-Vehicle-Carrying	2024	B	Update Available
M-921H	Cushioning Devices, End-of-Car, General Requirements	2024	B	Update Available
M-921C	Cushioning Devices, Reconditioned—Approved for Freight Service	2024	B	Update Available
M-921A	Cushioning Devices, Sliding Sill	2018	B	
S-181	Cushioning Pocket Identification Guide—AAR Rule 59	2003	B	
S-9010	Data Protection	2019	K-I	Update Available
S-6020	Data Summary Definition—Line-of-Road Failure	2019	F	
S-6021	Data Summary Definition—Line-of-Road Failure—Air Hose Separation	2016	F	
S-6023	Data Summary Definition—Line-of-Road Failure—Brake System/Other	2016	F	
S-6022	Data Summary Definition—Line-of-Road Failure—Train Separation	2016	F	
S-6002	Data Summary Definitions	2021	F	Update Available
S-6009	Data Summary—Automatic Equipment Identification (AEI)	2021	F	Update Available
S-6007	Data Summary—Brake Health Car	2015	F	
S-6006	Data Summary—Brake Health Truck	2021	F	Update Available
S-6005	Data Summary—RailBAM®	2021	F	Update Available
S-6008	Data Summary—Salient Wheel Impact	2022	F	Update Available
S-6004	Data Summary—TADS®	2021	F	Update Available
S-6003	Data Summary—Truck Hunting	2021	F	Update Available
S-6010	Data Summary—Wheel Profile Detector (WPD)	2019	F	
S-4046	Date Markings for Rubberized Components	2016	E	
RP-206	Decking, Wood—for Open Top Cars	1981	C	
S-046	Definitions of Terms for the <i>AAR Manual of Standards and Recommended Practices</i>	2015	AS	Update Available
RP-308	Design Dimensions for Brake Hanger Bracket	1937	E	
M-1001	Design, Fabrication, and Construction of Freight Cars	2023	C-II	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
M-968	Design Requirements for Rigid Open-Top Freight Car Covers	2024	C	
M-992	Designated Satellite Shop Repair Specifications for Multi-Level Autorack Cars	2024	N	Update Available
RP-514	Designation of Sides and Ends of Locomotives	2001	M	
RP-817	Destination Inspections	2023	N	
S-6101	Detector Calibration and Validation Requirements	2024	F	Update Available
RP-5132	Diesel Locomotive Control Stand for New Locomotives	2001	M	
S-493	Dirt Collector and Cutout Cock—Test Specification	2002	E	
S-489	Dirt Collector and Cutout Cock, Combined—Repair Specification	1981	E	
S-252	Door Air Lines—Location of End Cocks	1978	C	
RP-5117	Door Closure Bar—Locomotive Cab	2001	M	
S-249	Door Puller Bracket, Application to Intermediate Post	1978	C	
S-229	DOT Placard Location	2013	C	
RP-851	Double-Stack Container Cars	2004	I	
S-243	Draft Arrangement, E68 Coupler, 24 5/8-in. Pocket	1983	C	
S-244	Draft Arrangement, E69 Coupler, 24 5/8-in. Pocket	1983	C	
S-245	Draft Arrangement, F70 Coupler, 24 5/8-in. Pocket—Striker Applied by Welding	1978	C	
S-247	Draft Arrangement, F79 Coupler, 24 5/8-in. Pocket	1978	C	
S-119	Draft Gear Follower, Y44A	2012	B	
RP-101	Draft Gear Inspection	2011	B	
M-901F	Draft Gear Reaction Forces, Measuring and Recording, Instrumentation Requirements	2003	B	
M-901K	Draft Gear, All-Hydraulic, Rated by Impact Testing	2015	B	
M-901G	Draft Gear, Rated by Impact Testing	2023	B	Update Available
M-901B	Draft Gear, Secondhand and Reconditioned	2015	B	
M-901E	Draft Gears with a Minimum Capacity of 36,000 ft·lb at a Reaction of 500,000 lb	2023	B	Update Available
S-121	Draft Key	2017	B	
S-120	Draft Key Retainers, Locks, Keepers, and Washer	2011	B	
S-254	Draft Pocket Tolerances	1974	C	
S-5018	Dynamic Braking Control	2020	M	
S-4260	ECP Brake and Wire Distributed Power Interoperability Test Procedures	2008	E-II	
S-4240	ECP Brake Equipment—Approval Procedure	2007	E-II	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-4270	ECP BRake System Configuration Management	2008	E-II	
S-4220	ECP Cable-Based Brake DC Power Supply— Performance Specification	2002	E-II	
S-4210	ECP Cable-Based Brake System Cable, Connectors, and Junction Boxes—Performance Specification	2014	E-II	
S-9354	Edge Message Protocol	2018	K-IV	Update Available
S-9376	Edge Message Protocol (EMP) Subscribe Message Interface Control Document (ICD)	2016	K-IV	Update Available
M-967	Electrochemical Metal Deposition for Repairing Roller Bearing Axle Journals	2008	G	
RP-940	Electronic Distribution Format For Engineering Drawings	2005	C	
S-4200	Electronically Controlled Pneumatic (ECP) Cable- Based Brake Systems—Performance Requirements	2014	E-II	
S-4002	Empty/Load Devices—Performance Testing	2005	E	
S-488	End Cock and Air Brake Hose Location on Long Cars	2002	E	
S-472	End Cock Location on Cars Arranged for Rotary Dump Service	2002	E	
M-941	End Enclosure for Fully Enclosed Multi-Level Auto Rack Cars	2023	N	
S-440	End Hose Gaskets, Couplings, and Nipples—Annual Test Requirements	1999	E	
M-902	End-of-Car Energy Management Systems	2024	B	
S-9152	End-of-Train Communications	2016	K-II	Update Available
M-921G	Facility Inspection Requirements for Manufacturers of New and Reconditioned Cushioning Devices for Freight Service	2024	B	Update Available
S-9074	Federated Network Requirements	2020	K-I	Update Available
S-101	Field Service Experience—Reporting Requirements	2003	B	
S-492	Field Service Reports—Requirements	2002	E	
S-010	Field Test Requirements for Materials, Devices, and Products Manufactured to AAR Specifications but Having No Previous Service Experience on AAR Member Roads		AS	
RP-633	Figures	2022	G-II	
M-908	Flat Steel Floor for Freight Cars 50,000, 60,000, 70,000 or 80,000 lb Capacities	2006	C	
RP-5120	Flexible Hinge Guard on Locomotive Cab Door	2001	M	
M-964	Floor, Nailable Steel—Freight Cars 50,000-, 60,000- , 70,000- or 80,000-lb Capacities	2006	C	
M-127	Forgings, Alloy Steel	1964	S	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
M-126	Forgings, Carbon Steel	1968	S	
M-105	Forgings, Carbon Steel Blooms, Billets, and Slabs	1964	S	
RP-830	Form Preparation for Vehicle Inspection	2023	N	
M-211	Foundry and Product Approval Requirements for the Manufacture of Couplers, Coupler Yokes, Knuckles, Follower Blocks, and Coupler Parts	2023	S	Update Available
S-286	Free/Unrestricted Interchange for 286,000 lb Gross Rail Load Cars	2022	C	Update Available
M-934	Freight Car Journal Roller Bearings	2021	H	
S-3014	Freight Car Truck Springs—with Load-Carrying Snubber	2024	D	
S-3015	Freight Car Truck Springs—without Load-Carrying Snubber	2024	D	
M-980	Friction Wedge Performance for Railcars—Dynamic Wear Test	2024	D	
S-9553B	Front End Processor	2002	K-VI	
S-5025	Gaseous Supply Hose Unit for Fuel Tenders	2023	T-III	
M-602	Gaskets, Air Hose	2002	E	
RP-613	Gauge, Axle—Master Gauge for Verifying Axle Journal and Fillet Gauge S-614	2004	G	
RP-637	Gauge, Wheel—Application Drawing for AAR 1B Wheel Gauges S-661 and S-665	1991	G	
RP-636	Gauge, Wheel—Application Drawing for AAR 1B Wheel Gauges S-662 and S-667	1991	G	
RP-638	Gauge, Wheel—Application Drawing for Reference Gauge to Verify Wheel Gauges S-661, S-662, S-663, S-664, S-665, S-666, S-667, and S-668	1991	G	
RP-630	Gauge, Wheel—Application for Measuring Condemnable Overheated Wheels	2004	G	
RP-629	Gauge, Wheel—for Measuring Condemnable Overheated Wheels	2004	G	
S-618	Gauge, Wheel—Former Standard 1976	1976	G	
S-617	Gauge, Wheel—Former Standard 1980	1980	G	
RP-614	Gauge, Wheel—Master Gauge for Verifying Wheel Gauges S-617 and S-618	2004	G	
S-661	Gauge, Wheel—Maximum Flange Thickness, Height, and Throat Radii Gauge for AAR-1B Narrow-Flange Steel Wheel	1991	G	
S-665	Gauge, Wheel—Maximum Flange Thickness, Height, and Throat Radii Gauge for AAR-1B Wide-Flange Steel Wheels	1991	G	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-662	Gauge, Wheel—Minimum Flange Thickness, Height, and Throat Radii Gauge for AAR-1B Narrow-Flange Steel Wheel	1991	G	
S-667	Gauge, Wheel—Minimum Flange Thickness, Height, and Throat Radii Gauge for AAR-1B Wide-Flange Steel Wheels	1991	G	
S-663	Gauge, Wheel—Reference Limit Gauge for Verifying AAR 1B Narrow Flange Wheel Gauge S-661	1991	G	
S-664	Gauge, Wheel—Reference Limit Gauge for Verifying AAR 1B Narrow Flange Wheel Gauge S-662	1991	G	
S-666	Gauge, Wheel—Reference Limit Gauge for Verifying AAR 1B Wide Flange Wheel Gauge S-665	1991	G	
S-668	Gauge, Wheel—Reference Limit Gauge for Verifying AAR 1B Wide Flange Wheel Gauge S-667	1991	G	
RP-608	Gauge, Wheel—Reference Master Disk for Verifying Wheel Circumference Gauges S-612 and S-613	2004	G	
RP-615	Gauge, Wheel—Simplified	2004	G	
S-360	Gauges for End of Hangerless-Type Brake Beam	1979	E	
RP-634	Gauges—Wheel and Axle Shop	2022	G-II	
M-1001	General Data	2023	C-II	Update Available
Chapter 2				
RP-632	General Requirements and Information	2022	G-II	
S-359	Go and No-Go Gauge for Brake Head for Limiting Contour of Face, Metal or High-Friction Shoe	1990	E	
S-358	Go Gauge for Brake Head, Metal or High-Friction Shoe	2009	E	
S-361	Go Gauges for Brake Shoe	1944	E	
S-233	Gravity Outlet Gates, New—for Covered Hopper Cars	2014	C	
M-929	Grease for Lubrication of Trailer Hitches on Flatcars	2004	I	
S-475	Hand Brakes	2024	E	Update Available
S-224	Handholds, Safety Railings, and Ladder Treads	2015	C	
RP-2018	Handholds, Steps, and Ladders for Interior Access	2023	C	Update Available
RP-812	Handling and Inspection of Multi-Level Cars and Equipment After Loading	2023	N	
RP-810	Handling and Inspection of Vehicles Before Loading	2023	N	
RP-818	Handling of Multi-Level Cars and Equipment After Unloading	2023	N	
RP-813	Handling of Multi-Level Cars in Trains and Yards	2023	N	
S-380	Hangerless Brake Beam Extension Functional Gauge (Parallelism)	1979	E	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-5026	Heat Exchange Fluid Hose Unit for Fuel Tenders	2023	T-III	
M-928	Highway Trailer Hitches for Freight Cars	2018	I	
M-928A	Highway Trailer Hitches for Freight Cars with 90,000-lb Maximum Gross Vehicle Weight Capacity	2018	I	
RP-233	Hold-Down Clips—Gondolas, Side Sheet Mounted	1948	C	
RP-234	Hold-Down Clips—Gondolas, Top Cord Mounted	1982	C	
RP-5599	Hook and Eye Brake Rigging—Lever Angularity Inspection	2007	E	
S-2025	Hopper Car—End for Door Operating Shaft	1914	C	
RP-258	Hopper Car—Grain Service	1992	C	
M-800	Hopper Car, Covered—For Transport of Oxidizing Commodities	2023	C	Update Available
M-801	Hopper Car, Covered—Pressurized During Unloading and In-Transit	2023	C	Update Available
RP-200	Hopper Car, Open Top, in Shaker Service—Design Features	1976	C	
S-458	Hose Assemblies—Reclamation Procedures	2002	E	
M-923	Hose Cement	1983	E	
S-439	Hose Clamps	2002	E	
S-491	Hose Coupling	2005	E	
S-455	Hose Coupling Condemning Gauges for Checking the Beads and Shanks on New and Used Hose Couplings and Nipples	2002	E	
S-447	Hose Coupling Gasket Gauge	2002	E	
S-456	Hose Coupling Gauges for Gauging New and Used Couplings	2002	E	
S-457	Hose Coupling Tester, Air Brake, Type A-1-B—Modification to Permit Testing of Pinless-Type Couplings	2002	E	
S-436	Hose Coupling, Dummy	2002	E	
M-927	Hose Fittings and Hose Assemblies, Air, Wire-Reinforced	2007	E	
S-432	Hose Support, S Hook	2002	E	
S-4006	Hose Supports—Performance Testing	2008	E	
M-620	Hose, Air, Fabric-Reinforced	2011	E	
M-618	Hose, Air, Wire-Reinforced	2011	E	
S-438	Hose, Armored Type—Mounting Procedure	1949	E	
S-437	Hose, Other than Armored Type—Mounting Procedure	2002	E	
M-601	Hose, Wrapped, Air—Brake, “End Hose”	2006	E	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-3007	Hot Bearing Detection—Compatability Certification for New Truck Designs	2024	D	
S-9070	I-ETMS Human Machine Interface Standard	2012	K-I	
S-9364	I-ETMS® Onboard Segment Data Distribution Messages Interface Control Document (ICD)	2017	K-IV	Update Available
S-9503. V3.0	ITC Track Data File Format	2022	K-VI	Update Available
S-217	Identification Plate—Boxcar Doors	2009	C	
S-158	Immobilization of Freightmaster	2003	B	
S-161	Immobilization of Freightmaster 10-in. Type E Miner M-12S	2003	B	
S-157	Immobilization of Freightmaster Types F, FS, and B	2003	B	
S-159	Immobilization of Freightmaster Types HD and AR-F	2003	B	
S-156	Immobilization of Freightmaster Types SP-E and SP-C	2003	B	
S-162	Immobilization of Keystone F Shank	2003	B	
S-160	Immobilization of Keystone Type E Miner SR-12	2003	B	
S-171	Immobilization of Pullman Standard, ACF, or Keystone Center-of-Car Cushioning Devices (“Dummy Cylinder Method”)	2003	B	
S-125	Immobilization of Sliding Sill on Cushion Underframe Cars Having Damaged or Defective ACF Freight Saver 20- or 30-in. Travel Units—Plate No. 526-1	2003	B	
S-127	Immobilization of Sliding Sill on Cushion Underframe Cars Having Damaged or Defective Hydra Cushion 10-, 12-, or 20-in. Travel Units or Evans Cushion Pak Wide Tunnel Units—Plate No. 526-3	2003	B	
S-128	Immobilization of Sliding Sill on Cushion Underframe Cars Having Damaged or Defective Hydra Pullman Standard Hydroframe 40 and 60 Units or National 3C Wide Tunnel Units—Plate No. 526-4	2003	B	
S-126	Immobilization of Sliding Sill on Cushion Underframe Cars Having Damaged or Defective Keystone 20-in. Travel Unit, Santa Fe Shock Control, A.O. Smith Cushion Ride, and Rockwell Cargo Cushion—Plate No. 526-2	2003	B	
S-741	Information on Amtrak Passenger Car Bearings	2024	H-II	
S-6031	Inoperative Brake Indications as Determined by Wayside Detector	2016	F	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-732	Inspection and Lubrication of Trailer Hitches on Flatcars	2016	I	
RP-814	Inspection of Multi-Levels and Vehicles En Route	2023	N	
RP-609	Inspection Stand for Use with Master Disks	2004	G	
S-9202A	Integrated Wayside Messaging Server Hardware Requirements	2011	K-III	
M-934D	Interchangeable Backing Rings for Freight Car Tapered-Roller Journal Bearings	2007	H	
M-934C	Interchangeable End Caps for Freight Car Tapered-Roller Journal Bearings	2018	H	
S-739	Interchangeable Roller Bearing Requirements	2024	H-II	
M-934B	Interchangeable Seal Wear Rings for Freight Car Tapered-Roller Journal Bearings	2011	H	
M-934A	Interchangeable Spacers for Freight Car Tapered-Roller Journal Bearings	2011	H	
M-998	Intermodal Container Support and Interbox Connector (IBC) Securement Systems for Freight Cars	2022	I	Update Available
M-952	Intermodal Container Support and Securement System for Freight Cars	2008	I	
RP-852	Intermodal Equipment Cars	2003	I	
M-933	Intermodal Trailer and Container Securement	2018	I	
RP-2001	Interoperability Requirements—Movement of Passenger Equipment on Freight Railroads	2019	M	
RP-2002	Interoperability Requirements—Operation of Regularly Scheduled Revenue Passenger Service	2019	M	
S-9382.V1	Interoperable Asset Access Service	2022	K-IV	Update Available
S-9359	Interoperable Certificate Revocation Responder Service	2019	K-IV	Update Available
S-9503	Interoperable Electronic Train Management System® (I-ETMS) Subdivision File	2015	K-VI	Update Available
S-9370.V1.0	Interoperable Event and Status Service	2022	K-IV	Update Available
M-1004	Interoperable Fuel Tenders for Locomotives	2023	T	
S-9558.V1.0	Interoperable IP Network Address Allocations	2021	K-VI	Update Available
RP-9511	Interoperable Train Control (ITC) Onboard Track Database Field Survey and Validation	2019	K-VI	Update Available
S-9557	Interoperable Train Control (ITC) Radio Identification Format	2015	K-VI	Update Available
S-9363	Interoperable Train Control (ITC) Time and Location—Interface Control Document (ICD)	2012	K-IV	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-9363.V1.1	Interoperable Train Control (ITC) Time and Location—Interface Control Document (ICD)	2024	K-IV	
S-9362	Interoperable Train Control (ITC) Wayside- Locomotive Interface Control Document (ICD)	2014	K-IV	
S-9362 V2.0	Interoperable Train Control (ITC) Wayside- Locomotive Interface Control Document (ICD)	2023	K-IV	
S-9378.V1.0	Interoperable Train Control Ticket Management (ITCTM) Interface Control Document (ICD)	2021	K-IV	Update Available
S-9058	Interoperable Train Control Ticket Management (ITCTM) Requirements and Use Cases	2021	K-I	Update Available
S-9202	Interoperable Train Control Wayside Interface Unit Requirements	2012	K-III	
M-9154B	Intra-Consist Communications (ICC) Layer 2	2015	K-II	Update Available
M-9154A	Intra-Consist Communications (ICC) Routing Functionality	2013	K-II	
S-4230	Intratrain Communication Specification for Cable- Based Freight Train Control Systems	2014	E-II	
S-9075	ISMP Design Considerations	2022	K-I	Update Available
S-9420.V1.0	ITC Key Management Service	2024	K-V	
S-9454	ITC System Management (ITCSM) Back Office Requirements for Interoperable Train Control	2014	K-V	
S-9001	ITC System Reference Architecture	2012	K-I	
S-9076	ITC Systems Management Interoperable Gateway Requirements	2021	K-I	Update Available
S-9363	ITC Time and Location—Interface Control Document (ICD)	2012	K-IV	
S-9416.V1.0	ITCSM Agent Requirements to Support PSA-2	2024	K-V	
M-9453	ITCSM Asset User Interface Requirements for Interoperable Train Control	2014	K-V	
S-9452	ITCSM Common Data Dictionary for Interoperable Train Control	2018	K-V	Update Available
S-9452.V3.1	ITCSM Common Data Dictionary for Interoperable Train Control	2024	K-V	Update Available
S-9451	ITCSM Common Systems Management Requirements	2014	K-V	
S-9460	ITCSM Interface Control Document for Interoperable Train	2018	K-V	Update Available
S-9451A.V1	ITCSM WIU Asset-Specific Requirements for Interoperable Train Control	2012	K-V	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-9451A.V2	ITCSM WIU Asset-Specific Requirements for Interoperable Train Control	2021	K-V	Update Available
S-9452A.V1	ITCSM WIU Asset-Specific Data Dictionary for Interoperable Train Control	2012	K-V	
S-9452A.V2	ITCSM WIU Asset-specific Data Dictionary for Interoperable Train Control	2021	K-V	Update Available
M-924	Journal Roller Bearing Adapters for Freight Cars	2018	H	
M-942	Journal Roller Bearing Grease	2020	H	
M-216	Knuckles, Types E and F—Fatigue Test	2023	S	Update Available
RP-232	Ladder, End and Side—Configuration	1981	C	
S-230	Lading Strap Anchor Arrangement and Use—for Flatcars	1973	C	
RP-590	Lead-Acid Batteries and Compartments	2001	M	
S-5515	LED Lighting for Locomotives	2017	M	
S-5516	LED Headlights and Auxiliary Lighting for Locomotives	2020	M	
S-234	Lifting Freight Cars	1982	C	
S-616	Limit Wear Gauge for Condemning Wheel Defect—Worn Journal Collar and Journal Fillet Gauge	2004	G	
S-629	Limit Wear Gauge for Condemning Wheel Defect—Worn Journal Collar and Journal Fillet Gauge	1998	G	
S-370	Limiting Contour of Face of Brake Heads for Hanger-Type Brake Beams	2009	E	
S-371	Limiting Contour of Face of Brake Heads for Hangerless-Type Brake Beams	2009	E	
RP-811	Loading of Vehicles	2023	N	
S-373	Peep Hole—Location for Checking Brake Cylinder Piston Travel on Cars with Deep Side Sills	2024	D	
S-701	Locking Plate for Journal Roller Bearing Assemblies	1997	H	
S-701A	Locking Plate for Journal Roller Bearing Assemblies	2012	H	
S-5513	Locomotive Alerter Requirements	2021	M	Update Available
S-5520	Locomotive Cab Securement	2014	M	
S-5101	Locomotive Cab Window Glazing Material	2002	M	
M-9155.V1	Locomotive Command and Control Module (LCCM)—Functional Requirements	2014	K-II	
M-9155.V2	Locomotive Command and Control Module (LCCM)—Functional Requirements	2015	K-II	Update Available
M-9155.V2.1	Locomotive Command and Control Module (LCCM)—Functional Requirements	2015	K-II	Update Available

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices

Tables of Content

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
M-9155. V2.2	Locomotive Command and Control Module (LCCM)—Functional Requirements	2016	K-II	Update Available
M-9155. V2.3	Locomotive Command and Control Module (LCCM)—Functional Requirements	2018	K-II	Update Available
M-9155. V2.4	Locomotive Command and Control Module (LCCM)—Functional Requirements	2019	K-II	Update Available
M-9155. V2.4.1	Locomotive Command and Control Module (LCCM)—Functional Requirements	2021	K-II	Update Available
M-9155. V2.5	Locomotive Command and Control Module (LCCM)—Functional Requirements	2021	K-II	Update Available
S-580	Locomotive Crashworthiness Requirements	2020	M	
S-9101G V1.0	Locomotive Data Acquisition and Recording System (LDARS)—Common File Format Standard	2018	K-II	Update Available
S-9101C V1.0	Locomotive Data Acquisition and Recording System (LDARS)—Event Data Acquisition Processor	2018	K-II	Update Available
S-9101B V1.0	Locomotive Data Acquisition and Recording System Architecture	2011	K-II	
S-5019	Locomotive Definitions	2019	M	
RP-503	Locomotive Diesel Fuel Additives and Fuel Savings Devices—Evaluation Procedure	2016	M	
S-5509	Locomotive Dynamic Brake Status Reporting	2018	M	
S-9102 V1.0	Locomotive Electronics and Train Control System Architecture	2022	K-II	Update Available
M-1005	Locomotive Electronics Safety Assessments and Analyses	2022	M	Update Available
S-9101 V1.2	Locomotive Electronics System Architecture	2019	K-II	Update Available
S-9101. V1.2.1	Locomotive Electronics System Architecture	2022	K-II	Update Available
S-5512	Locomotive Event Recorder Download Standard (RETIRED 02/22/2021)	2021	M	Update Available
RP-5503	Locomotive Fueling Interface	2001	M	
S-5530	Locomotive Headlight Control	2018	M	
RP-5122	Locomotive Horn Valve Handle with Soft, Resilient-Type Rubber Cover	2001	M	
S-5500	Locomotive Interchange Agreement	2007	M	
S-9365	Locomotive Interface Gateway (LIG) to Positive Train Control (PTC) Interface Control Document (ICD)	2019	K-IV	Update Available
S-5514	Locomotive Operator Control Symbols	2011	M	
RP-548	Locomotive Rating Train/Track Resistance	2001	M	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-9101E V1.1	Locomotive System Integration Communications	2016	K-II	Update Available
S-591	Locomotive System Integration Operating Display	2020	M	
M-959	Lubrication Seals for Freight Car Journal Roller Bearings	2019	H	
M-1001 Chapter 3	M-1001 Chapter 3 - Materials-Body Structure	2022	C-II	Update Available
M-1001 Chapter 4	M-1001 Chapter 4 - Design	2022	C-II	Update Available
M-1001 Chapter 6	M-1001 Chapter 6 - General Design and Test Requirements—Tank Cars	2022	C-II	Update Available
S-6200	Machine Vision Detector	2021	F	Update Available
RP-5595	Main Reservoir Equalizing End Hose Coupling	2001	M	
S-659	Mandatory Rules Governing Wheel Shop Practices as Required by Interchange Rules	2022	G-II	
S-910	Marking of Freight Cars	2023	C	Update Available
RP-804	Measurement Requirements for Remote Ride Quality Monitoring	2023	N	
M-993	Mechanical Certification of Flatcars for Autorack Service	2023	N	
RP-906	Methodology: Multi-Car Drifting Simulations	2024	B	
S-736	Minimum Acceptance and Rejection Criteria	2024	H-II	
RP-546	Minimum Requirements for Main Reservoir System on New and Rebuilt Diesel-Electric, Electric, and Gas Turbine Locomotives of 800-hp Capacity and Greater	2001	M	
S-9553A	Mobile Communications Package	2002	K-VI	
RP-612	Mounting Pressures for Wrought and Cast Steel Wheels on Gear-Driven and Idler Axles of Locomotives Other than Steam	2004	G	
S-5529	Multiple Unit Pneumatic Brake Equipment for Locomotives	2008	M	
S-9357	Mutually Authenticated Key Exchange	2019	K-IV	Update Available
S-362	No-Go Gauge for Brake Shoe	1944	E	
M-971	Non-Grease Lubricant for Autorack Equipment	2023	N	
M-912	Oil, Control Valve	2002	E	
S-132	Operating Mechanism, Type No. 6, Interlocking	2003	S-III	
RP-5124	Padded Sun Visor in Locomotive Cab—Engineer’s Side Only	2001	M	
S-4045	Passenger Equipment Maintenance Requirements (formerly S-045)	2013	E	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
M-1006	Passenger Equipment Performance Specification	2019	M	
S-3008	Performance of Devices or Designs to Control Yaw Dynamics in Freight Car Trucks	1997	D	
S-5506	Performance Requirements for Diesel Electric Locomotive Fuel Tanks	2001	M	
S-4250	Performance Requirements for ITC-Controlled Cable-Based Distributed Power Systems	2014	E-II	
RP-905	Performance Requirements for Refrigerated Boxcar Fuel Tanks	2006	C	
S-469	Performance Specification for Freight Brakes	2006	E	
S-2042	Performance Specification for Sill Steps	2017	C	
S-2043	Performance Specification for Trains Used to Carry High-Level Radioactive Material	2024	C	Update Available
M-118	Pin, Coupler Knuckle Pivot and Coupler Shank Connecting, Steel	2018	B	
S-4022	Pipe, Other than Schedule 80 Iron (RETIRED 04/16/2020)	2006	E	Update Available
S-184	Pocket Tolerances—EOC-10	2011	B	
S-182	Pocket Tolerances—EOC-8	2011	B	
S-183	Pocket Tolerances—EOC-9	2011	B	
M-951	Portable Bridge Plates for Multi-Level Autorack Cars	2023	N	
S-9081.V1.1	Positive Train Control (PTC) – Interoperable Train Control (ITC) – Electronic Data Interchange (EDI) Rules Governing the Use of EDI 161, EDI 824 & EDI 418J	2021	K-I	Update Available
S-9081.V1.2	Positive Train Control (PTC) – Interoperable Train Control (ITC) – Electronic Data Interchange (EDI) Rules Governing the Use of EDI 161, EDI 824 & EDI 418J	2021	K-I	Update Available
S-9501	Positive Train Control Data Model Definition	2018	K-VI	Update Available
S-9501.V4.0	Positive Train Control Data Model Definition	2024	K-VI	Update Available
S-9501 Appendix A.V1.0	Positive Train Control Data Model Definition	2024	K-VI	Update Available
S-9080.V3	Positive Train Control Interoperability Committee Policy	2022	K-I	Update Available
S-9080.V4	Positive Train Control Interoperability Committee Policy	2022	K-I	Update Available
S-9080.V5	Positive Train Control Interoperability Committee Policy	2024	K-I	Update Available

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

**AAR Manual of Standards and Recommended Practices
Tables of Content**

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
RP-9457.V1	Positive Train Control Interoperable Electronic Train Management System (I-ETMS) Master Test Strategy (MTS)	2012	K-V	
RP-9457.V2	Interoperable Train Control / Positive Train Control Master Test Strategy (MTS)	2021	K-V	Update Available
S-9055	Positive Train Control ITC Communications Segment Requirements—Level 1	2013	K-I	
S-9053	Positive Train Control ITC System Requirements—Level 0	2018	K-I	Update Available
S-9054	Positive Train Control ITC System Requirements—Level 1	2018	K-I	Update Available
S-9057	Positive Train Control ITC Systems Management Requirements—Level 1	2012	K-I	
S-9056	Positive Train Control ITC Wayside System Requirements—Level 1	2012	K-I	
S-9361 V3.0	Positive Train Control Office-Locomotive Segment—Interface Control Document (ICD)	2020	K-IV	Update Available
S-9361 V3.1	Positive Train Control Office-Locomotive Segment—Interface Control Document (ICD)	2021	K-IV	Update Available
S-4047	Positive Train Control—Locomotive Air Brake Interface Requirements	2017	E	
S-9103	Precision Navigation Module Interface Control Document (ICD)	2021	K-II	Update Available
S-050	Procedures for Considering Proposals Regarding Revisions to the Manual of Standards and Recommended Practices	2014	AS	
S-9419.V1	PSA-2 Back Office Application Requirements	2023	K-V	
S-9418.V1.0	PSA-2 Gateway Requirements	2024	K-V	
S-9504	PSA-2 W-OPK Service Requirements	2023	K-VI	
S-9372.V1.0	PTC Back Office Segment—Energy Managementinterface Control Document (ICD)	2014	K-IV	Update Available
S-9372.V1.1	PTC Back Office Segment—Energy Managementinterface Control Document (ICD)	2016	K-IV	Update Available
S-9372.V2.0	PTC Back Office Segment—Energy Managementinterface Control Document (ICD)	2018	K-IV	Update Available
S-9372.V3.0	PTC Back Office Segment—Energy Managementinterface Control Document (ICD)	2023	K-IV	Update Available
S-9371.V1.0	PTC Onboard Segment—Energy Management Interface Control Document (ICD)	2014	K-IV	Update Available
S-9371.V2.0	PTC Onboard Segment—Energy Management Interface Control Document (ICD)	2018	K-IV	Update Available

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-9371.V3.0	PTC Onboard Segment—Energy Management Interface Control Document (ICD)	2021	K-IV	Update Available
S-9371.V4.0	PTC Onboard Segment—Energy Management Interface Control Document (ICD)	2022	K-IV	Update Available
S-9008.V1.0	PTC Security Architecture 2 (PSA 2)	2024	K-I	
S-9502.V1.0	PTC Track Data Exchange	2020	K-VI	Update Available
S-9502.V1.1	PTC Track Data Exchange	2020	K-VI	Update Available
S-9502.V2.0	PTC Track Data Exchange	2024	K-VI	Update Available
S-2009	Push Rod, Brake Cylinder	1964	E	
M-915	Quality Assurance Requirements for Locomotives and Locomotive Components	2023	M	Update Available
S-2038	Rack Car, Multilevel, with or without Door or Roof, Enclosed—Safety Appliance Standards	2017	C	
S-259	Rail Car, 286,000-lb Gross Weight	1994	C	
S-9552	Railroad Communications Network	2004	K-VI	
S-9401	Railroad Electronics Environmental Requirements	2009	K-V	
S-9401.V1.1	Railroad Electronics Environmental Requirements	2024	K-V	
S-9353.V1.0	Railroad Electronics Standards Committee (RESC) Data Dictionary	2019	K-IV	Update Available
S-9353.V1.1	Railroad Electronics Standards Committee (RESC) Data Dictionary	2021	K-IV	Update Available
S-9002	Railroad Electronics Standards Configuration Management	2009	K-I	
RP-815	Railroad Police Protection	2023	N	
S-9555	Railroad Use of IEEE 802.11	2015	K-VI	Update Available
RP-589	Rating for Specific Fuel Consumption of Diesel Electric Locomotives	2022	M	Update Available
RP-5126	Recessed Windshield Wiper Valve, Train-Order Light Switch, and Flush-Mounted Train-Order Light	2001	M	
RP-631	Recommended Wheel Shop Practices	2022	G-II	
M-300	Reconditioned Brake Beams	2012	E	
S-619	Reference Groove for Multiple-Wear Diesel Wheels	2015	G	
S-5507	Remote Control Locomotives	2002	M	
S-2045	Remote Monitoring Equipment, Installation	2022	C	Update Available
S-5531	Remote Monitoring Equipment, Locomotive—Installation	2019	M	
S-738	Repair Procedure Spalls, SWR, and Press Fit	2024	H-II	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-740	Requirements for Remanufacture of Roller Bearing Components	2024	H-II	
S-737	Requirements for Roller Bearing Reconditioning	2024	H-II	
S-9379	Requirements for Using an ITC EMP Application Gateway	2018	K-IV	Update Available
M-956	Requirements Governing Superstructures to Cars Equipped With Sliding Sill or End-of-Car Cushioning Devices	2023	N	
S-4007	Reservoir, Combined Auxiliary and Emergency—Reclamation Procedure	2002	E	
S-494	Reservoir, Steel Fabricated, Combined Auxiliary and Emergency	2005	E	
M-119	Retaining Pin and Keeper for F-Type Cushion Yoke	2009	B	
S-445	Retaining Valve—Location	2002	E	
S-446	Retaining Valve, 1967-Type, Three-Position	2002	E	
S-916	Retroreflective Comparator Panel Requirements	2018	C	
RP-803	Ride Quality Performance Requirements for Motor Vehicle Shipments	2023	N	
S-724	Roller Bearing Manual—Information on Amtrak Passenger Car Bearings	2012	H-II	
S-721	Roller Bearing Manual—Mandatory Instructions and Practices	2018	H-II	
S-723	Roller Bearing Manual—Mandatory Minimum Requirements for Roller Bearing Reconditioning Shops—Procedures—Tool Requirements Necessary to Make Roller Bearing Repairs for Interchange Use	2024	H-II	Update Available
S-725	Roller Bearing Manual—Manufacture of Interchangeable Roller Bearing Components	2018	H-II	
S-726	Roller Bearing Manual—Remanufacture of Roller Bearing Components	2022	H-II	Update Available
S-722	Roller Bearing Manual—Rules Covering Requirements for Approval of Roller Bearing Shops to Recondition Roller Bearings for Interchange Service	2012	H-II	
RP-5127	Rounded Cab Window Latch in Locomotive Cabs	2001	M	
RP-5128	Rounding All Possible Exposed Convex Edges and Corners	2001	M	
S-4001	Rubber Products—Performance	2018	E	
S-226	Running Board, End Platform, and Brake Step—Design Approval	2020	C	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-5030	Safety Appliance Requirements for Enclosed Car Body-style Fuel Tenders	2023	T-III	
S-2044	Safety Appliance Requirements for Freight Cars	2020	C	
S-5029	Safety Appliance Requirements for Intermodal Car-style Fuel Tenders	2023	T-III	
S-5028	Safety Appliance Requirements for Tank Car-style Fuel Tenders	2023	T-III	
S-219	Safety Appliances for Bulkhead Flatcars, Including Pulpwood Cars and Center Beam Cars	2017	C	
S-220	Safety Appliances for Special Service High-Side Gondolas with Fixed Ends	2017	C	
S-215	Safety Hangers and Retainers—for Freight Car Doors	1964	C	
M-916	Sand for Traction	2017	M	
S-377	Side Frame Keys for AAR Standard and Alternate Standard Pedestal-Type Side Frames	2024	D	
S-235	Side Bearing Wear Plate—Car Body	2012	C	
S-213	Side Door and Door Frames, Boxcar—Plug Type	2024	C	Update Available
S-212	Side Door, Boxcar—Sliding Type	2012	C	
S-377	Side Frame Keys for AAR Standard and Alternate Standard Pedestal-Type Side Frames	2024	D	
S-318	Side Frame—Bolster Rotation Stop Lug	1965	S-II	
S-320	Side Frame—Column Wear Plate, Application	2024	D	
S-327	Side Frame—Roof Repair	2012	S-II	
S-317	Side Frame—Tolerances	1981	S-II	
S-319	Side Frame—Wide Land Rotation Stop Lug Column	1968	S-II	
S-3012	Side Frame, Alternate Standard Pedestal-Type with Side Frame Key—Application of Roller Bearing Unit	1994	S-II	
S-325	Side Frame, Narrow Pedestal—Limiting Dimensions	2009	S-II	
S-329	Side Frame, Narrow Pedestal—Roller Bearing	1997	S-II	
S-3010	Side Frame, Standard Pedestal-Type with Side Frame Key—Limiting Dimensions	1947	S-II	
S-314	Side Frame, Truck—Marking Diagram	2014	S-II	
M-210	Side Frame and Bolsters Manufacture	2024	S	Update Available
S-393	Side Frames and Bolsters—Produced Prior to 1978	2001	S-II	
M-214	Side Frames and Bolsters, Used and Reconditioned—Classification and Repair Procedure	2024	S	Update Available

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-2035	Side Handhold, Additional—Hopper and High-Side Gondola Cars	2017	C	
S-378	Side Frame, Cast Steel—Marking and Mating	2010	S-II	
S-3011	Side Frame, Standard Pedestal-Type Size 6 in. × 11 in. with Side Frame Key—Limiting Dimensions	1997	S-II	
S-461	Single-Capacity Freight Brakes—Performance Specification	2019	E	Update Available
S-4286	Single-Car Test for Testing Electronically Controlled Pneumatic Braking Systems—Design and Performance Requirements	2009	E-II	
M-949	Slack Adjuster Grease	2002	E	
S-423	Slack Adjuster Reclamation—Automatic, Double-Acting, Mechanical Slack Adjusters	2010	E	
RP-400	Slack Adjuster—General Information	2002	E	
S-420	Slack Adjuster—Limiting Design Dimensions (Group E)	2002	E	
S-421	Slack Adjuster, Center Rod Application (Group E)	2002	E	
S-4008	Slack Adjuster, Mechanical, Double-Acting, Automatic Compression	2017	E	
S-419	Slack Adjuster, Mechanical, Double-Acting, Automatic Tension	2017	E	
S-4010	Slack Adjuster, Tension—Inspection, Testing, Removal, and Application	2018	E	
S-420A	Slack Adjuster, Tension—Limiting Design Dimensions	2002	E	
S-422	Slack Adjuster, Top Rod Application (Group E)	2002	E	
S-9417	SMIA-2 Service Template	2023	K-V	
S-9410.V1.0	SMIA-2 Event and Status Service	2024	K-V	
S-9411.V1.0	SMIA-2 Architecture, Principles and Common Requirements	2024	K-V	
S-9412.V1.0	SMIA-2 Identity Services	2024	K-V	
S-9414.V1.0	SMIA-Service Registry	2024	K-V	
M-975	Span Bolsters	2020	S	
RP-557	Spark Arrester	2001	M	
S-225	Spark Shield—Wooden Deck Cars with Cast Iron Brake Shoes	1980	C	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
M-965	Truck Systems to Control Roll Stability of Freight Cars	2024	D	
S-399	Specification for Bottom Rod Safety Supports	1992	E	
M-1001 AppC	Specification for Instrumented Wheel Sets	2022	C-II	Update Available
M-1003	Specification for Quality Assurance	2024	J	Update Available
M-1002	Specifications for Tank Cars	2024	C-III	
S-3006	Spring—"D" Series, Recertified	2024	D	
S-3009	Specification for Self-Locking Cotter Keys	1992	E	
S-3013	Side Bearing Mounting Pad—Surface Requirements	2024	D	
M-1004	Interoperable Fuel Tenders for Locomotives	2023	T-I	
S-332	Spring—D2, 1 5/8-in. Travel	2024	D	
S-333	Spring—D3, 2 1/2-in. Travel	2024	D	
S-334	Spring—D4, 3 1/16-in. Travel	2024	D	
S-335	Spring—D5, 3 11/16-in. Travel	2024	D	
S-336	Spring—D6, 3 3/8-in. Travel	2024	D	
S-337	Spring—D6A, 3 15/16-in. Travel	2024	D	
S-338	Spring—D7, 4 1/4-in. Travel	2024	D	
S-339	Spring—Groups for D2	2024	D	
S-3016	Spring—Groups for Free, Unrestricted Interchange for 286,000 GRL Cars (M-976 and S-286 Approved Trucks)	2024	D	
S-343	Spring—Groups with Hydraulic Snubber	2024	D	
S-340	Spring—Groups without Load-Carrying Snubbers	2024	D	
S-341	Spring—Groups with Load-Carrying Snubbers (Single-Side Springs)	2024	D	
M-114	Spring—Heat-Treated Steel	2024	D	
RP-306	Spring Test Machine, Pneumatic	2024	D	
RP-307	Spring Test Machine, Electro-Hydraulic	2024	D	
RP-209	Stake Pocket—for Flatcars	1998	C	
RP-208	Stake Pocket—Permanent	1998	C	
S-9202B	Stand-alone Wayside Messaging Server Hardware Requirements	2012	K-III	
S-365	Standard Location of Brake Hanger Brackets and Unit Guide Brackets	1979	E	
M-935	Standard Operating Procedures for Intermodal Securement	2017	I	
RP-831	Standard Vehicle Nomenclature	2023	N	
S-630	Steel Wheel Gauge	2013	G	

Note: Click the "Update Available" link in the column entitled "Circulars?" to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
RP-2017	Striker Casting, Cast Steel	1991	C	
S-238	Striker, Cast Steel, F70 Coupler Design, 24 5/8-in. Draft Gear Pocket—Parts and Assembly	1978	C	
S-236	Striker, Cast Steel, F70 Coupler Design, 24 5/8-in. Draft Gear Pocket—Welded Application	1978	C	
RP-323	Stop Lugs for Clip-On-Type Pedestal Roof Liners—Application	2024	D	
S-720	Tabulation of Adapters and Frame Keys for AAR-Approved Roller Bearings	2008	H	
S-2036	Temperature—for Car Structures and Components	1983	C	
S-5031	Tender-Fill Control Cable, Cable Assembly, and Receptacle (FC-18)	2023	T-III	
S-5032	Tender-Fill Ethernet Cable, Cable Assembly, and Receptacle (FC-8)	2023	T-III	
RP-545	Testing Electrical Components (RETIRED 01/04/2021)	2001	M	Update Available
S-464	Test Rack, Multiple-Car—Performance Testing Procedure	2019	E	Update Available
S-463	Test Rack, Multiple-Car, Freight Brake	2019	E	Update Available
S-465	Test Rack, Single-Car	2002	E	
S-466	Test Rack, Single-Car, for Individual Valve Portions—Performance Testing Procedure	2005	E	
S-815	Tie-Down Chain Assemblies for Multi-Level and Other Flat Cars, Refurbished High Test Grade 43 or Alloy Grade 80	2023	N	
M-990	Tie-Down Tracks, Wheel Chocks, and Straps (Tri-Level Autoracks)	2023	N	
M-957	Tie-Down Tracks, Winches, and Chains	2023	N	
M-966	TOFC Portable Bridge Plates	2004	I	
RP-853	Trailer Repair and Modification	2022	I	Update Available
M-931	Trailers for Intermodal Service	2019	I	Update Available
S-253	Train Coal Car, 100-Ton Nominal Capacity, with Train Positioner—Clearance Diagram	1982	C	
S-4003	Train Line Arrangement for Cars with F-Shank Couplers	2005	E	
S-4029	Train Line Arrangement with Displaceable Union on Cars with EOCC and Couplers Exceeding 45 in. in Length	2008	E	
S-4028	Train Line Arrangement with Displaceable Union on Cars with EOCC and Couplers Not Exceeding 45 in. in Length	2008	E	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-4013	Train Line Hoses—Coupling Extension Adapter	2002	E	
S-4031	Trainline Arrangement for Cars with E-Type Couplers and with Draft System Buff Travel of 6 to 10 Inches	2024	E	
S-4032	Trainline Arrangement for Cars with E/F-Type Couplers and Draft System Buff Travel of 6 to 10 Inches	2024	E	
S-4030	Trolley Arrangement on Cars with EOCC and E Shank Couplers	2008	E	
S-2037	Trough Hatch Cover	2015	C	
M-202	Truck Bolsters, Cast or Structural—Design and Testing	2021	S	
M-213	Truck Frames, Fabricated Steel	2021	S	
M-976	Truck Performance for Rail Cars	2024	D	
M-948	Truck Side Bearing	2024	D	
M-203	Truck Side Frames, Cast Steel—Design and Testing	2024	S	Update Available
S-392	Truck—Design Drawings	2018	S-II	
S-301	Truck, 33-in. Wheels—Design Dimensions	2018	S-II	
S-302	Truck, 36 in. Wheels—Design Dimensions	2018	S-II	
S-304	Truck, 38 in. Wheels—Design Dimensions	2018	S-II	
S-300	Truck, Freight Car—Design Data	2016	S-II	
M-204	Truck, Freight Car, with Car Body/Side Frame Load Path—Design and Testing	2011	S	
RP-505	Typical 26-L Type Brake Equipment Piping Diagrams for Locomotives	2001	M	
S-5022	Ultra-Low Sulfur Diesel (ULSD) Identification Label/Decal	2015	M	
M-961	Uncoupling Devices, Special	2003	S-III	
M-921H	Unit Condition Indicator, Standard EOC and COC Cushioning Devices	2018	B	
S-366	Unit Guide Bracket, EC-2055—Design Dimensions	2009	S-II	
S-3005	Universal Brake Beam Gauge	1985	E	
M-934E	Universal Fitted Backing Rings For Freight Car Tapered-roller Journal Bearings	2019	H	
RP-231	Universal Pocket—Typical Sections and Notes	1975	C	
RP-228	Universal Pocket, 10-in. Cushion, Low Deck—E69 Coupler	1975	C	
RP-227	Universal Pocket, 15-in. Cushion, E69 Coupler	1975	C	
M-950-A	Universal Wide-Body Bi-Level Fully Enclosed Autorack Car (Standard Deck)	2023	N	Update Available

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
M-950	Universal Wide-Body Tri-Level Fully Enclosed Autorack Car (Low Deck)	2023	N	Update Available
RP-816	Unloading of Vehicles	2023	N	
M-991	Vehicle Door Edge Protection System for Multi-Level Autorack Cars	2023	N	
S-490	Vent Protector Performance and Approval	2002	E	
S-227	Walkways, Alternate—at Sides of Double-Stack Car Wells	2020	C	
S-6100	Wayside Detector Data Processing	2016	F	
S-6102	Wayside Passing Data Format	2021	F	Update Available
S-705	Wear Gauge for Journal Roller Bearing Adapters	1978	H	
S-706	Wear Gauge for Journal Roller Bearing Adapters	1975	H	
S-367	Wear Plate for Unit-Type Brake Beam Guide in Side Frame	2003	E	
M-269	Wear Plate, Coupler Carrier, Performance Specification—Non Metallic	2003	B	
S-270	Wear Plate, Used in Cushion Unit and Draft Systems that Employ the Y-47 Pin for an F Shank	2024	B	Update Available
S-402	Welding of Air Brake Pipe and Fittings for Railroad Cars—Welding Procedure	2020	E	Update Available
RP-802	Wheel Chock Strap Assembly Replacement	2023	N	
S-614	Wheel Defect—Worn Journal Collar and Journal Fillet Gauge	2004	G	
S-615	Wheel Defect—Worn Journal Collar and Journal Fillet Gauge	2004	G	
S-660	Wheel Designs, Locomotive and Freight Car—Analytic Evaluation	2009	G	
S-6030	Wheel Performance—Dynamic Impact and Rim Thickness	2016	F	
S-6103	Wheel Profile Detector	2022	F	Update Available
S-5021	Wheel Size and Speed Pickup Axle Identification	2016	M	
RP-750	Wheel-Mounting Compound Approval Test Procedure	2015	G-II	
S-657	Wheel, Passenger Car (Amfleet)	1980	G	
S-601	Wheels—Manufacturing Facility Inspection by Technical Services	2004	G	
S-611	Wheels—Measuring Wheel Circumference (Tape) Using Wheel Gauges S-612 and S-613	2004	G	
M-107/ M-208	Wheels, Carbon Steel	2020	G	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

ALPHABETIC INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
RP-5136	Windshield Wiper Motor Handle with Soft-Rubber-Type Grip	2001	M	
RP-5137	Windshield Wiper Motor Protective Cover	2001	M	
RP-588	Wire and Cable Insulating Material	2001	M	
RP-586	Wire and Cable Insulating Material—Moisture-Resisting Jacketed	2005	M	
RP-587	Wire and Cable Insulating Material—Silicone Rubber Insulated	2005	M	
RP-585	Wiring and Cable Specification	2001	M	
S-9421.V1.0	WIU ITCSM Agent Requirements to Support PSA-2	2024	K-V	
M-205	Yoke, Coupler—Test Requirements	2023	S	Update Available
S-176	Yoke, E Type, Cushioning, for Pocket EOC-7	2020	S-III	
S-177	Yoke, E Type, Cushioning, for Pocket EOC-8	2020	S-III	
S-143	Yoke, E Type, SY40AE or YS93AE, Standard, for 24 5/8-in. Draft Gear Pocket	2009	S-III	
S-141	Yoke, E Type, Y40AE, Standard, for 24 5/8-in. Draft Gear Pocket	2009	S-III	
S-142	Yoke, E Type, Y41AE for 36-in. Draft Gear Pocket	2009	S-III	
S-149	Yoke, E/F and F Type, Y45AE, Standard, for 24 5/8-in. Draft Gear Pocket	2003	S-III	
S-151	Yoke, E/F Type, Y49AE, Standard, for 36-in. Draft Gear Pocket	2003	S-III	
S-180	Yoke, F Type, Cushioning, for Pocket EOC-1, EOC-2, and EOC-16	2020	S-III	
S-179	Yoke, F Type, Cushioning, for Pocket EOC-10 and EOC 26	2020	S-III	
S-178	Yoke, F Type, Cushioning, for Pocket EOC-9	2020	S-III	
S-139	Yokes, Relief Fillets	2003	S-III	
S-5032	Tender-fill Ethernet Cable (FC-8)	2023	T-III	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

**AAR Manual of Standards and Recommended Practices
Tables of Content**

SECTION INDEX

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-010	Field Test Requirements for Materials, Devices, and Products Manufactured to AAR Specifications but Having No Previous Service Experience on AAR Member Roads		AS	
S-046	Definitions of Terms for the AAR <i>Manual of Standards and Recommended Practices</i>	2015	AS	Update Available
S-050	Procedures for Considering Proposals Regarding Revisions to the Manual of Standards and Recommended Practices	2014	AS	
S-051	Conditions Governing Withdrawal of AAR Approval of Freight Car and Locomotive Components and Products	2000	AS	
S-060	Application for Component Approval Procedure	2015	AS	Update Available
M-118	Pin, Coupler Knuckle Pivot and Coupler Shank Connecting, Steel	2018	B	
M-119	Retaining Pin and Keeper for F-Type Cushion Yoke	2009	B	
M-269	Wear Plate, Coupler Carrier, Performance Specification—Non Metallic	2003	B	
M-901B	Draft Gear, Secondhand and Reconditioned	2015	B	
M-901E	Draft Gears with a Minimum Capacity of 36,000 ft·lb at a Reaction of 500,000 lb	2023	B	Update Available
M-901F	Draft Gear Reaction Forces, Measuring and Recording, Instrumentation Requirements	2003	B	
M-901G	Draft Gear, Rated by Impact Testing	2023	B	Update Available
M-901K	Draft Gear, All-Hydraulic, Rated by Impact Testing	2015	B	
M-902	End-of-Car Energy Management Systems	2024	B	
M-921A	Cushioning Devices, Sliding Sill	2018	B	
M-921B	Cushioning Devices, End-of-Car	2024	B	Update Available
M-921C	Cushioning Devices, Reconditioned—Approved for Freight Service	2024	B	Update Available
M-921D	Cushioning Devices, End-of-Car—Motor-Vehicle-Carrying	2024	B	Update Available
M-921E	Cushioning Devices, Active Draft End	2024	B	Update Available
M-921F	Cushioning Devices, Active Draft End of Car	2024	B	Update Available
M-921G	Facility Inspection Requirements for Manufacturers of New and Reconditioned Cushioning Devices for Freight Service	2024	B	Update Available
M-921H	Unit Condition Indicator, Standard EOC and COC Cushioning Devices	2024	B	Update Available

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
RP-101	Draft Gear Inspection	2011	B	
RP-110	Cushioning Device Inspection	2003	B	
RP-906	Methodology: Multi-Car Drifting Simulations	2024	B	
S-100	Bushings, Seamless Steel Tube—Coupler Shanks and Yokes	2010	B	
S-101	Field Service Experience—Reporting Requirements	2003	B	
S-119	Draft Gear Follower, Y44A	2012	B	
S-120	Draft Key Retainers, Locks, Keepers, and Washer	2011	B	
S-121	Draft Key	2017	B	
S-125	Immobilization of Sliding Sill on Cushion Underframe Cars Having Damaged or Defective ACF Freight Saver 20- or 30-in. Travel Units—Plate No. 526-1	2003	B	
S-126	Immobilization of Sliding Sill on Cushion Underframe Cars Having Damaged or Defective Keystone 20-in. Travel Unit, Santa Fe Shock Control, A.O. Smith Cushion Ride, and Rockwell Cargo Cushion—Plate No. 526-2	2003	B	
S-127	Immobilization of Sliding Sill on Cushion Underframe Cars Having Damaged or Defective Hydra Cushion 10-, 12-, or 20-in. Travel Units or Evans Cushion Pak Wide Tunnel Units—Plate No. 526-3	2003	B	
S-128	Immobilization of Sliding Sill on Cushion Underframe Cars Having Damaged or Defective Hydra Pullman Standard Hydroframe 40 and 60 Units or National 3C Wide Tunnel Units—Plate No. 526-4	2003	B	
S-156	Immobilization of Freightmaster Types SP-E and SP-C	2003	B	
S-157	Immobilization of Freightmaster Types F, FS, and B	2003	B	
S-158	Immobilization of Freightmaster	2003	B	
S-159	Immobilization of Freightmaster Types HD and AR-F	2003	B	
S-160	Immobilization of Keystone Type E Miner SR-12	2003	B	
S-161	Immobilization of Freightmaster 10-in. Type E Miner M-12S	2003	B	
S-162	Immobilization of Keystone F Shank	2003	B	
S-171	Immobilization of Pullman Standard, ACF, or Keystone Center-of-Car Cushioning Devices (“Dummy Cylinder Method”)	2003	B	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-181	Cushioning Pocket Identification Guide—AAR Rule 59	2003	B	
S-182	Pocket Tolerances—EOC-8	2011	B	
S-183	Pocket Tolerances—EOC-9	2011	B	
S-184	Pocket Tolerances—EOC-10	2011	B	
S-269	Coupler Carrier Wear Plate	2003	B	
S-270	Wear Plate, Used in Cushion Unit and Draft Systems that Employ the Y-47 Pin for an F Shank	2024	B	Update Available
M-800	Hopper Car, Covered—For Transport of Oxidizing Commodities	2023	C	Update Available
M-801	Hopper Car, Covered—Pressurized During Unloading and In-Transit	2023	C	Update Available
M-908	Flat Steel Floor for Freight Cars 50,000, 60,000, 70,000 or 80,000 lb Capacities	2006	C	
M-947	Adhesive-Backed Films for Marking Cars—Performance-Based Requirements	2015	C	
M-964	Floor, Nailable Steel—Freight Cars 50,000-, 60,000-, 70,000- or 80,000-lb Capacities	2006	C	
M-968	Design Requirements for Rigid Open-Top Freight Car Covers	2024	C	
RP-200	Hopper Car, Open Top, in Shaker Service—Design Features	1976	C	
RP-206	Decking, Wood—for Open Top Cars	1981	C	
RP-208	Stake Pocket—Permanent	1998	C	
RP-209	Stake Pocket—for Flatcars	1998	C	
RP-227	Universal Pocket, 15-in. Cushion, E69 Coupler	1975	C	
RP-228	Universal Pocket, 10-in. Cushion, Low Deck—E69 Coupler	1975	C	
RP-231	Universal Pocket—Typical Sections and Notes	1975	C	
RP-232	Ladder, End and Side—Configuration	1981	C	
RP-233	Hold-Down Clips—Gondolas, Side Sheet Mounted	1948	C	
RP-234	Hold-Down Clips—Gondolas, Top Cord Mounted	1982	C	
RP-258	Hopper Car—Grain Service	1992	C	
RP-401	Brake Control Valves—Mount-Configuration Designs as Related to Field Vibration	2014	C	
RP-905	Performance Requirements for Refrigerated Boxcar Fuel Tanks	2006	C	
RP-940	Electronic Distribution Format For Engineering Drawings	2005	C	
RP-2017	Striker Casting, Cast Steel	1991	C	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
RP-2018	Handholds, Steps, and Ladders for Interior Access	2023	C	Update Available
S-203	Coupler, Height Adjustment (RETIRED 07/20/2023)	1962	C	Update Available
S-204	Body Center Plate, Separable—Surface Finish	2014	C	
S-206	Body Center Plate, Cast Steel or Forged—for Freight Cars with 14 in. Center Plates	1978	C	
S-207	Body Center Plate, Cast Steel or Forged—for Freight Cars with 16 in. Center Plates	2014	C	
S-211	Body Center Plate Gauge—14-in. and 16-in. Diameter	1976	C	
S-212	Side Door, Boxcar—Sliding Type	2012	C	
S-213	Side Door and Door Frames, Boxcar—Plug Type	2024	C	Update Available
S-215	Safety Hangers and Retainers—for Freight Car Doors	1964	C	
S-217	Identification Plate—Boxcar Doors	2009	C	
S-219	Safety Appliances for Bulkhead Flatcars, Including Pulpwood Cars and Center Beam Cars	2017	C	
S-220	Safety Appliances for Special Service High-Side Gondolas with Fixed Ends	2017	C	
S-224	Handholds, Safety Railings, and Ladder Treads	2015	C	
S-225	Spark Shield—Wooden Deck Cars with Cast Iron Brake Shoes	1980	C	
S-226	Running Board, End Platform, and Brake Step—Design Approval	2020	C	
S-227	Walkways, Alternate—at Sides of Double-Stack Car Wells	2020	C	
S-229	DOT Placard Location	2013	C	
S-230	Lading Strap Anchor Arrangement and Use—for Flatcars	1973	C	
S-233	Gravity Outlet Gates, New—for Covered Hopper Cars	2014	C	
S-234	Lifting Freight Cars	1982	C	
S-235	Side Bearing Wear Plate—Car Body	2012	C	
S-236	Striker, Cast Steel, F70 Coupler Design, 24 5/8-in. Draft Gear Pocket—Welded Application	1978	C	
S-238	Striker, Cast Steel, F70 Coupler Design, 24 5/8-in. Draft Gear Pocket—Parts and Assembly	1978	C	
S-239	Arrangement E60 Coupler Design 24 5/8 in. Draft Gear Pocket Striker Applied by Welding	2012	C	
S-243	Draft Arrangement, E68 Coupler, 24 5/8-in. Pocket	1983	C	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-244	Draft Arrangement, E69 Coupler, 24 5/8-in. Pocket	1983	C	
S-245	Draft Arrangement, F70 Coupler, 24 5/8-in. Pocket— Striker Applied by Welding	1978	C	
S-247	Draft Arrangement, F79 Coupler, 24 5/8-in. Pocket	1978	C	
S-249	Door Puller Bracket, Application to Intermediate Post	1978	C	
S-252	Door Air Lines—Location of End Cocks	1978	C	
S-253	Train Coal Car, 100-Ton Nominal Capacity, with Train Positioner—Clearance Diagram	1982	C	
S-254	Draft Pocket Tolerances	1974	C	
S-255	Combined Striker and Front Draft Lug Tolerances	1974	C	
S-258	Body Center Plate Relief	1980	C	
S-259	Rail Car, 286,000-lb Gross Weight	1994	C	
S-265	Center Pin—Freight Car	1989	C	
S-266	Center Sill Section, Rolled Steel	2012	C	
S-267	Center Sill Section—Welding Notes	1979	C	
S-286	Free/Unrestricted Interchange for 286,000 lb Gross Rail Load Cars (RETIRED 12/29/2022)	2022	C	Update Available
S-910	Marking of Freight Cars	2023	C	Update Available
S-916	Retroreflective Comparator Panel Requirements	2018	C	
S-2008	Card Holder—Bad Order	2013	C	
S-2025	Hopper Car—End for Door Operating Shaft	1914	C	
S-2034	Car Builder Certification	2019	C	
S-2035	Side Handhold, Additional—Hopper and High-Side Gondola Cars	2017	C	
S-2036	Temperature—for Car Structures and Components	1983	C	
S-2037	Trough Hatch Cover	2015	C	
S-2038	Rack Car, Multilevel, with or without Door or Roof, Enclosed—Safety Appliance Standards	2017	C	
S-2039	Batten Bars	2014	C	
S-2042	Performance Specification for Sill Steps	2017	C	
S-2043	Performance Specification for Trains Used to Carry High-Level Radioactive Material	2024	C	Update Available
S-2044	Safety Appliance Requirements for Freight Cars	2020	C	
S-2045	Remote Monitoring Equipment, Installation	2022	C	Update Available
S-2046	Accelerated Fatigue Test Specification for Increased Life Status Applications	2006	C	
S-2049	Anti-Pilferage Device—Boxcar Sliding Door	2007	C	
S-2050	Anti-Pilferage Device—Boxcar Plug Door	2007	C	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-2053	Container Interface—Well Car, 53 ft	2009	C	
S-2054	Clearance Diagram—Interface Between a Well Car and a Container Equipped with a Refrigerator/ Heater Unit	2016	C	
S-2055	Body Center Plate, Low Profile	2014	C	
S-2056	Clearance Plate Diagrams for Interchange Service	2024	C	Update Available
M-1001	Design, Fabrication, and Construction of Freight Cars	2023	C-II	
M-1002	Specifications for Tank Cars	2024	C-III	
M-1003	Specification for Quality Assurance	2024	J	Update Available
M-114	Spring—Heat-Treated Steel	2024	D	
M-948	Truck Side Bearing	2024	D	
M-965	Truck Systems to Control Roll Stability of Freight Cars	2024	D	
M-976	Truck Performance for Rail Cars	2024	D	
M-979	Center Bowl Liner—Requirements for Approval	2024	D	
M-980	Friction Wedge Performance for Railcars—Dynamic Wear Test	2024	D	
RP-306	Spring Test Machine, Pneumatic	2024	D	
RP-307	Spring Test Machine, Electro-Hydraulic	2024	D	
RP-323	Stop Lugs for Clip-On-Type Pedestal Roof Liners—Application	2024	D	
S-306	Center Bowl Vertical Wear Liner	2024	D	
S-307	Center Bowl Horizontal Wear Liner	2024	D	
S-308	Center Bowl Wear Liner Application	2024	D	
S-320	Side Frame—Column Wear Plate, Application	2024	D	
S-332	Spring—D2, 1 5/8-in. Travel	2024	D	
S-333	Spring—D3, 2 1/2-in. Travel	2024	D	
S-334	Spring—D4, 3 1/16-in. Travel	2024	D	
S-335	Spring—D5, 3 11/16-in. Travel	2024	D	
S-336	Spring—D6, 3 3/8-in. Travel	2024	D	
S-337	Spring—D6A, 3 15/16-in. Travel	2024	D	
S-338	Spring—D7, 4 1/4-in. Travel	2024	D	
S-339	Spring—Groups for D2	2024	D	
S-340	Spring—Groups without Load-Carrying Snubbers	2024	D	
S-341	Spring—Groups with Load-Carrying Snubbers (Single-Side Springs)	2024	D	
S-342	Spring—Groups with Load-Carrying Snubber (Double-Side Springs)	2024	D	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-343	Spring—Groups with Hydraulic Snubber	2024	D	
S-373	Peep Hole—Location for Checking Brake Cylinder Piston Travel on Cars with Deep Side Sills	2024	D	
S-377	Side Frame Keys for AAR Standard and Alternate Standard Pedestal-Type Side Frames	2024	D	
S-394	Side Bearing Pad for Two-Hole Application	2024	D	
S-3006	Spring—“D” Series, Recertified	2024	D	
S-3007	Hot Bearing Detection—Compatability Certification for New Truck Designs	2024	D	
S-3008	Hot Bearing Detection—Compatability Certification for New Truck Designs	2024	D	
S-3013	Side Bearing Mounting Pad—Surface Requirements	2024	D	
S-3014	Freight Car Truck Springs—with Load-Carrying Snubber	2024	D	
S-3015	Freight Car Truck Springs—without Load-Carrying Snubber	2024	D	
S-3016	Spring—Groups for Free, Unrestricted Interchange for 286,000 GRL Cars (M-976 and S-286 Approved Trucks)	2024	D	
M-300	Reconditioned Brake Beams	2012	E	
M-402	Brake Shoe, Cast Iron, High-Phosphorus Type	2002	E	
M-601	Hose, Wrapped, Air—Brake, “End Hose”	2006	E	
M-602	Gaskets, Air Hose	2023	E	Update Available
M-618	Hose, Air, Wire-Reinforced	2011	E	
M-619	Brake Cylinder Line Hose Assemblies—Performance Requirements	2005	E	
M-620	Hose, Air, Fabric-Reinforced	2011	E	
M-912	Oil, Control Valve	2002	E	
M-914	Brake Cylinder Lubricant	2003	E	
M-923	Hose Cement	1983	E	
M-926	Brake Shoe, High-Friction Composition or Metal Type	2015	E	
M-927	Hose Fittings and Hose Assemblies, Air, Wire-Reinforced	2007	E	
M-949	Slack Adjuster Grease	2002	E	
M-996	Brake Shoe, Low-Friction Composition Type	2015	E	
M-997	Brake Shoe—High-Friction Tread Conditioning, High Capacity	2008	E	
RP-308	Design Dimensions for Brake Hanger Bracket	1937	E	
RP-322	Brake Beam Strut Keyway Gauge	1992	E	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
RP-400	Slack Adjuster—General Information	2002	E	
RP-5599	Hook and Eye Brake Rigging—Lever Angularity Inspection	2007	E	
S-344	Brake Beam Specifications and Tests	2007	E	
S-345	Brake Beam—Tolerance, Hangerless Type	1979	E	
S-346	Brake Beam—Outline, Hanger Type	1953	E	
S-348	Brake Beam Gauges for Standard Brake Beams	1992	E	
S-349	Brake Beam—Outline, Hangerless Type	1979	E	
S-352	Brake Beam Gauge Assembly—Hangerless Type	1979	E	
S-353	Brake Beam Gauge Details—Hangerless Type	1981	E	
S-355	Brake Beam Gauge Application—Hangerless Type	1979	E	
S-358	Go Gauge for Brake Head, Metal or High-Friction Shoe	2009	E	
S-359	Go and No-Go Gauge for Brake Head for Limiting Contour of Face, Metal or High-Friction Shoe	1990	E	
S-360	Gauges for End of Hangerless-Type Brake Beam	1979	E	
S-361	Go Gauges for Brake Shoe	1944	E	
S-362	No-Go Gauge for Brake Shoe	1944	E	
S-365	Standard Location of Brake Hanger Brackets and Unit Guide Brackets	1979	E	
S-367	Wear Plate for Unit-Type Brake Beam Guide in Side Frame	2003	E	
S-368	Brake Beam Hangers and Attachments	1965	E	
S-369	Brake Beam Hangers and Attachments	1965	E	
S-370	Limiting Contour of Face of Brake Heads for Hanger-Type Brake Beams	2009	E	
S-371	Limiting Contour of Face of Brake Heads for Hangerless-Type Brake Beams	2009	E	
S-372	Brake Head Conversion—Metal Shoe-Type to High-Friction Composition	1972	E	
S-374	Badge Plate for Showing Proper Dimensions for Body and Truck Brake Levers	1964	E	
S-375	Brake Pin Tolerance	1975	E	
S-376	Brake Shoe Keys	2003	E	
S-379	Application Tolerances for Hanger-Type Brake Beams	unk	E	
S-380	Hangerless Brake Beam Extension Functional Gauge (Parallelism)	1979	E	
S-399	Specification for Bottom Rod Safety Supports	1992	E	
S-400	Brake Equipment—Installation Specifications	2018	E	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-401	Brake Design Requirements.	2020	E	Update Available
S-402	Welding of Air Brake Pipe and Fittings for Railroad Cars—Welding Procedure	2020	E	Update Available
S-419	Slack Adjuster, Mechanical, Double-Acting, Automatic Tension	2017	E	
S-420	Slack Adjuster—Limiting Design Dimensions (Group E)	2002	E	
S-420A	Slack Adjuster, Tension—Limiting Design Dimensions	2002	E	
S-421	Slack Adjuster, Center Rod Application (Group E)	2002	E	
S-422	Slack Adjuster, Top Rod Application (Group E)	2002	E	
S-423	Slack Adjuster Reclamation—Automatic, Double-Acting, Mechanical Slack Adjusters	2010	E	
S-424	Angle Cock Location	2018	E	
S-425	Angle Cock Location on Cars Equipped with AAR Type F Coupler	2002	E	
S-426	Angle Cock Location on Cars with Floating Sills	2005	E	
S-427	Angle Cock and Air Brake Hose Location on Cars with Excessive Overhang Preventing Compliance with AAR Standards S-424, S-425, and S-426	2005	E	
S-428	Angle Cock Location on Cars Equipped with AAR Type F Coupler and Cushioned Underframe	2005	E	
S-429	Angle Cock Locking Lugs—Minimum Permissible Engagement	2002	E	
S-430	Brake Shoe, Metal, Reinforced	2002	E	
S-431	Brake Shoe, High-Friction Composition Type—Limiting Contour	2017	E	
S-432	Hose Support, S Hook	2002	E	
S-436	Hose Coupling, Dummy	2002	E	
S-437	Hose, Other than Armored Type—Mounting Procedure	2002	E	
S-438	Hose, Armored Type—Mounting Procedure	1949	E	
S-439	Hose Clamps	2002	E	
S-440	End Hose Gaskets, Couplings, and Nipples—Annual Test Requirements	1999	E	
S-441	Air Brake and Signal Hose—Mounting of Coupling and Nipple	2002	E	
S-443	Brake Cylinder Release Valve and Release Rod	2002	E	
S-444	Brake Cylinder Release Valve Rod Handles—Location	2002	E	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-445	Retaining Valve—Location	2002	E	
S-446	Retaining Valve, 1967-Type, Three-Position	2002	E	
S-447	Hose Coupling Gasket Gauge	2002	E	
S-448	Brake Shoe Go Gauge	2002	E	
S-449	Brake Shoe No-Go Gauge	2002	E	
S-455	Hose Coupling Condemning Gauges for Checking the Beads and Shanks on New and Used Hose Couplings and Nipples	2002	E	
S-456	Hose Coupling Gauges for Gauging New and Used Couplings	2002	E	
S-457	Hose Coupling Tester, Air Brake, Type A-1-B—Modification to Permit Testing of Pinless-Type Couplings	2002	E	
S-458	Hose Assemblies—Reclamation Procedures	2002	E	
S-461	Single-Capacity Freight Brakes—Performance Specification	2019	E	Update Available
S-462	Control Valve—Approval Procedure	2019	E	Update Available
S-463	Test Rack, Multiple-Car, Freight Brake	2019	E	Update Available
S-464	Test Rack, Multiple-Car—Performance Testing Procedure	2019	E	Update Available
S-465	Test Rack, Single-Car	2002	E	
S-466	Test Rack, Single-Car, for Individual Valve Portions—Performance Testing Procedure	2005	E	
S-467	Control Valve, Freight Brake—Environmental Tests	2002	E	
S-468	Control Valve Pipe Bracket	2009	E	
S-469	Performance Specification for Freight Brakes	2006	E	
S-470	Angle Cock, Ball Type—Specification for Approval	2002	E	
S-471	Brake Pipe Restriction Test	2010	E	
S-472	End Cock Location on Cars Arranged for Rotary Dump Service	2002	E	
S-473	Brake Equipment—Application Form for AAR Approval of New and Untried Freight Cars	2003	E	
S-475	Hand Brakes	2024	E	Update Available
S-476	Angle Cocks and Brake Pipe End Cocks—Repair Specification	1981	E	
S-477	Control Valve—Shop Certification Requirements for Approved Valves	2002	E	
S-486	Code of Air Brake System Tests for Freight Equipment—Single Car Test	2018	E	
S-488	End Cock and Air Brake Hose Location on Long Cars	2002	E	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-489	Dirt Collector and Cutout Cock, Combined—Repair Specification	1981	E	
S-490	Vent Protector Performance and Approval	2002	E	
S-491	Hose Coupling	2005	E	
S-492	Field Service Reports—Requirements	2002	E	
S-493	Dirt Collector and Cutout Cock—Test Specification	2002	E	
S-494	Reservoir, Steel Fabricated, Combined Auxiliary and Emergency	2005	E	
S-495	Angle Cock Location on Cars Arranged for Rotary Dump Service	2002	E	
S-2009	Push Rod, Brake Cylinder	1964	E	
S-3001	Approval of AAR-Approved Brake Beam Safety Supports	1984	E	
S-3005	Universal Brake Beam Gauge	1985	E	
S-3009	Specification for Self-Locking Cotter Keys	1992	E	
S-4000	Brake Pipe Reduction Devices, Freight Auxiliary—Environmental Tests	1984	E	
S-4001	Rubber Products—Performance	2018	E	
S-4002	Empty/Load Devices—Performance Testing	2005	E	
S-4003	Train Line Arrangement for Cars with F-Shank Couplers	2005	E	
S-4004	Brake Cylinder—Performance Testing	2002	E	
S-4005	Brake Systems, Truck-Mounted—Performance Testing	2002	E	
S-4006	Hose Supports—Performance Testing	2008	E	
S-4007	Reservoir, Combined Auxiliary and Emergency—Reclamation Procedure	2002	E	
S-4008	Slack Adjuster, Mechanical, Double-Acting, Automatic Compression	2017	E	
S-4009	Compression Slack Adjusters and Piston Travel Adjustment—Inspection, Testing, Removal, and Application	2009	E	
S-4010	Slack Adjuster, Tension—Inspection, Testing, Removal, and Application	2018	E	
S-4013	Train Line Hoses—Coupling Extension Adapter	2002	E	
S-4020	Brake Cylinder Pressure Measurement Taps	2005	E	
S-4021	Angle Cock and Brake Hose Location on Cars with EOCC	2009	E	
S-4022	Pipe, Other than Schedule 80 Iron (RETIRED 04/16/2020)	2006	E	Update Available

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-4023	Brake Shoe Limiting Contour, Low-Friction Composition Type	2009	E	
S-4024	Brake Shoe Force Measurement Devices—Performance Specification	2002	E	
S-4025	Brake Beam Wear Liners, Non-Metallic	2004	E	
S-4026	Brake Rod Connector—Design Requirements	2003	E	
S-4027	Automated Single-Car Test Equipment, Conventional Brake Equipment—Design and Performance Requirements	2018	E	
S-4028	Train Line Arrangement with Displaceable Union on Cars with EOCC and Couplers Not Exceeding 45 in. in Length	2008	E	
S-4029	Train Line Arrangement with Displaceable Union on Cars with EOCC and Couplers Exceeding 45 in. in Length	2008	E	
S-4030	Trolley Arrangement on Cars with EOCC and E Shank Couplers	2008	E	
S-4031	Trainline Arrangement for Cars with E-Type Couplers and with Draft System Buff Travel of 6 to 10 Inches	2024	E	
S-4032	Trainline Arrangement for Cars with E/F-Type Couplers and Draft System Buff Travel of 6 to 10 Inches	2024	E	
S-4045	Passenger Equipment Maintenance Requirements (formerly S-045)	2013	E	
S-4046	Date Markings for Rubberized Components	2016	E	
S-4047	Positive Train Control—Locomotive Air Brake Interface Requirements	2017	E	
S-4200	Electronically Controlled Pneumatic (ECP) Cable-Based Brake Systems—Performance Requirements	2014	E-II	
S-4210	ECP Cable-Based Brake System Cable, Connectors, and Junction Boxes—Performance Specification	2014	E-II	
S-4220	ECP Cable-Based Brake DC Power Supply—Performance Specification	2002	E-II	
S-4230	Intratrain Communication Specification for Cable-Based Freight Train Control Systems	2014	E-II	
S-4240	ECP Brake Equipment—Approval Procedure	2007	E-II	
S-4250	Performance Requirements for ITC-Controlled Cable-Based Distributed Power Systems	2014	E-II	
S-4260	ECP Brake and Wire Distributed Power Interoperability Test Procedures	2008	E-II	
S-4270	ECP Brake System Configuration Management	2008	E-II	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-4286	Single-Car Test for Testing Electronically Controlled Pneumatic Braking Systems—Design and Performance Requirements	2009	E-II	
S-920	AAR Component Identification (CID) Bar Code Standard	2023	F	Update Available
S-6000	Acoustic Roller Bearing Detector Level-1 Indications	2021	F	Update Available
S-6001	Bearing Temperature Performance	2023	F	Update Available
S-6002	Data Summary Definitions	2021	F	Update Available
S-6003	Data Summary—Truck Hunting	2021	F	Update Available
S-6004	Data Summary—TADS®	2021	F	Update Available
S-6005	Data Summary—RailBAM®	2021	F	Update Available
S-6006	Data Summary—Brake Health Truck	2021	F	Update Available
S-6007	Data Summary—Brake Health Car	2015	F	
S-6008	Data Summary—Salient Wheel Impact	2022	F	Update Available
S-6009	Data Summary—Automatic Equipment Identification (AEI)	2021	F	Update Available
S-6010	Data Summary—Wheel Profile Detector (WPD)	2019	F	
S-6020	Data Summary Definition—Line-of-Road Failure	2019	F	
S-6021	Data Summary Definition—Line-of-Road Failure—Air Hose Separation	2016	F	
S-6022	Data Summary Definition—Line-of-Road Failure—Train Separation	2016	F	
S-6023	Data Summary Definition—Line-of-Road Failure—Brake System/Other	2016	F	
S-6030	Wheel Performance—Dynamic Impact and Rim Thickness	2016	F	
S-6031	Inoperative Brake Indications as Determined by Wayside Detector	2016	F	
S-6100	Wayside Detector Data Processing	2016	F	
S-6101	Detector Calibration and Validation Requirements	2024	F	Update Available
S-6102	Wayside Passing Data Format	2021	F	Update Available
S-6103	Wheel Profile Detector	2022	F	Update Available
S-6200	Machine Vision Detector	2021	F	Update Available
M-101	Axles, Carbon Steel, Heat-Treated	2020	G	
M-107/ M-208	Wheels, Carbon Steel	2020	G	
M-967	Electrochemical Metal Deposition for Repairing Roller Bearing Axle Journals	2008	G	
RP-608	Gauge, Wheel—Reference Master Disk for Verifying Wheel Circumference Gauges S-612 and S-613	2004	G	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
RP-609	Inspection Stand for Use with Master Disks	2004	G	
RP-612	Mounting Pressures for Wrought and Cast Steel Wheels on Gear-Driven and Idler Axles of Locomotives Other than Steam	2004	G	
RP-613	Gauge, Axle—Master Gauge for Verifying Axle Journal and Fillet Gauge S-614	2004	G	
RP-614	Gauge, Wheel—Master Gauge for Verifying Wheel Gauges S-617 and S-618	2004	G	
RP-615	Gauge, Wheel—Simplified	2004	G	
RP-622	Axle, Weight—Machined Finish, Raised Wheel Seat	2007	G	
RP-629	Gauge, Wheel—for Measuring Condemnable Overheated Wheels	2004	G	
RP-630	Gauge, Wheel—Application for Measuring Condemnable Overheated Wheels	2004	G	
RP-636	Gauge, Wheel—Application Drawing for AAR 1B Wheel Gauges S-662 and S-667	1991	G	
RP-637	Gauge, Wheel—Application Drawing for AAR 1B Wheel Gauges S-661 and S-665	1991	G	
RP-638	Gauge, Wheel—Application Drawing for Reference Gauge to Verify Wheel Gauges S-661, S-662, S-663, S-664, S-665, S-666, S-667, and S-668	1991	G	
S-601	Wheels—Manufacturing Facility Inspection by Technical Services	2004	G	
S-611	Wheels—Measuring Wheel Circumference (Tape) Using Wheel Gauges S-612 and S-613	2004	G	
S-612	Circumference Measure (Tape) for 27 in. to 38 in. Steel Wheels	2004	G	
S-613	Circumference Measure (Tape) for 38 in. to 52 in. Steel Wheels	2004	G	
S-614	Wheel Defect—Worn Journal Collar and Journal Fillet Gauge	2004	G	
S-615	Wheel Defect—Worn Journal Collar and Journal Fillet Gauge	2004	G	
S-616	Limit Wear Gauge for Condemning Wheel Defect—Worn Journal Collar and Journal Fillet Gauge	2004	G	
S-617	Gauge, Wheel—Former Standard 1980	1980	G	
S-618	Gauge, Wheel—Former Standard 1976	1976	G	
S-619	Reference Groove for Multiple-Wear Diesel Wheels	2015	G	
S-627	Combined Wheel Gauge	1998	G	
S-628	Combined Wheel Gauge	1998	G	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-629	Limit Wear Gauge for Condemning Wheel Defect— Worn Journal Collar and Journal Fillet Gauge	1998	G	
S-630	Steel Wheel Gauge	2013	G	
S-649	Axles—Manufacturing Facility Inspection by Technical Services	2004	G	
S-657	Wheel, Passenger Car (Amfleet)	1980	G	
S-658	Axle for Passenger Cars (Amfleet) Inboard Roller Bearing—Raised Wheel Seat	2020	G	
S-660	Wheel Designs, Locomotive and Freight Car— Analytic Evaluation	2009	G	
S-661	Gauge, Wheel—Maximum Flange Thickness, Height, and Throat Radii Gauge for AAR-1B Narrow-Flange Steel Wheel	1991	G	
S-662	Gauge, Wheel—Minimum Flange Thickness, Height, and Throat Radii Gauge for AAR-1B Narrow-Flange Steel Wheel	1991	G	
S-663	Gauge, Wheel—Reference Limit Gauge for Verifying AAR 1B Narrow Flange Wheel Gauge S-661	1991	G	
S-664	Gauge, Wheel—Reference Limit Gauge for Verifying AAR 1B Narrow Flange Wheel Gauge S-662	1991	G	
S-665	Gauge, Wheel—Maximum Flange Thickness, Height, and Throat Radii Gauge for AAR-1B Wide- Flange Steel Wheels	1991	G	
S-666	Gauge, Wheel—Reference Limit Gauge for Verifying AAR 1B Wide Flange Wheel Gauge S-665	1991	G	
S-667	Gauge, Wheel—Minimum Flange Thickness, Height, and Throat Radii Gauge for AAR-1B Wide- Flange Steel Wheels	1991	G	
S-668	Gauge, Wheel—Reference Limit Gauge for Verifying AAR 1B Wide Flange Wheel Gauge S-667	1991	G	
S-669	Analytic Evaluation of Locomotive Wheel Designs	2020	G	
RP-631	Recommended Wheel Shop Practices	2022	G-II	
RP-632	General Requirements and Information	2022	G-II	
RP-633	Figures	2022	G-II	
RP-634	Gauges—Wheel and Axle Shop	2022	G-II	
RP-750	Wheel-Mounting Compound Approval Test Procedure	2015	G-II	
S-659	Mandatory Rules Governing Wheel Shop Practices as Required by Interchange Rules	2022	G-II	
S-727	Appendix A Approved Materials	2015	G-II	
M-924	Journal Roller Bearing Adapters for Freight Cars	2018	H	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
M-934	Freight Car Journal Roller Bearings	2021	H	
M-934A	Interchangeable Spacers for Freight Car Tapered-Roller Journal Bearings	2011	H	
M-934B	Interchangeable Seal Wear Rings for Freight Car Tapered-Roller Journal Bearings	2011	H	
M-934C	Interchangeable End Caps for Freight Car Tapered-Roller Journal Bearings	2018	H	
M-934D	Interchangeable Backing Rings for Freight Car Tapered-Roller Journal Bearings	2007	H	
M-934E	Universal Fitted Backing Rings For Freight Car Tapered-roller Journal Bearings	2019	H	
M-942	Journal Roller Bearing Grease	2020	H	
M-959	Lubrication Seals for Freight Car Journal Roller Bearings	2019	H	
S-701	Locking Plate for Journal Roller Bearing Assemblies	1997	H	
S-701A	Locking Plate for Journal Roller Bearing Assemblies	2012	H	
S-702	Component Parts for Journal Roller Bearing Assemblies	1998	H	
S-703	Cap Screws for Journal Roller Bearing Assemblies	2021	H	
S-704	Adapter for Use with AAR Standard Pedestal-Type Side	1968	H	
S-705	Wear Gauge for Journal Roller Bearing Adapters	1978	H	
S-706	Wear Gauge for Journal Roller Bearing Adapters	1975	H	
S-720	Tabulation of Adapters and Frame Keys for AAR-Approved Roller Bearings	2008	H	
S-735	Approval Requirements for Reconditioners and Remanufacturers of Roller Bearings	2024	H-II	
S-736	Minimum Acceptance and Rejection Criteria	2024	H-II	
S-737	Requirements for Roller Bearing Reconditioning	2024	H-II	
S-738	Repair Procedure Spalls, SWR, and Press Fit	2024	H-II	
S-739	Interchangeable Roller Bearing Requirements	2024	H-II	
S-740	Requirements for Remanufacture of Roller Bearing Components	2024	H-II	
S-741	Information on Amtrak Passenger Car Bearings	2024	H-II	
S-742	Car Repair Track Information Specific to Roller Bearings	2024	H-II	
M-928	Highway Trailer Hitches for Freight Cars	2018	I	
M-928A	Highway Trailer Hitches for Freight Cars with 90,000-lb Maximum Gross Vehicle Weight Capacity	2018	I	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
M-929	Grease for Lubrication of Trailer Hitches on Flatcars	2004	I	
M-930	Containers for Domestic Intermodal Service	2019	I	Update Available
M-931	Trailers for Intermodal Service	2019	I	Update Available
M-933	Intermodal Trailer and Container Securement	2018	I	
M-935	Standard Operating Procedures for Intermodal Securement	2017	I	
M-952	Intermodal Container Support and Securement System for Freight Cars	2008	I	
M-966	TOFC Portable Bridge Plates	2004	I	
M-985	Bad Order Device for Identification of Defective Hitches	2004	I	
M-998	Intermodal Container Support and Interbox Connector (IBC) Securement Systems for Freight Cars	2022	I	Update Available
RP-851	Double-Stack Container Cars	2004	I	
RP-852	Intermodal Equipment Cars	2003	I	
RP-853	Trailer Repair and Modification	2022	I	Update Available
RP-899	Car Owner’s Manual for the Inspection and Maintenance of Double-Stack Container Cars	2018	I	
S-732	Inspection and Lubrication of Trailer Hitches on Flatcars	2016	I	
M-1003	Specification for Quality Assurance	2024	J	Update Available
S-9001	ITC System Reference Architecture	2012	K-I	
S-9002	Railroad Electronics Standards Configuration Management	2009	K-I	
S-9008.V1.0	PTC Security Architecture 2 (PSA 2)	2024	K-I	
S-9010	Data Protection	2019	K-I	Update Available
S-9053	Positive Train Control ITC System Requirements—Level 0	2018	K-I	Update Available
S-9054	Positive Train Control ITC System Requirements—Level 1	2018	K-I	Update Available
S-9055	Positive Train Control ITC Communications Segment Requirements—Level 1	2013	K-I	
S-9056	Positive Train Control ITC Wayside System Requirements—Level 1	2012	K-I	
S-9057	Positive Train Control ITC Systems Management Requirements—Level 1	2012	K-I	
S-9058	Interoperable Train Control Ticket Management (ITCTM) Requirements and Use Cases	2021	K-I	Update Available

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-9070	I-ETMS Human Machine Interface Standard	2012	K-I	
S-9074	Federated Network Requirements	2020	K-I	Update Available
S-9075	ISMP Design Considerations	2022	K-I	Update Available
S-9076	ITC Systems Management Interoperable Gateway Requirements	2021	K-I	Update Available
S-9080.V3	Positive Train Control Interoperability Committee Policy	2022	K-I	Update Available
S-9080.V4	Positive Train Control Interoperability Committee Policy	2022	K-I	Update Available
S-9080.V5	Positive Train Control Interoperability Committee Policy	2024	K-I	Update Available
S-9081.V1.1	Positive Train Control (PTC) – Interoperable Train Control (ITC) – Electronic Data Interchange (EDI) Rules Governing the Use of EDI 161, EDI 824 & EDI 418J	2021	K-I	Update Available
S-9081.V1.2	Positive Train Control (PTC) – Interoperable Train Control (ITC) – Electronic Data Interchange (EDI) Rules Governing the Use of EDI 161, EDI 824 & EDI 418J	2021	K-I	Update Available
S-9153	Common Air Interface (CAI-12) Communications FOR Remote Control Locomotive Systems (RCL) Operating AT 220 Mhz	2012	K-II	
S-9152	End-of-Train Communications	2016	K-II	Update Available
M-9154B	Intra-Consist Communications (ICC) Layer 2	2015	K-II	Update Available
M-9154A	Intra-Consist Communications (ICC) Routing Functionality	2013	K-II	
M-9155.V1	Locomotive Command and Control Module (LCCM)—Functional Requirements	2014	K-II	
M-9155.V2	Locomotive Command and Control Module (LCCM)—Functional Requirements	2015	K-II	Update Available
M-9155.V2.1	Locomotive Command and Control Module (LCCM)—Functional Requirements	2015	K-II	Update Available
M-9155.V2.2	Locomotive Command and Control Module (LCCM)—Functional Requirements	2016	K-II	Update Available
M-9155.V2.3	Locomotive Command and Control Module (LCCM)—Functional Requirements	2018	K-II	Update Available
M-9155.V2.4	Locomotive Command and Control Module (LCCM)—Functional Requirements	2019	K-II	Update Available
M-9155.V2.4.1	Locomotive Command and Control Module (LCCM)—Functional Requirements	2021	K-II	Update Available
M-9155.V2.5	Locomotive Command and Control Module (LCCM)—Functional Requirements	2021	K-II	Update Available

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-9101 V1.2	Locomotive Electronics System Architecture	2019	K-II	Update Available
S-9101. V1.2.1	Locomotive Electronics System Architecture	2022	K-II	Update Available
S-9101B V1.0	Locomotive Data Acquisition and Recording System Architecture	2011	K-II	
S-9101C V1.0	Locomotive Data Acquisition and Recording System (LDARS)—Event Data Acquisition Processor	2018	K-II	Update Available
S-9101E V1.1	Locomotive System Integration Communications	2016	K-II	Update Available
S-9101F V1.2	Appendix F-Version 1.2 Locomotive Interface Gateway (LIG) Segment and Locomotive Application (LAPP) Segment Subsystems Addresses	2022	K-II	Update Available
S-9101G V1.0	Locomotive Data Acquisition and Recording System (LDARS)—Common File Format Standard	2018	K-II	Update Available
S-9102 V1.0	Locomotive Electronics and Train Control System Architecture	2022	K-II	Update Available
S-9103	Precision Navigation Module Interface Control Document (ICD)	2021	K-II	Update Available
RP-9203	AEI Reader Equipment Requirements	2010	K-III	
S-9202	Interoperable Train Control Wayside Interface Unit Requirements	2012	K-III	
S-9202A	Integrated Wayside Messaging Server Hardware Requirements	2011	K-III	
S-9202B	Stand-alone Wayside Messaging Server Hardware Requirements	2012	K-III	
S-9203	Automatic Equipment Identification	2010	K-III	
S-9203. V1.1	Automatic Equipment Identification	2020	K-III	Update Available
S-9203A	AEI Site-to-Host Consist Report Format	2009	K-III	
S-9203A. V1.1	AEI Site-to-Host Consist Report Format	2020	K-III	Update Available
S-9203B	AEI Site-to-Host Wayside Report Format	2010	K-III	
S-9353. V1.0	Railroad Electronics Standards Committee (RESC) Data Dictionary	2019	K-IV	Update Available
S-9353. V1.1	Railroad Electronics Standards Committee (RESC) Data Dictionary	2021	K-IV	Update Available
S-9354	Edge Message Protocol	2018	K-IV	Update Available
S-9355 AppA.V1.0	Appendix A Version 1.0 Class C Messaging Class C Multicast Message Groups	2022	K-IV	Update Available

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-9355 V1.0	Class C Messaging	2010	K-IV	
S-9355 V2.0	Class C Messaging	2022	K-IV	Update Available
S-9356	Class D Messaging	2018	K-IV	Update Available
S-9357	Mutually Authenticated Key Exchange	2019	K-IV	Update Available
S-9358	Anonymous Key Exchange	2019	K-IV	Update Available
S-9359	Interoperable Certificate Revocation Responder Service	2019	K-IV	Update Available
S-9361 V3.0	Positive Train Control Office-Locomotive Segment—Interface Control Document (ICD)	2020	K-IV	Update Available
S-9361 V3.1	Positive Train Control Office-Locomotive Segment—Interface Control Document (ICD)	2021	K-IV	Update Available
S-9362	Interoperable Train Control (ITC) Wayside- Locomotive Interface Control Document (ICD)	2014	K-IV	
S-9362 V2.0	Interoperable Train Control (ITC) Wayside- Locomotive Interface Control Document (ICD)	2023	K-IV	
S-9363	Interoperable Train Control (ITC) Time and Location—Interface Control Document (ICD)	2012	K-IV	
S-9363.V1.1	Interoperable Train Control (ITC) Time and Location—Interface Control Document (ICD)	2024	K-IV	
S-9364	I-ETMS® Onboard Segment Data Distribution Messages Interface Control Document (ICD)	2017	K-IV	Update Available
S-9365	Locomotive Interface Gateway (LIG) to Positive Train Control (PTC) Interface Control Document (ICD)	2019	K-IV	Update Available
S-9370.V1.0	Interoperable Event and Status Service	2022	K-IV	Update Available
S-9371.V1.0	PTC Onboard Segment—Energy Management Interface Control Document (ICD)	2014	K-IV	Update Available
S-9371.V2.0	PTC Onboard Segment—Energy Management Interface Control Document (ICD)	2018	K-IV	Update Available
S-9371.V3.0	PTC Onboard Segment—Energy Management Interface Control Document (ICD)	2021	K-IV	Update Available
S-9371.V4.0	PTC Onboard Segment—Energy Management Interface Control Document (ICD)	2022	K-IV	Update Available
S-9372.V1.0	PTC Back Office Segment—Energy Managementinterface Control Document (ICD)	2014	K-IV	Update Available
S-9372.V1.1	PTC Back Office Segment—Energy Managementinterface Control Document (ICD)	2016	K-IV	Update Available
S-9372.V2.0	PTC Back Office Segment—Energy Managementinterface Control Document (ICD)	2018	K-IV	Update Available

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-9372.V3.0	PTC Back Office Segment—Energy Managementinterface Control Document (ICD)	2023	K-IV	Update Available
S-9375	Centralized Traffic Control (CTC) over Interoperable Train Control Management (ITCM)—Interface Control Document	2018	K-IV	Update Available
S-9376	Edge Message Protocol (EMP) Subscribe Message Interface Control Document (ICD)	2016	K-IV	Update Available
S-9378.V1.0	Interoperable Train Control Ticket Management (ITCTM) Interface Control Document (ICD)	2021	K-IV	Update Available
S-9379	Requirements for Using an ITC EMP Application Gateway	2018	K-IV	Update Available
S-9382.V1	Interoperable Asset Access Service	2022	K-IV	Update Available
M-9453	ITCSM Asset User Interface Requirements for Interoperable Train Control	2014	K-V	
RP-9457.V1	Positive Train Control Interoperable Electronic Train Management System (I-ETMS) Master Test Strategy (MTS)	2012	K-V	
RP-9457.V2	Interoperable Train Control / Positive Train Control Master Test Strategy (MTS)	2021	K-V	Update Available
S-9401	Railroad Electronics Environmental Requirements	2009	K-V	
S-9401.V1.1	Railroad Electronics Environmental Requirements	2024	K-V	
S-9410.V1.0	SMIA-2 Event and Status Service	2024	K-V	
S-9411.V1.0	SMIA-2 Architecture, Principles and Common Requirements	2024	K-V	
S-9412.V1.0	SMIA-2 Identity Services	2024	K-V	
S-9414.V1.0	SMIA-Service Registry	2024	K-V	
S-9415.V1.0	Automated Certificate Update	2024	K-V	
S-9416.V1.0	ITCSM Agent Requirements to Support PSA-2	2024	K-V	
S-9417	SMIA-2 Service Template	2023	K-V	
S-9418.V1.0	PSA-2 Gateway Requirements	2024	K-V	
S-9419.V1	PSA-2 Back Office Application Requirements	2023	K-V	
S-9420.V1.0	ITC Key Management Service	2024	K-V	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-9421.V1.0	WIU ITCSM Agent Requirements to Support PSA-2	2024	K-V	
S-9451	ITCSM Common Systems Management Requirements	2014	K-V	
S-9451A.V1	ITCSM WIU Asset-Specific Requirements for Interoperable Train Control	2012	K-V	
S-9451A.V2	ITCSM WIU Asset-Specific Requirements for Interoperable Train Control	2021	K-V	Update Available
S-9452	ITCSM Common Data Dictionary for Interoperable Train Control	2018	K-V	Update Available
S-9452.V3.1	ITCSM Common Data Dictionary for Interoperable Train Control	2024	K-V	Update Available
S-9452A.V1	ITCSM WIU Asset-Specific Data Dictionary for Interoperable Train Control	2012	K-V	
S-9452A.V2	ITCSM WIU Asset-specific Data Dictionary for Interoperable Train Control	2021	K-V	Update Available
S-9454	ITC System Management (ITCSM) Back Office Requirements for Interoperable Train Control	2014	K-V	
S-9460	ITCSM Interface Control Document for Interoperable Train	2018	K-V	Update Available
RP-9511	Interoperable Train Control (ITC) Onboard Track Database Field Survey and Validation	2019	K-VI	Update Available
S-9501	PTC Data Model Definition	2018	K-VI	Update Available
S-9501.V4.0	Positive Train Control Data Model Definition	2024	K-VI	Update Available
S-9501 Appendix A.V1.0	Positive Train Control Data Model Definition	2024	K-VI	Update Available
S-9502.V1.0	PTC Track Data Exchange	2020	K-VI	Update Available
S-9502.V1.1	PTC Track Data Exchange	2020	K-VI	Update Available
S-9502.V2.0	PTC Track Data Exchange	2024	K-VI	Update Available
S-9503	Interoperable Electronic Train Management System® (I-ETMS) Subdivision File	2015	K-VI	Update Available
S-9503.V3.0	ITC Track Data File Format	2022	K-VI	Update Available
S-9504	PSA-2 W-OPK File Service Requirements	2023	K-VI	
S-9552	Railroad Communications Network	2004	K-VI	
S-9553	Communications System Architecture	2002	K-VI	
S-9553A	Mobile Communications Package	2002	K-VI	
S-9553B	Front End Processor	2002	K-VI	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-9553C	Cluster Controller	2002	K-VI	
S-9553D	Base Communications Package	2002	K-VI	
S-9555	Railroad Use of IEEE 802.11	2015	K-VI	Update Available
S-9556	AAR Channel Plan for VHF Frequencies from 160.215 MHz to 161.565 MHz	2013	K-VI	
S-9557	Interoperable Train Control (ITC) Radio Identification Format	2015	K-VI	Update Available
S-9558.V1.0	Interoperable IP Network Address Allocations	2021	K-VI	Update Available
M-915	Quality Assurance Requirements for Locomotives and Locomotive Components	2023	M	Update Available
M-916	Sand for Traction	2017	M	
M-1005	Locomotive Electronics Safety Assessments and Analyses	2022	M	Update Available
M-1006	Passenger Equipment Performance Specification	2019	M	
RP-503	Locomotive Diesel Fuel Additives and Fuel Savings Devices—Evaluation Procedure	2016	M	
RP-505	Typical 26-L Type Brake Equipment Piping Diagrams for Locomotives	2001	M	
RP-508	Air Brake Exhaust Piping	2001	M	
RP-509	Braking Ratios for Locomotives	2024	M	Update Available
RP-512	Color Code for Identifying Fluids on Locomotive	2001	M	
RP-514	Designation of Sides and Ends of Locomotives	2001	M	
RP-518	Brake Shoe Unflanged	2001	M	
RP-545	Testing Electrical Components (RETIRED 01/04/2021)	2001	M	Update Available
RP-546	Minimum Requirements for Main Reservoir System on New and Rebuilt Diesel-Electric, Electric, and Gas Turbine Locomotives of 800-hp Capacity and Greater	2001	M	
RP-548	Locomotive Rating Train/Track Resistance	2001	M	
RP-557	Spark Arrester	2001	M	
RP-585	Wiring and Cable Specification	2001	M	
RP-586	Wire and Cable Insulating Material—Moisture-Resisting Jacketed	2005	M	
RP-587	Wire and Cable Insulating Material—Silicone Rubber Insulated	2005	M	
RP-588	Wire and Cable Insulating Material	2001	M	
RP-589	Rating for Specific Fuel Consumption of Diesel Electric Locomotives	2022	M	Update Available
RP-590	Lead-Acid Batteries and Compartments	2001	M	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
RP-599	Brake Shoes—High-Friction Composition Type for Locomotives	2001	M	
RP-2001	Interoperability Requirements—Movement of Passenger Equipment on Freight Railroads	2019	M	
RP-2002	Interoperability Requirements—Operation of Regularly Scheduled Revenue Passenger Service	2019	M	
RP-5107	Access Doors to Light Boxes for Road Number, Headlight, or Warning Lights—Outside Cab	2001	M	
RP-5115	Cushion Pad—Locomotive Cab Door Frame	2001	M	
RP-5117	Door Closure Bar—Locomotive Cab	2001	M	
RP-5120	Flexible Hinge Guard on Locomotive Cab Door	2001	M	
RP-5122	Locomotive Horn Valve Handle with Soft, Resilient-Type Rubber Cover	2001	M	
RP-5124	Padded Sun Visor in Locomotive Cab—Engineer’s Side Only	2001	M	
RP-5126	Recessed Windshield Wiper Valve, Train-Order Light Switch, and Flush-Mounted Train-Order Light	2001	M	
RP-5127	Rounded Cab Window Latch in Locomotive Cabs	2001	M	
RP-5128	Rounding All Possible Exposed Convex Edges and Corners	2001	M	
RP-5132	Diesel Locomotive Control Stand for New Locomotives	2001	M	
RP-5136	Windshield Wiper Motor Handle with Soft-Rubber-Type Grip	2001	M	
RP-5137	Windshield Wiper Motor Protective Cover	2001	M	
RP-5209	Basic Brake Design Data for Freight Locomotives (RETIRED 05/20/2024)	2024	M	Update Available
RP-5503	Locomotive Fueling Interface	2001	M	
RP-5523	Axle Nomenclature Arrangement—Locomotives	2001	M	
RP-5595	Main Reservoir Equalizing End Hose Coupling	2001	M	
RP-5596	Brake Shoes—Metal Type	2001	M	
S-512	27-Point Control Plug and Receptacle	2007	M	
S-580	Locomotive Crashworthiness Requirements	2020	M	
S-591	Locomotive System Integration Operating Display	2020	M	
S-5018	Dynamic Braking Control	2020	M	
S-5019	Locomotive Definitions	2019	M	
S-5020	Color Code for Identifying Fluids on Locomotive	2015	M	
S-5021	Wheel Size and Speed Pickup Axle Identification	2016	M	
S-5022	Ultra-Low Sulfur Diesel (ULSD) Identification Label/Decal	2015	M	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-5101	Locomotive Cab Window Glazing Material	2002	M	
S-5500	Locomotive Interchange Agreement	2007	M	
S-5502	Automatic Engine Start/Stop System	2011	M	
S-5506	Performance Requirements for Diesel Electric Locomotive Fuel Tanks	2001	M	
S-5507	Remote Control Locomotives	2002	M	
S-5509	Locomotive Dynamic Brake Status Reporting	2018	M	
S-5512	Locomotive Event Recorder Download Standard (RETIRED 02/22/2021)	2021	M	Update Available
S-5513	Locomotive Alerter Requirements	2021	M	Update Available
S-5514	Locomotive Operator Control Symbols	2011	M	
S-5515	LED Lighting for Locomotives	2017	M	
S-5516	LED Headlights and Auxiliary Lighting for Locomotives	2020	M	
S-5520	Locomotive Cab Securement	2014	M	
S-5529	Multiple Unit Pneumatic Brake Equipment for Locomotives	2008	M	
S-5530	Locomotive Headlight Control	2018	M	
S-5531	Remote Monitoring Equipment, Locomotive—Installation	2019	M	
S-5597	Air Flow Indicators	2007	M	
S-5598	Calibration Procedure for AFM Type Air Flow Indicators	2007	M	
M-941	End Enclosure for Fully Enclosed Multi-Level Auto Rack Cars	2023	N	
M-950	Universal Wide-Body Tri-Level Fully Enclosed Autorack Car (Low Deck)	2023	N	Update Available
M-950-A	Universal Wide-Body Bi-Level Fully Enclosed Autorack Car (Standard Deck)	2023	N	Update Available
M-951	Portable Bridge Plates for Multi-Level Autorack Cars	2023	N	
M-956	Requirements Governing Superstructures to Cars Equipped With Sliding Sill or End-of-Car Cushioning Devices	2023	N	
M-957	Tie-Down Tracks, Winches, and Chains	2023	N	
M-970	Condition-Based Certification of Multi-Level Auto Rack Cars	2023	N	Update Available
M-971	Non-Grease Lubricant for Autorack Equipment	2023	N	
M-990	Tie-Down Tracks, Wheel Chocks, and Straps (Tri-Level Autoracks)	2023	N	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
M-991	Vehicle Door Edge Protection System for Multi-Level Autorack Cars	2023	N	
M-992	Designated Satellite Shop Repair Specifications for Multi-Level Autorack Cars	2024	N	Update Available
M-993	Mechanical Certification of Flatcars for Autorack Service	2023	N	
RP-802	Wheel Chock Strap Assembly Replacement	2023	N	
RP-803	Ride Quality Performance Requirements for Motor Vehicle Shipments	2023	N	
RP-804	Measurement Requirements for Remote Ride Quality Monitoring	2023	N	
RP-810	Handling and Inspection of Vehicles Before Loading	2023	N	
RP-811	Loading of Vehicles	2023	N	
RP-812	Handling and Inspection of Multi-Level Cars and Equipment After Loading	2023	N	
RP-813	Handling of Multi-Level Cars in Trains and Yards	2023	N	
RP-814	Inspection of Multi-Levels and Vehicles En Route	2023	N	
RP-815	Railroad Police Protection	2023	N	
RP-816	Unloading of Vehicles	2023	N	
RP-817	Destination Inspections	2023	N	
RP-818	Handling of Multi-Level Cars and Equipment After Unloading	2023	N	
RP-830	Form Preparation for Vehicle Inspection	2023	N	
RP-831	Standard Vehicle Nomenclature	2023	N	
S-810	Field Impact and Over-the-Road Tests of Multi-Level Tie-down Equipment and/or Methods	2023	N	
S-815	Tie-Down Chain Assemblies for Multi-Level and Other Flat Cars, Refurbished High Test Grade 43 or Alloy Grade 80	2023	N	
M-105	Forgings, Carbon Steel Blooms, Billets, and Slabs	1964	S	
M-126	Forgings, Carbon Steel	1968	S	
M-127	Forgings, Alloy Steel	1964	S	
M-131	Blooms, Billets, and Slabs—Alloy Steel	1964	S	
M-201	Castings, Steel	2024	S	Update Available
M-202	Truck Bolsters, Cast or Structural—Design and Testing	2021	S	
M-203	Truck Side Frames, Cast Steel—Design and Testing	2024	S	Update Available
M-203A	Bolster Design Loads	1997	S	
M-204	Truck, Freight Car, with Car Body/Side Frame Load Path—Design and Testing	2011	S	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

AAR Manual of Standards and Recommended Practices
Tables of Content

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
M-205	Yoke, Coupler—Test Requirements	2023	S	Update Available
M-210	Side Frame and Bolsters Manufacture	2024	S	Update Available
M-211	Foundry and Product Approval Requirements for the Manufacture of Couplers, Coupler Yokes, Knuckles, Follower Blocks, and Coupler Parts	2023	S	Update Available
M-212	Couplers and Yokes, Secondhand—Classification and Reconditioning Procedure	2023	S	Update Available
M-212A	Coupler Parts, Knuckles, Vertical Connection Pins, Follower Blocks, and Draft Keys—Secondhand Classification	2024	S	
M-213	Truck Frames, Fabricated Steel	2021	S	
M-214	Side Frames and Bolsters, Used and Reconditioned—Classification and Repair Procedure	2024	S	Update Available
M-215	Coupling Systems	2018	S	
M-216	Knuckles, Types E and F—Fatigue Test	2023	S	Update Available
M-220	Casting Component Nondestructive Testing Requirements	2022	S	Update Available
M-975	Span Bolsters	2020	S	
S-300	Truck, Freight Car—Design Data	2016	S-II	
S-301	Truck, 33-in. Wheels—Design Dimensions	2018	S-II	
S-302	Truck, 36 in. Wheels—Design Dimensions	2018	S-II	
S-304	Truck, 38 in. Wheels—Design Dimensions	2018	S-II	
S-310	Bolster, 14 in. Center Plate—Limiting Outline	1979	S-II	
S-311	Bolster, 16 in. Center Plate—Limiting Outline	2009	S-II	
S-312	Bolster, Truck—Marking Diagram	2014	S-II	
S-314	Side Frame, Truck—Marking Diagram	2014	S-II	
S-316	Bolster—Tolerances	1981	S-II	
S-317	Side Frame—Tolerances	1981	S-II	
S-318	Side Frame—Bolster Rotation Stop Lug	1965	S-II	
S-319	Side Frame—Wide Land Rotation Stop Lug Column	1968	S-II	
S-325	Side Frame, Narrow Pedestal—Limiting Dimensions	2009	S-II	
S-327	Side Frame—Roof Repair	2012	S-II	
S-329	Side Frame, Narrow Pedestal—Roller Bearing	1997	S-II	
S-366	Unit Guide Bracket, EC-2055—Design Dimensions	2009	S-II	
S-378	Side Frame, Cast Steel—Marking and Mating	2010	S-II	
S-392	Truck—Design Drawings	2018	S-II	
S-393	Side Frames and Bolsters—Produced Prior to 1978	2001	S-II	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-3010	Side Frame, Standard Pedestal-Type with Side Frame Key—Limiting Dimensions	1947	S-II	
S-3011	Side Frame, Standard Pedestal-Type Size 6 in. × 11 in. with Side Frame Key—Limiting Dimensions	1997	S-II	
S-3012	Side Frame, Alternate Standard Pedestal-Type with Side Frame Key—Application of Roller Bearing Unit	1994	S-II	
M-932	Coupler Centering Device Specification	2003	S-III	
M-961	Uncoupling Devices, Special	2003	S-III	
S-102	Coupler, E Type, E60EE	2024	S-III	Update Available
S-103	Coupler, E Type, Top and Bottom Shelf, SE60EE	2024	S-III	Update Available
S-105	Coupler, E Type, Detail Parts	2021	S-III	Update Available
S-106	Coupler, E Type, No. 10-A Contour and Detail of Pivot Pin Hole	2003	S-III	
S-107	Coupler, E Type, E67DE	2020	S-III	
S-108	Coupler, E/F Type, E68DE	2020	S-III	
S-109	Coupler, E/F Type, E69CE	2020	S-III	
S-110	Coupler, F Type, Standard F Coupler, F70DE	2009	S-III	
S-111	Coupler, F Type, with Top Shelf, Standard, SF70DE	2003	S-III	
S-112	Coupler, F Type, Standard, F73BE	2003	S-III	
S-114	Coupler, F Type, Standard, F79DE	2003	S-III	
S-115	Coupler, F Type, with Top Shelf, Standard, SF79DE	2003	S-III	
S-116	Coupler, F Type, Interlocking, Coupler and Yoke Parts	2003	S-III	
S-117	Coupler Contour, F Type, Interlocking	2003	S-III	
S-129	Couplers—Arrangement of Operating Mechanisms	2000	S-III	
S-130	Coupler, E Type, Articulated Rotor Lever Assembly	2003	S-III	
S-131	Coupler (Rotary), Type E60, Operating Rod, use with up to 6 1/2-in. Total Draft Gear Travel	2016	S-III	
S-132	Operating Mechanism, Type No. 6, Interlocking	2003	S-III	
S-133	Coupler (Rotary), Type F70, Operating Rod, use with up to 6 1/2-in. Total Draft Gear Travel	2016	S-III	
S-134	Coupler (Rotary), Types E60, E67, and F70, Operating Rod for Use with Standard Draft Gear or End-of-Car Cushioning up to 15-in. Total Travel	2016	S-III	
S-137	Coupler Shank Wear Plates and Application	2000	S-III	
S-139	Yokes, Relief Fillets	2003	S-III	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

**AAR Manual of Standards and Recommended Practices
Tables of Content**

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-141	Yoke, E Type, Y40AE, Standard, for 24 5/8-in. Draft Gear Pocket	2009	S-III	
S-142	Yoke, E Type, Y41AE for 36-in. Draft Gear Pocket	2009	S-III	
S-143	Yoke, E Type, SY40AE or YS93AE, Standard, for 24 5/8-in. Draft Gear Pocket	2009	S-III	
S-149	Yoke, E/F and F Type, Y45AE, Standard, for 24 5/8-in. Draft Gear Pocket	2003	S-III	
S-151	Yoke, E/F Type, Y49AE, Standard, for 36-in. Draft Gear Pocket	2003	S-III	
S-154	Coupler, E Type, Top and Bottom Shelf, SE67DE	2020	S-III	
S-155	Coupler, E/F Type, Top and Bottom Shelf, SE68DE	2020	S-III	
S-163	Coupler, E Type, Bottom Shelf, SBE60EE	2024	S-III	Update Available
S-164	Coupler, E Type, Bottom Shelf, SBE67DE	2020	S-III	
S-165	Coupler, E/F Type, Bottom Shelf, SBE68DE	2020	S-III	
S-170	Coupler, E/F Type, Bottom Shelf, SBE69CE	2020	S-III	
S-172	Coupler, E/F Type, Top and Bottom Shelf, SE69CE	2020	S-III	
S-173	Coupler, E Type, Guard Arm Lightener Hole Openings and Knuckle Flag Hole—Standard Dimensions	2003	S-III	
S-174	Coupler, F Type, Guard Arm Lightener Hole Openings and Knuckle Flag Hole—Standard Dimensions	2003	S-III	
S-176	Yoke, E Type, Cushioning, for Pocket EOC-7	2020	S-III	
S-177	Yoke, E Type, Cushioning, for Pocket EOC-8	2020	S-III	
S-178	Yoke, F Type, Cushioning, for Pocket EOC-9	2020	S-III	
S-179	Yoke, F Type, Cushioning, for Pocket EOC-10 and EOC 26	2020	S-III	
S-180	Yoke, F Type, Cushioning, for Pocket EOC-1, EOC-2, and EOC-16	2020	S-III	
M-1004	Interoperable Fuel Tenders for Locomotives	2023	T-I	
S-5025	Gaseous Supply Hose Unit for Fuel Tenders	2023	T-III	
S-5026	Heat Exchange Fluid Hose Unit for Fuel Tenders	2023	T-III	
S-5027	21-Point Control Plug, Cable Assembly, and Receptacle (TC-21 Tender Control Cable)	2023	T-III	
S-5028	Safety Appliance Requirements for Tank Car-style Fuel Tenders	2023	T-III	
S-5029	Safety Appliance Requirements for Intermodal Car-style Fuel Tenders	2023	T-III	
S-5030	Safety Appliance Requirements for Enclosed Car Body-style Fuel Tenders	2023	T-III	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

SECTION INDEX

<u>Standard</u>	<u>Subject</u>	<u>Last Revised</u>	<u>Section</u>	<u>Circulars?</u>
S-5031	Tender-Fill Control Cable, Cable Assembly, and Receptacle (FC-18)	2023	T-III	
S-5032	Tender-Fill Ethernet Cable, Cable Assembly, and Receptacle (FC-8)	2023	T-III	

Note: Click the “Update Available” link in the column entitled “Circulars?” to identify any circular letters that implement specifications, standards, or recommended practices revised since the MSRP section was last printed. Call 877-999-8824 with questions.

EFFECTIVE 10/28/2024

THIS PAGE LEFT BLANK INTENTIONALLY

AAR Manual of Standards and Recommended Practices
Tables of Content

ARCHIVED/RENUMBERED DOCUMENTS

ARCHIVED/RENUMBERED DOCUMENTS

This table provides historical reference information for documents that have been archived or renumbered.

<u>DocNo.</u>	<u>Title</u>	<u>Change</u>
M-112	Springs-Carbon Steel Bars, plate Steel-Bars, Truck Springs	Archived 02/23/2007 via C-10469
M-113	Springs-Elliptical, Leaf style Steel-Bars and Bands for Elliptical Springs	Archived 02/23/2007 via C-10469
M-504	Copper-Tubes, Types A and B Tubes-Copper, Seamless	Archived 02/23/2007 via C-10469
M-604	Hose-Cold Water, Wrapped, Braided	Archived 02/23/2007 via C-10469
M-605	Hose-Steam and Hot Water	Archived 02/23/2007 via C-10469
M-608	Hose-Air, Pneumatic Tools	Archived 02/23/2007 via C-10469
M-617	Hose-Fuel Oil Dispensing	Archived 02/23/2007 via C-10469
M-901C	Draft Gear—36 in. Pocket	Archived 10/23/2006 via C-10375
M-901H	Draft Gear—Impact Testing, Alternate Standard	Archived 10/23/2006 via C-10375
M-907	Lumber-Classification Lumber-Nomenclature, Schedule, Grading Wood-Lumber Nomenclature, Grading, Sizes	Archived 08/10/2007 via C-10569
M-907A	Flooring—Laminated Wood	Archived 08/10/2007 via C-10569
M-922	Cap Screws-Self Locking Nuts-Self Locking	Archived 02/23/2007 via C-10469
M-945	Adjustable Bulkheads Pneumatic Type for Box Cars	Archived 02/23/2007 via C-10467
M-946	For Adjustable Bulkheads Non-Pneumatic Type for Box Cars	Archived 02/23/2007 via C-10467
M-953	Minimum Requirement Standard for Railroad Flatcars for Handling farm and Industrial Equipment	Archived 04/30/2008 via C-10721
M-960	Adjustable Column Type Bulkheads for Box Cars	Archived 02/23/2007 via C-10467
M-962	Remanufacture of TOFC Trailers	Archived 11/02/2017 via C-12983
RP-011	Car Rack for Mounted Wheel Sets Flat Car Rack for Mounted Wheels Mounted Wheels-Rack for Shipment Rack-Wheel Sets, Shipments	Archived 02/23/2007 via C-10469
RP-012	Rivet-Two Piece, Safety Appliance Safety Appliance-Two Piece Rivet Two Piece Rivet-Safety Appliances	Archived 02/23/2007 via C-10469
RP-021	Implementation of Equipment Identification and Warranty Administration	Archived 10/27/17 via C-12977
RP-202	Center Plate-Unit Pressures	Archived 02/23/2007 via C-10467
RP-203	Door-Stock Car	Archived 02/23/2007 via C-10467
RP-204	Lumber-Moisture Content	Archived 08/10/2007 via C-10569
RP-205	Car-Lumber Lining Boards	Archived 02/23/2007 via C-10467
RP-207	Defect Card Receptacle	Archived 03/23/2011 via C-11409
RP-210	Alcohol Burning Heater	Archived 02/23/2007 via C-10467
RP-211	Refrigerator Car Drain Extension	Archived 02/23/2007 via C-10467
RP-212	Boxcar, Insulated—Heat Transmission Rate	Archived 04/16/2007 via C-10486

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

ARCHIVED/RENUMBERED DOCUMENTS

<u>DocNo.</u>	<u>Title</u>	<u>Change</u>
RP-220	Stringer-Arrangement, Box Car	Archived 02/23/2007 via C-10467
RP-222	Univ. Pocket-Cushion 15", E6OCHT Coupler	Archived 02/23/2007 via C-10467
RP-223	Univ. Pocket-Cushion 10, EGOCHT, E67AHT	Archived 02/23/2007 via C-10467
RP-224	Univ. Pocket-Cushion 15", E67AHT Coupler	Archived 02/23/2007 via C-10467
RP-225	Univ. Pocket-Cushion 10, E68AHT, F79AHT	Archived 02/23/2007 via C-10467
RP-226	Univ. Pocket-Cushion 10" E69HTE Coupler	Archived 02/23/2007 via C-10467
RP-229	Liquefied Petroleum Cylinder	Archived 02/23/2007 via C-10467
RP-230	Cradle Blocking, Cax Dumping Machine	Archived 02/23/2007 via C-10467
RP-235	Bolster-Body, Box Car	Archived 02/23/2007 via -10467
RP-236	Bolster-Body, Diagonal Brace, Hopper Car	Archived 02/23/2007 via C-10467
RP-237	Crossbearer-Box Car	Archived 02/23/2007 via C-10467
RP-238	Hopper Car-Crossbearer	Archived 02/23/2007 via C-10467
RP-239	Box Car-Crosstie	Archived 02/23/2007 via C-10467 but reinstated as S-239, its former number, 02/04/2012 via C-11615
RP-240	Door-Single, Sliding, Panel Type	Archived 02/23/2007 via C-10467
RP-241	Door-Double, Sliding, Panel Type	Archived 02/23/2007 via C-10467
RP-242	Door-Single, Plug, No. 3 Type	Archived 02/23/2007 via C-10467
RP-243	Door-Plug and Sliding No.3 Type	Archived 02/23/2007 via C-10467
RP-244	Door Arrangement Double Plug Type No. 3	Archived 02/23/2007 via C-10467
RP-245	Gondola Car-End Arrangement	Archived 02/23/2007 via C-10467
RP-246	Gondola Car-Drop End Arrangement	Archived 02/23/2007 via C-10467
RP-247	Box Car-End Arrangement	Archived 02/23/2007 via C-10467
RP-248	Hopper Car-End Arrangement	Archived 02/23/2007 via C-10467
RP-249	Box Car-Grain Door Nailers	Archived 02/23/2007 via C-10467
RP-250	Hopper Arrangement-Cast Steel Frame	Archived 02/23/2007 via C-10467 (formerly S-250)
RP-251	Hopper Arrangement-Two Piece Hopper	Archived 02/23/2007 via C-10467 (formerly S-251)
RP-252	Roof Arrangement-Diagonal Panel, Box Car	Archived 02/23/2007 via C-10467
RP-253	Refrigerator Car Specifications	Archived 02/23/2007 via C-10467
RP-254	Anti-Pilferage Device—Boxcar Sliding Door	Renumbered S-2049 4/25/2007
RP-255	Anti-Pilferage Device—Boxcar Plug Door	Renumbered S-2050 4/25/2007
RP-256	Floor Restraint, Intermodal Container Cars	Archived 02/23/2007 via C-10467
RP-257	Rail Compatible Vehicles	Archived 02/23/2007 via C-10467
RP-260	Double-Stack Container Cars	Archived 02/23/2007 via C-10467
RP-261	Center Bowl Liner and Lubricant—Double-Stack Container Car	Archived 11/25/2019 via C-13477
RP-300	Center Plate—Liner, Vertical 6 in. × 11 in.	Archived 07/14/2011 via C-11472
RP-301	Center Plate—Liner, Vertical 6 in. × 11 in.	Archived 07/14/2011 via C-11472
RP-305		Archived 07/14/2011 via C-11472
RP-5104	Locomotive Cab Seats	Archived 1/27/2016 via C-12559

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

ARCHIVED/RENUMBERED DOCUMENTS

<u>DocNo.</u>	<u>Title</u>	<u>Change</u>
RP-512	Color Code for Identifying Fluids on Locomotive	Renumbered S-5020
RP-545	Testing Electrical Components	Archived 01/04/2021 via C-13731
RP-619	Reference Groove for Multiple-Wear Diesel Wheels	Renumbered S-619
RP-750	Wheel Mounting Compound Approval Test Procedure	Archived 03/06/17 via C-12839
RP-800	Standards for Reconditioned Cross members and Doorway Members	Archived 02/23/2007 via C-10467
RP-900	Passenger Car	Archived 08/06/2020 via C-13630
RP-901	Boxcars Equipped with Removable Crossbars	Archived 08/06/2020 via C-13630
RP-902	Cars Equipped with Antipilferage Devices	Archived 08/06/2020 via C-13630
RP-903	Lading Strap Anchors	Archived 08/06/2020 via C-13630
RP-904	Gondola Cars with Wood Floors	Archived 08/06/2020 via C-13630
RP-5209	Basic Brake Design Data for Freight Locomotives	Archived 05/20/2024 via C-14373
S-045	Passenger Equipment Car Maintenance Requirements	Renumbered S-4045
S-118	Periodic Inspection of Manufacturers' Facilities	Archived 06/20/2007 via C-10541
S-122	Draft Key Retainer	Archived 02/16/2011 via C-11381
S-2017	Striker—Casting	Renumbered RP-2017 02/23/2007 via C-10467
S-2018	Striker—E Coupler, 24 5/8 in. Riveted	Archived 02/23/2007 via C-10467
S-2019	Striker—E Coupler, 36 in. Riveted	Archived 02/23/2007 via C-10467
S-202	Coupler Height	Archived 02/23/2007 via C-10467
S-2021	Striker—E67 Coupler, 36 in. Welded	Archived 02/23/2007 via C-10467
S-2022	Refrigerator Car—Brine Valve Operation	Archived 02/23/2007 via C-10467
S-2024	Refrigerator and Power Unit Data	Archived 02/23/2007 via C-10467
S-2026	Plate B—Equipment Diagram for Unrestricted Interchange Service	Archived 7/31/2017 via C-12935
S-2027	Plate B-1—Maximum Width of Cars with Various Truck Centers	Archived 7/31/2017 via C-12935
S-2028	Plate C—Equipment Diagram for Limited Interchange Service	Archived 7/31/2017 via C-12935
S-2029	Plate C-1—Maximum Width of Cars with Various Truck Centers	Archived 7/31/2017 via C-12935
S-203	Coupler, Height Adjustment	Archived 7/20/2023 via C-14187
S-2030	Plate D—Obtaining Maximum Allowable Width of Car, Other Than at Centerline of Car, for Unrestricted (Plate B-1) and Limited (Plates C-1, H-1, J-1, and K-1) Interchange Service	Archived 7/31/2017 via C-12935
S-2031	Plate E—Equipment Diagram for Limited Interchange Service	Archived 7/31/2017 via C-12935
S-2032	Plate F—Equipment Diagram for Limited Interchange Service	Archived 7/31/2017 via C-12935

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

ARCHIVED/RENUMBERED DOCUMENTS

<u>DocNo.</u>	<u>Title</u>	<u>Change</u>
S-2040	Plate H—Equipment Diagram for Limited Interchange Service	Archived 7/31/2017 via C-12935
S-2041	Plate H-1—Maximum Width of Cars with Various Truck Centers	Archived 7/31/2017 via C-12935
S-2047	Plate J—Equipment Diagram for Limited Interchange Service	Archived 7/31/2017 via C-12935
S-2048	Plate K—Clearance Diagram for Limited Interchange Service	Archived 7/31/2017 via C-12935
S-205	Center Plate—Body Cast Integral	Archived 02/23/2007 via C-10467
S-2051	Plate J1—Maximum Width of Cars with Various Truck Centers	Archived 7/31/2017 via C-12935
S-2052	Plate K1—Maximum Width of Cars with Various Truck Centers	Archived 7/31/2017 via C-12935
S-209	Center Plate—Cast Steel or Forged	Archived 02/23/2007 via C-10467
S-210	Center Plate—Gage, 12 in. Diameter	Archived 02/23/2007 via C-10467
S-216	Door Posts and Reinforcements	Archived 02/23/2007 via C-10467
S-218	Door—Box Car End	Archived 02/23/2007 via C-10467
S-221	Safety Appliance—Multi-Level Open or Screened Rack Car	Archived 02/23/2007 via C-10467
S-227	Car—Lumber Sections	Archived 04/16/2007 via C-10467
S-228	Flat Car—Platform Width	Archived 02/23/2007 via C-10467
S-231	Meat Hook—Refrigerator Car	Archived 02/23/2007 via C-10467
S-237	Striker—F Coupler, 24 in. Riveted	Archived 02/23/2007 via C-10467
S-239	Draft Arrangement—E60 Coupler 24 in. Pocket Arrangement E60 Coupler Design 24 5/8 in. Draft Gear Pocket Striker Applied by Welding	Renumbered RP-239 Archived 07/18/2024 via C-14398
S-240	Draft Arrangement—E60 Coupler 24 in. Pocket, Former Standard	Archived 02/23/2007 via C-10467
S-241	Draft Arrangement—E67 Coupler 36 in. Pocket	Archived 02/23/2007 via C-10467
S-242	Draft Arrangement—E67 Coupler 36 in. Pocket, Former Standard	Archived 02/23/2007 via C-10467
S-243	Draft Arrangement, E68 Coupler, 24 5/8-in. Pocket Draft Arrangement, F70 Coupler, 24 5/8-in. Pocket—Striker Applied by Welding	Archived 07/18/2024 via C-14398
S-245	Draft Arrangement—F70 Coupler, 24 in. Pocket (Riveting)	Archived 02/23/2007 via C-10467
S-248	Draft Arrangement—F79 Coupler 36 in. Pocket	Archived 02/23/2007 via C-10467
S-250	Center Filler—Rear Draft Lugs	Renumbered RP-250 02/23/2007 via C-10467
S-251	Bellmouth Striker—FC&F, P/S Thrall	Renumbered RP-251 02/23/2007 via C-10467
S-256	Body Bolster—Center Filler, Tolerances Integral Center Plate	Archived 02/23/2007 via C-10467

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

ARCHIVED/RENUMBERED DOCUMENTS

<u>DocNo.</u>	<u>Title</u>	<u>Change</u>
S-257	Body Bolster—Center Filler, Tolerances Die Pressed	Archived 02/23/2007 via C-10467
S-260	Bolster—Body, Center Filler 4 ft 11 in. OH	Archived 02/23/2007 via C-10467
S-261	Bolster—Body, Center Filler 5 ft 5 5/8 in. OH	Archived 02/23/2007 via C-10467
S-262	Bolster—Body, Center Filler 4 ft 11 in. OH	Archived 02/23/2007 via C-10467
S-263	Bolster—Body, Center Filler 5 ft 5 5/8 in. OH	Archived 02/23/2007 via C-10467
S-268	Corner Push Pad and Roping Staple—Hopper	Archived 02/23/2007 via C-10467
S-275	Door—End Door, Auto Box Car	Archived 02/23/2007 via C-10467
S-3003	Side Frame—Column Friction Wear Plate, Application	Archived 08/07/2024 via C-14400
S-3004	Truck Center Plate Liners or Wear Plates	Archived 11/25/2019 via C-13477
S-305	Center Plate Liner, Horizontal and Vertical	Archived 07/14/2011 via C-11472
S-4022	Pipe, Other than Schedule 80 Iron	Archived 04/16/2020 via C-13532
S-5021	Wheel Size and Speed Pickup Axle Identification	Archived 12/02/2016 via C-12763
S-5510	Plate L-Lomotive Diagram for Interchange Service	Archived 7/31/2017 via C-12935
S-5511	Locomotive-Based Top-of-Rail Friction Control Application	Archived 11/26/13 and again 8/5/15 via C-12429
S-590	Locomotive Electronics System Architecture	Archived 08/05/2015 via C-12430
S-721	Roller Bearing Manual—Mandatory Instructions and Practices	Archived 05/08/2024 via C-14358
S-722	Roller Bearing Manual—Rules Covering Requirements for Approval of Roller Bearing Shops to Recondition Roller Bearings for Interchange Service	Archived 05/08/2024 via C-14358
S-723	Roller Bearing Manual—Mandatory Minimum Requirements for Roller Bearing Reconditioning Shops—Procedures—Tool Requirements Necessary to Make Roller Bearing Repairs for Interchange Use	Archived 05/08/2024 via C-14358
S-724	Roller Bearing Manual—Information on Amtrak Passenger Car Bearings	Archived 05/08/2024 via C-14358
S-725	Roller Bearing Manual—Manufacture of Interchangeable Roller Bearing Components	Archived 05/08/2024 via C-14358
S-726	Roller Bearing Manual—Remanufacture of Roller Bearing Components	Archived 05/08/2024 via C-14358
S-729	Lubrication, Roller Bearing	Archived 03/06/2017 via C-12839
S-730	Lubrication, Center Plates	Archived 03/06/2017 via C-12839
S-731	Lubrication, Doors	Archived 03/06/2017 via C-12839
S-732	Inspection and Lubrication of Bulkheads in Freight Cars	Archived 03/06/2017 via C-12839
S-733	Inspection and Lubrication of Bulkheads in Freight Cars	Archived 03/06/2017 via C-12839
S-734	Lubrication, Tie-Down Devices on Multi-Level Automobile rack and Flatcars	Archived 03/06/2017 via C-12839

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

ARCHIVED/RENUMBERED DOCUMENTS

<u>DocNo.</u>	<u>Title</u>	<u>Change</u>
S-736	Inspection and Lubrication, Hand Brakes	Archived 03/06/2017 via C-12839
S-808	Interior Dunnage Equipment—Deck Boards	Archived 02/23/2007 via C-10467
S-809	Standardization of Saddleback Cars	Archived 02/23/2007 via C-10467
S-813	Device for Opening and Closing Side Doors on Boxcars	Archived 02/23/2007 via C-10467
S-814	Portable Bridge Plate for Saddleback Flatcars	Archived 02/23/2007 via C-10467
S-900	Flatcar—Class F	Archived 08/06/2020 via C-13630
S-901	Gondola Car—Class G	Archived 08/06/2020 via C-13630
S-902	Hopper Car—Class H	Archived 08/06/2020 via C-13630
S-903	Special Car—Class L	Archived 08/06/2020 via C-13630
S-904	Caboose—Class N	Archived 08/06/2020 via C-13630
S-905	Refrigerator Car—Class R	Archived 08/06/2020 via C-13630
S-907	Tank Car—Class T	Archived 08/06/2020 via C-13630
S-908	Boxcar—Class X	Archived 08/06/2020 via C-13630
S-909	Maintenance of Way Equipment—Class MW Cars Equipped with Loading Bars and Movable	Archived 08/06/2020 via C-13630
S-911	Bulkheads	Archived 08/06/2020 via C-13630
S-912	Clear Door Opening	Archived 08/06/2020 via C-13630
S-913	Clearance Plates	Archived 08/06/2020 via C-13630
S-914	Metrication Stenciling	Archived 08/06/2020 via C-13630
S-915	Loading Stencil—Refrigerator Car Floor	Archived 08/06/2020 via C-13630

EFFECTIVE 10/28/2024

**AAR Manual of Standards and Recommended Practices
Tables of Content**

CIRCULAR LETTERS

CURRENT CIRCULAR LETTERS

DISCLAIMER

This table lists the Circular Letters that have been issued subsequent to the release of the MSRP specifications, standards, and recommended practices shown in MSRP-A1. This Index Tool is intended to improve accessibility to the users. It is the responsibility of the user to ensure that individual MSRP sections reflect interim revisions implemented via Circular Letter.

Click one of the links below to see the Circular Letters affecting that particular MSRP section.

MSRP-AS	MSRP-E2	MSRP-J	MSRP-M
MSRP-B	MSRP-F	MSRP-K1	MSRP-N
MSRP-C	MSRP-G	MSRP-K2	MSRP-S1
MSRP-C2	MSRP-G2	MSRP-K3	MSRP-S2
MSRP-C3	MSRP-H	MSRP-K4	MSRP-S3
MSRP-D	MSRP-H2	MSRP-K5	MSRP-T1
MSRP-E	MSRP-I	MSRP-K6	MSRP-T3

Section AS Administrative Supplement (2015)

Doc Affected	Date	CL No.	Title
Book	06/17/2014	C-12193	Implementation of Revised AAR Manual of Standards and Recommended Practices Section AS, Administrative Standards Supplement
S-046 S-060	09/30/2015	C-12448	Implementation of Revisions to MSRP Section AS Administrative Standards, Standards S-060 Application for Component Approval Procedure; and S-046 Definitions of Terms for the AAR MSRP.

Section B—Couplers and Freight Car Draft Components (2019) (page 1 of 2)

Doc Affected	Date	CL No.	Title
Book	07/24/2019	C-13386	Implementation of Revised MSRP Section B, Freight Car Draft Components, 2019
M-921B	08/12/2019	C-13398	Solicitation of Comments for Revisions to MSRP Section B, Freight Car Draft Components, Specification M-921B Cushioning Devices, End-of-Car, Addition of New Requirements
M-921B	05/13/2019	C-13585	Implementation of Revisions to MSRP Section B, Freight Car Draft Components, Specification M-921B Cushioning Devices, End-of-Car. Addition of New Requirements.
M-921B M-921C M-921D M-921E M-921F	06/29/2020	C-13604	Implementation of Revisions to MSRP Section F, Sensors, Standard S-920 AAR Component Identification (CID) Bar Code Standard, and MSRP Section B, Freight Car Draft Components, Cushioning Devices Specifications M-921B-C-D-E-F. Component Tracking.
M-921D	08/07/2023	C-14196	Implementation of Revisions to MSRP Section B, Freight Car Draft Components, Specification M-921D Cushioning Devices, End-of-Car, Motor-Vehicle-Carrying. Addition of New Requirements

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

CIRCULAR LETTERS

Section B—Couplers and Freight Car Draft Components (2019) (page 2 of 2)

Doc Affected	Date	CL No.	Title
M-901E M-901G	08/07/2023	C-14199	Implementation of Revisions to MSRP Section B, Freight Car Draft Components, Specifications M-901E and M-901G Draft Gear Requirements, in regard to extending the limits of travel
M-921B M-921C M-921D M-921E M-921F M-921G M-921H	07/18/2024	C-14399	Implementation of Revisions to MSRP Section B FREIGHT CAR DRAFT COMPONENTS, Specification M-921H, Cushioning Devices, End-of-Car, General Requirements, addition of requirements for end-of-car cushioning devices. Updates to M-921B, C, D, E, F, and G
S-270	07/18/2024	C-14398	Implementation of Revisions to MSRP Section C, CAR CONSTRUCTION FUNDAMENTALS AND DETAILS, New Standard "S-2057 Draft Arrangements, 24 5/8-in. Pocket"; retirement of S-239, S-243, and S-245; edits to S-236, S-238, S-270
M-902 RP-906	08/08/2024	C-14410	Implementation of Revisions to MSRP Section B, FREIGHT CAR DRAFT COMPONENTS, New Publications M-902 End-of-Car Energy Management Systems and RP-906 Methodology: Multi-Car Drifting Simulations

Section C—Car Construction—Fundamentals and Details (2014) (page 1 of 2)

Doc Affected	Date	CL No.	Title
Book	09/24/2020	C-13653	Implementation of Revised MSRP Section C, Car Construction Fundamentals and Details, 2020
S-910	03/22/2022	C-13941	Implementation of Editorial Revisions to MSRP Section C, CAR Construction Fundamentals and Details, Standard S-910 Marking of Freight Cars, regarding update to font
S-2045	07/19/2022	C-14001	Implementation of Revisions to MSRP Section C, CAR Construction Fundamentals and Details, Standard S-2045 Remote Monitoring Equipment, Installation. Revision of requirements
S-286	12/29/2022	C-14096	Implementation of Revisions to MSRP Section C Part II, M-1001 Design, Fabrication, and Construction of Freight Cars, and Section C Standard S-286. Freight car and draft pocket design requirements
S-203	07/20/2023	C-14187	Implementation of Retirement to MSRP Section C, CAR Construction Fundamentals and Details, Standard S-203, Coupler, Height Adjustment
S-910 M-800 M-801	08/07/2023	C-14198	Implementation of Editorial Revisions to MSRP Section C, Car Construction Fundamentals and Details, Standard S-910 and Specifications M-800 and M-801, edits relative to marking of multiple unit cars, autoracks, and certain hopper cars
RP-2018	10/11/2023	C-14226	Implementation of Revisions to MSRP Section C, Car Construction Fundamentals and Details, RP-2018 Handholds, Steps, and Ladders for Interior Access - New guidance for safety appliances located below the coupler shank

**AAR Manual of Standards and Recommended Practices
Tables of Content**

CIRCULAR LETTERS

Section C—Car Construction—Fundamentals and Details (2014) (page 2 of 2)

Doc Affected	Date	CL No.	Title
S-213	01/29/2024	C-14302	Implementation of Revisions to MSRP Section C, Car Construction Fundamentals and Details, Standard S-213, Side Door and Door Frames, Boxcar - Plug Type, Revision to the water test fixture requirements
S-2043	04/12/2024	C-14336	Implementation of Revisions to MSRP Section C, CAR CONSTRUCTION FUNDAMENTALS AND DETAILS, Standard S-2043, Performance Specification for Trains Used to Carry High Level Radioactive Material. Assorted edits to requirements.
S-2056	04/25/2024	C-14338	Implementation of Revisions to MSRP Section C, CAR CONSTRUCTION FUNDAMENTALS AND DETAILS, Standard S-2056, Clearance Plate Diagrams for Interchange Service: Plates H, K, and P
S-2057 S-239 S-243 S-245 S-236 S-238	07/18/2024	C-14398	Implementation of Revisions to MSRP Section C, CAR CONSTRUCTION FUNDAMENTALS AND DETAILS, New Standard "S-2057 Draft Arrangements, 24 5/8-in. Pocket"; retirement of S-239, S-243, and S-245; edits to S-236, S-238, S-270
M-968	08/08/2024	C-14411	Implementation of Revisions to MSRP Section C, CAR CONSTRUCTION FUNDAMENTALS AND DETAILS, Specification M-968, Design Requirements for Rigid Open-Top Freight Car Covers, implementation of new specification

Section C-II—Specifications for Design, Fabrication, and Construction of Freight Cars, M-1001 (2015)

Doc Affected	Date	CL No.	Title
Book	11/15/2023	C-14266	Implementation of Revised AAR Manual of Standards and Recommended Practices Section C Part II, Specification M-1001, Design, Fabrication, and Construction of Freight Cars

Section C-III—Specifications for Tank Cars, M-1002 (2014)

Doc Affected	Date	CL No.	Title
Book	05/01/2024	CPC-1425	Publication of 2024 AAR MSRP C-III (M-1002)

Section D—Trucks and Truck Details (2019)

Doc Affected	Date	CL No.	Title
Book	10/25/2024	C-11443	Implementation of Revised AAR Manual of Standards and Recommended Practices Section D, Trucks and Truck Details Manual

EFFECTIVE 10/28/2024

**AAR Manual of Standards and Recommended Practices
Tables of Content**

CIRCULAR LETTERS

Section E—Brakes and Brake Equipment (2019)

Doc Affected	Date	CL No.	Title
Book	02/20/2019	C-13284	Implementation of Revised MSRP Section E, Brakes and Brake Equipment, 2019
S-461 S-462 S-463 S-464	08/28/2019	C-13401	Implementation of Editorial Revisions to MSRP Section E—Brakes and Brake Equipment, Standards: S-461, S-462, S-463, and S-464 to Better Clarify the Purpose of the Test Rack Standards—Revised August 30, 2019
S-475	09/19/2019	C-13414	Implementation of Revisions to MSRP Section E—Brakes and Brake Equipment, S-475, Hand Brakes, Sheave and Chain Connector Clarification
S-4022	04/16/2020	C-13532	Implementation of Retirement of MSRP Section E, Standard S-4022 – Pipe, other than Schedule 80 Iron
S-401	08/03/2020	C-13626	Implementation of Editorial Revisions to MSRP Section E – Brakes and Equipment, Standard S-401, Brake Design Requirements. Hand brake marking requirements have been removed.
S-402	08/03/2020	C-13625	Implementation of Editorial Revision to MSRP Section E – Brakes and Brake Equipment, Standard S-402, Welding of Air Brake Pipe and Fittings For Railroad Cars – Welding Procedure Clarification
S-602	11/28/2023	C-14280	Implementation of Editorial Revision to MSRP Section E – Brakes and Brake Equipment, Specification S-602, Gaskets, Air Hose, updates, and additions
S-475	03/01/2024	C-14317	Implementation of Revisions to MSRP Section E, Brakes and Brake Equipment, Standard S-475, Hand Brakes, Editorial Corrections to Dimensions
S-4031	03/01/2024	C-14318	Implementation of Revisions to MSRP E, Brakes and Brake Equipment, S-4032, Trainline Arrangement For Cars With E/F-Type Couplers And Draft System Buff Travel Of 6 To 10 Inches
S-4032	03/01/2024	C-14319	Implementation of Revisions to MSRP Section E, Brakes and Brake Equipment, New Standard S-4031, Trainline Arrangement For Cars With E-Type Couplers And With Draft System Buff Travel Of 6 To 10 Inches

Section E-II—Electronically Controlled Brake Systems (2014)

Doc Affected	Date	CL No.	Title
Book	08/07/2014	C-12225	Implementation of Revised AAR MSRP Section E-II, Electronically Controlled Brake Systems

Section F—Sensors (2012) (page 1 of 3)

Doc Affected	Date	CL No.	Title
Book	04/10/2020	C-13527	Implementation of Revised MSRP, Section F - Sensors

EFFECTIVE 10/28/2024

**AAR Manual of Standards and Recommended Practices
Tables of Content**

CIRCULAR LETTERS

Section F—Sensors (2012) (page 2 of 3)

Doc Affected	Date	CL No.	Title
S-920	06/29/2020	C-13604	Implementation of Revisions to MSRP Section F, Sensors, Standard S-920 AAR Component Identification (CID) Bar Code Standard, and MSRP Section B, Freight Car Draft Components, Cushioning Devices Specifications M-921B-C-D-E-F. Component Tracking.
S-6102	07/20/2020	C-13613	Implementation Circular for Additions to MSRP, Section F – Sensors: Standard S-6102, Wayside Passing Data Format.
S-920	11/05/2020	C-13695 C-13696	Implementation Circular: Revisions to MSRP Section F, SENSORS S-920 AAR Component Identification Bar Code Standard Modifications to Section 17 – Emergency Brake Valve Portion CID Labels and Section 18 – Service Brake Valve Portion CID Labels. Implementation Circular: Revisions to MSRP Section F, Sensors, S-920 AAR Component Identification - Bar Code Standard / Addition of Data Glossary Elements for Side Frames and Bolsters
S-920	03/10/2021	C-13754	Additions to MSRP Section F, SENSORS S-920 AAR Component Identification Bar Code Standard: Tank Car Service Equipment: Pressure Relief Valves (PRV)
S-6000 S-6001 S-6002 S-6003 S-6004 S-6005 S-6006 S-6008 S-6009 S-6021 S-6102 S-6103 S-6200	05/26/2021	C-13821	Implementation of Editorial Updates to MSRP, Section F, Sensors - Multiple Standards
S-6101	06/02/2021	C-13822	Implementation Circular: MSRP Section F, Sensors, Standard S-6101, Detector Calibration & Validation Requirements: Wheel Impact Load Detector (WILD) Validation Plan
S-920	06/04/2021	C-13823	Implementation of Editorial Updates to MSRP, Section F, S-920, Component Identification Bar Code Standard
S-920	06/08/2021	C-13824	Implementation of Additional/Corrected Editorial Updates to MSRP, Section F, S-920, Component Identification Bar Code Standard
S-920	07/06/2021	C-13833	Implementation Circular: MSRP Section F, Sensors, Standard S-920, Component Identification Bar Code Standards / Sections 12 & 13
S-6101	01/11/2022	C-13925	Implementation Circular: MSRP Section F, Sensors, Standard S-6101, Detector Calibration & Validation Requirements: Acoustic Bearing Detector (ABD) Validation Standards
S-920	06/30/2022	C-13998	Implementation: Revisions to MSRP F, Sensors, S-920, Component Identification Bar Code Standard - Section 10 Wheel Set CID Labels

EFFECTIVE 10/28/2024

**AAR Manual of Standards and Recommended Practices
Tables of Content**

CIRCULAR LETTERS

Section F—Sensors (2012) (page 3 of 3)

Doc Affected	Date	CL No.	Title
S-6103	08/30/2022	C-14018	Implementation: Revisions to MSRP F, Sensors, S-6103 Wheel Profile Detector - Section 5.0 Measurement Standards
S-6008	09/26/2022	C-14026	Implementation Circular: Revisions to MSRP F, Sensors, S-6008 Data Summary - Salient Wheel Impact
S-920	10/11/2022	C-14031	Informational: Implementation of Editorial Modifications to S-920 Appendices A-H (Registered Component Data Glossaries)
S-6101	12/05/2022	C-14084	Implementation Circular: MSRP Section F, Sensors, Standard S-6101, Detector Calibration & Validation Requirements: Archived WILD Validation Standards
S-920	01/03/2023	C-14097	Implementation Circular: MSRP Section F, Sensors, Standard S-920, Component Identification Bar Code Standards / Appendix D - Coupler Body Data Glossary
S-6101	11/28/2023	C-14278	Implementation Circular: MSRP Section F, Sensors, Standard S-6101, Detector Calibration & Validation Requirements - Acoustic Bearing Detector (ABD) Fault Descriptor Validation
S-6001	11/29/2023	C-14282	Implementation Circular: MSRP Section F, Sensors, Standard S-6001, Bearing Temperature Performance
S-6101	04/09/2024	C-14334	Implementation Circular and Modification to Circular C-14331: Revisions to MSRP F, Sensors, S-6101 Detector Calibration & Validation Requirements / ABD Site Current Validations
S-6101	06/13/2024	C-14383	Implementation Circular: Revisions to MSRP F, Sensors, S-6101 - Detector Calibration & Validation Requirements / ABD Site Current Validations
S-6101	08/29/2024	C-14414	Implementation Circular: Revisions to MSRP F, Sensors, S-6101 - Detector Calibration & Validation Requirements / ABD Site Current Validations
S-6101	10/17/2024	C-14426	Implementation Circular: Revisions to MSRP F, Sensors, S-6101 - Detector Calibration & Validation Requirements / ABD Site Current Validations

Section G—Wheels and Axles (2016)

Doc Affected	Date	CL No.	Title
Book	09/29/2020	C-13654	Implementation of Revised MSRP Section G, Wheel and Axles, 2020

Section G-II—Wheel and Axle (Shop) Manual (2019)

Doc Affected	Date	CL No.	Title
Book	10/25/2022	C-14039	Implementation of Revised MSRP Section G-II, Wheel and Axle Manual, 2022

EFFECTIVE 10/28/2024

**AAR Manual of Standards and Recommended Practices
Tables of Content**

CIRCULAR LETTERS

Section H—Journal Bearings and Lubrication (2021)

Doc Affected	Date	CL No.	Title
Book	04/29/2021	C-13785	Implementation of Revised MSRP Section H, Journal Bearings and Lubrication, 2021

Section H-II—Roller Bearing (Shop) Manual (2017)

Doc Affected	Date	CL No.	Title
Book	05/08/2024	C-14358	Implementation of Revised MSRP Section H-II, Roller Bearing Manual, 2024

Section I—Intermodal Equipment Manual (2018)

Doc Affected	Date	CL No.	Title
Book	08/01/2018	C-13180	Implementation of Revised MSRP Section I, Intermodal Equipment Manual, 2018
M-930 M-931 M-998 RP-853	04/19/2019	C-13310	Implementation of Revisions to MSRP Section I, Intermodal Equipment Manual, M-930, M-931, M-998, RP-853, Appendix E CSU Testing, Lift Pad, and IBC Tension Testing
RP-853	10/12/2022	C-14032	Implementation of Revisions to MSRP Section I, Intermodal Equipment Manual, Recommended Practice RP-853, Trailer Skirt
S-9080.V4.0	10/19/2022	C-14036	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-I Railway Electronics Architecture and Concepts of Operations, Standard S-9080.V4.0
M-998	12/20/2022	C-14094	Implementation of Revisions to MSRP Section I, Intermodal Equipment Manual, M-998, IBC Handle Requirement

Section J—Specification for Quality Assurance, M-1003 (2019)

Doc Affected	Date	CL No.	Title
Book	02/01/2024	C-14306	Implementation of Revision to AAR MSRP Section J, Specification for Quality Assurance M-1003

**Section K-I—Railway Electronics Systems Architecture and Concepts of Operation (2014)
(page 1 of 3)**

Doc Affected	Date	CL No.	Title
Book	08/01/2014	C-12211	New Release of Railway Electronics Standards Sections K-I through K-VI
S-9053.V1.0	08/08/2014	C-12229	Implementation of New AAR Manual of Standards and Recommended Practices (MSRP), Section K-I Railway Electronics Systems Architecture and Concepts of Operations, S-9053 Positive Train Control ITC System Requirements—Level 0

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

CIRCULAR LETTERS

Section K-I—Railway Electronics Systems Architecture and Concepts of Operation (2014)
(page 2 of 3)

Doc Affected	Date	CL No.	Title
S-9054.V1.0	08/08/2014	C-12230	Implementation of New AAR Manual of Standards and Recommended Practices (MSRP), Section K-I Railway Electronics Systems Architecture and Concepts of Operations, S-9054 Positive Train Control ITC System Requirements—Level 1
S-9053.V2.0	12/07/2018	C-13252	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-I Railway Electronics Systems Architecture and Concepts of Operations, Positive Train Control ITC System Requirements - Level 0, Standard S-9053.V2.0
S-9054.V2.0	12/07/2018	C-13253	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-1 Railway Electronics Systems Architecture and Concepts of Operations, Positive Train Control ITC System Requirements - Level 1, Standard S-9054.V2.0
S-9010.V1.0	07/24/2019	C-13385	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-I Railway Electronics Systems Architecture and Concepts of Operations, Data Protection, Standard S-9010.V1.0
S-9080.V1.0	10/17/2019	C-13422	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-I Railway Electronics Systems Architecture and Concepts of Operations, Standard S-9080.V1.0
S-9080.V2.0	09/30/2020	C-13655	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-I Railway Electronics Systems Architecture and Concepts of Operations, Standard S-9080.V2.0
S-9074.V1.0	11/05/2020	C-13694	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-I Railway Electronics Systems Architecture and Concepts of Operations, Standard S-9074.V1.0
S-9081.V1.0	12/18/2020	C-13726	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-I Railway Electronics Systems Architecture and Concept of Operations, Standard S-9081.V1.0
S-9058.V1.0	01/19/2021	C-13736	IMPLEMENTED. AAR Manual of Standards and Recommended Practices (MSRP), Section K-I Railway Electronics Systems Architecture and Concept of Operations, Standard S-9058.V1.0
S-9081.V1.1	02/26/2021	C-13749	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-1 Railway Electronics Systems Architecture and Concept of Operations, Standard S-9081.V1.1
S-9081.V1.2	03/08/2021	C-13753	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-1 Railway Electronics Systems Architecture and Concept of Operations, Standard S-9081.V1.2
S-9076.V1.0	08/17/2021	C-13841	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-I Railway Electronics Systems Architecture and Concept of Operations, Standard S-9076.V1.0
S-9075.V1.0	07/19/2022	C-14003	Implemented, AAR Manual of Standards and Recommended Practices (MSRP), Section K-1 Railway Electronics Systems Architecture and Concepts of Operations, Standard S-9075.V1.0
S-9080.V3.0	08/05/2022	C-14009	Implemented, AAR Manual of Standards and Recommended Practices (MSRP), Section K-1 Railway Electronics Systems Architecture and Concept of Operations, Standard S-9080.V3.0

EFFECTIVE 10/28/2024

**AAR Manual of Standards and Recommended Practices
Tables of Content**

CIRCULAR LETTERS

**Section K-I—Railway Electronics Systems Architecture and Concepts of Operation (2014)
(page 3 of 3)**

Doc Affected	Date	CL No.	Title
S-9008.V1.0	04/05/2024	C-14333	IMPLEMENTED. AAR Manual of Standards and Recommended Practices (MSRP), Section K-I Railway Electronics Systems Architecture and Concepts of Operations, Standard S-9008.V1.0
S-9080.V5.0	06/24/2024	C-14388	IMPLEMENTED. Manual of Standards and Recommended Practices (MSRP). Section K-I Railway Electronics Architecture and Concepts of Operations. Standard S-9080.V5.0

**Section K-II—Locomotive Electronics and Train Consist System Architecture
(2014) (page 1 of 2)**

Doc Affected	Date	CL No.	Title
Book	08/01/2014	C-12211	New Release of Railway Electronics Standards Sections K-I through K-VI
M-9154B.V1.0	01/23/2015	C-12326	Implementation of New AAR Manual of Standards and Recommended Practices (MSRP), Section K-II, Locomotive Electronics and Train Consist Architecture, Intra-Consist Communications (ICC) Layer 2, M-9154B.V1.0.
M-9155.V2.0	05/19/2015	C-12384	Railway Electronics Standards Committee, Specification M-9155.V2.0—Locomotive Command and Control Module (LCCM)—Functional Requirements
M-9155.V.2.1	11/2/2015	C-12465	New Circular Letter Release: Implementation of Revision to MSRP, Section K-II, Specification M-9155.V.2.1 - Locomotive Command and Control Module (LCCM) Functional Requirements
M-9155.V2.2	08/23/2016	C-12704	New Circular Release: Implementation of Changes to MSRP, Section K-II, Specification M-9155.V2.2, Locomotive Command and Control Module (LCCM) – Functional Requirements.
S-9101E.V1.1	09/30/2016	C-12716	New Circular Letter Release: Implementation of Changes to MSRP, Section K-II, Specification S-9101E.V1.1—Locomotive System Integration Communications
S-9152.V2.2	09/30/2016	C-12717	New Circular Letter Release: Implementation of Changes to MSRP, Section K-II, Standard S-9152.V2.2—End-of-Train Communications
S-9101.V1.1	11/03/2016	C-12730	New Circular Release: Implementation of Changes to the MSRP, Section K-II, Standard S-9101.V1.1—Locomotive Electronics System Architecture (LESA) and Appendix F— Locomotive Interface Gateway (LIG)
S-9101C.V1.0	07/13/2018	C-13170	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-II Loco Electronics & Train Consist System Architecture, Locomotive Data Acquisition and Recording System (LDARS)—Event Data Acquisition Processor, Standard S-9101C.V1.0
S-9101G.V1.0	07/13/2018	C-13171	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-II Locomotive Electronics & Train Consist System Architecture, Locomotive Data Acquisition and Recording System (LDARS) - Common File Format Standard, Standard S-9101G.V1.0

EFFECTIVE 10/28/2024

**AAR Manual of Standards and Recommended Practices
Tables of Content**

CIRCULAR LETTERS

**Section K-II—Locomotive Electronics and Train Consist System Architecture
(2014) (page 2 of 2)**

Doc Affected	Date	CL No.	Title
M-9155.V2.3	10/04/2018	C-13204	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-II Locomotive Electronics and Train Consist System Architecture, Locomotive Command and Control Module (LCCM)—Functional Requirements, Specification M-9155.V2.3
M-9155.V2.4	08/30/2019	C-13402	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-II Locomotive Electronics and Train Consist System Architecture, Locomotive Command and Control Module (LCCM)—Functional Requirements Specification M-9155.V2.4
S-9101.V1.2	08/30/2019	C-13403	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-II Locomotive Electronics and Train Consist System Architecture, Locomotive Electronics System Architecture Standard S-9101.V1.2
S-9101.V1.2	08/30/2019	C-13404	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-II Locomotive Electronics and Train Consist System Architecture, Standard S-9101 Appendix F
M-9155.V2.4.1	09/10/2021	C-13851	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-II Locomotive Electronics and Train Consist System Architecture, Specification M-9155.V2.4.1.
S-9103.V1.0	10/25/2021	C-13860	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-II Locomotive Electronics and Train Control System Architecture, Standard S-9103.V1.0
M-9155.V2.5	12/20/2021	C-13918	Implemented, AAR Manual of Standards and Recommended Practices (MSRP), Section K-II Locomotive Electronics and Train Consist System Architecture, Specification M-9155.V2.5
S-9101 Appendix F.V1.2	09/21/2022	C-14025	Implemented, AAR Manual of Standards and Recommended Practices (MSRP), Section K-II Locomotive Electronics and Train Control System Architecture, Standard S-9101 Appendix F V1.2
S-9101.V1.2.1	12/16/2022	C-14090	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-II Locomotive Electronics and Train Control System Architecture, Standard S-9101.V1.2.1
S-9102.V1.0	12/16/2022	C-14091	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-II Locomotive Electronics and Train Control System Architecture, Standard S-9102.V1.0

Section K-III—Wayside Electronics and Mobile Worker Communications Architecture (2014) (page 1 of 2)

Doc Affected	Date	CL No.	Title
Book	08/01/2014	C-12211	New Release of Railway Electronics Standards Sections K-I through K-VI
S-9203.V1.1	04/27/2020	C-13547	Implementation of AAR Manual of Standards and Recommended Practices(MSRP), Section K-III Office Architecture and Railroad Electronics Messaging, Standard S-9203.V1.1

EFFECTIVE 10/28/2024

**AAR Manual of Standards and Recommended Practices
Tables of Content**

CIRCULAR LETTERS

Section K-III—Wayside Electronics and Mobile Worker Communications Architecture (2014) (page 2 of 2)

Doc Affected	Date	CL No.	Title
S-9203A.V1.1	04/27/2020	C-13549	Implementation of AAR Manual of Standards and Recommended Practices (MSRP), Section K-III Office Architecture and Railroad Electronics Messaging, Standard S-9203A.V1.1

**Section K-IV—Office Architecture and Railroad Electronics Messaging
(2014) (page 1 of 3)**

Doc Affected	Date	CL No.	Title
Book	08/01/2014	C-12211	New Release of Railway Electronics Standards Sections K-I through K-VI
S-9371.V1.0	11/25/2014	C-12299	Implementation of New AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Office Architecture and Railroad Electronics Messaging, PTC Onboard Segment—Energy Management Interface Control Document (ICD), S-9371.V1.0
S-9372.V1.0	11/25/2014	C-12300	Implementation of New AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Office Architecture and Railroad Electronics Messaging, PTC Back Office Segment—Energy Management Interface Control Document (ICD), S-9372.V1.0
S-9364.V1.1	06/05/2015	C-12399	Railway Electronics Standards Committee, Standard S-9364.V1.1—I-ETMS Onboard Segment Data Distribution Messages Interface Control Document (ICD)
S-9372.V1.1	06/06/2016	C-12652	New Circular Release: Implementation of Changes to MSRP, Section K-IV, Standard S-9372.V1.1—PTC Back Office Segment—Energy Management Interface Control Document (ICD)
S-9361.V1.2	07/05/2016	C-12681	New Circular Release: Implementation of Changes to MSRP, Section K-IV, Standard S-9361.V1.2, Positive Train Control Office—Locomotive Segment—Interface Control Document (ICD)
S-9376.V1.0	10/19/2016	C-12725	New Circular Release: Implementation of New Standard in MSRP, Section K-IV, Standard S-9376.V1.0—Edge Message Protocol (EMP) Subscribe Message Interface Control Document (ICD)
S-9364.V2.0	01/18/2017	C-12786	New Circular Letter Release, S-9364.V2.0—I-ETMS® Onboard Segment Data Distribution Messages Interface Control Document (ICD), In Support of AAR Manual of Standards and Recommended Practices (MSRP), Section K-4, Railway Electronics Messaging Stand
S-9361.V2.0	06/28/2018	C-13165	IMPLEMENTED. AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Railroad Electronics Messaging Standards, Positive Train Control (PTC) Office—Locomotive Segment—Interface Control Document (ICD), Standard S-9361.V2.0
S-9372.V2.0	06/28/2018	C-13166	IMPLEMENTED. AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Railroad Electronics Messaging Standards, PTC Back Office Segment-Energy Management Interface Control Document (ICD), Standard S-9372.V2.0

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

CIRCULAR LETTERS

Section K-IV—Office Architecture and Railroad Electronics Messaging
(2014) (page 2 of 3)

Doc Affected	Date	CL No.	Title
S-9375.V1.0	07/23/2018	C-13174	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Railroad Electronics Messaging Standards, Centralized Train Control (CTC) Over Interoperable Train Control Mgmt (ITCM)-Interface Control Document, Standard S-9375.V1.0
S-9452.V2.0	10/08/2018	C-13205	IMPLEMENTED. AAR Manual of Standards and Recommended Practices (MSRP), Section K-V Electronics Environmental Requirements and Systems Management, ITCSM Common Data Dictionary for Interoperable Train Control Standard S-9452.V2.0
S-9354.V2.0	10/30/2018	C-13221	IMPLEMENTED. AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Office Architecture and Railroad Electronics Messaging, Edge Message Protocol Standard S-9354.V2.0.
S-9371.V2.0	10/30/2018	C-13222	IMPLEMENTED. AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Office Architecture and Railroad Electronics Messaging, PTC Onboard Segment-Energy Management Interface Control Document (ICD) Standard S-9371.V2.0
S-9356.V2.0	10/30/2018	C-13223	IMPLEMENTED. AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Office Architecture and Railroad Electronics Messaging, Class D Messaging Standard S-9356.V2.0
S-9379.V1.0	12/7/2018	C-13251	IMPLEMENTED. AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Office Architecture and Railroad Electronics Messaging, Requirements For Using An ITC EMP Application Gateway, Standard S-9379.V1.0
S-9357.V1.0	06/28/2019	C-13371	IMPLEMENTED. AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Office Architecture and Railroad Electronics Messaging, Mutually Authenticated Key Exchange, Standard S-9357.V1.0
S-9358.V1.0	06/28/2019	C-13372	IMPLEMENTED. AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Office Architecture and Railroad Electronics Messaging, Anonymous Key Exchange, Standard S-9358.V1.0
S-9359.V1.0	06/28/2019	C-13373	IMPLEMENTED. AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Office Architecture and railroad Electronics Messaging, Interoperable Certificate Revocation Responder Service, Standard S-9359.V1.0
S-9365.V3.0	08/11/2019	C-13395	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Office Architecture and RR Electronics Messaging, Locomotive Interface Gateway (LIG) Positive Train Control (PTC) Interface Control Document (ICD), Standard S-9365.V3.0
S-9353.V1.0	08/11/2019	C-13394	Implemented. AAR Manual of Standards and Recommended Practices (MSRP). Section K-IV Office Architecture and Railroad Electronics Messaging, Railroad Electronics Standards Committee (RESC) Data Dictionary, S-9353.V1.0

EFFECTIVE 10/28/2024

**AAR Manual of Standards and Recommended Practices
Tables of Content**

CIRCULAR LETTERS

**Section K-IV—Office Architecture and Railroad Electronics Messaging
(2014) (page 3 of 3)**

Doc Affected	Date	CL No.	Title
S-9361.V3.0	10/14/2020	C-13657	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Office Architecture and Railroad Electronics Messaging, Standard S-9361.V3.0
S-9371.V3.0	04/05/2021	C-13765	Implemented. AAR Manual of Standard and Recommended Practices (MSRP), Section K-IV Office Architecture and Railroad Electronics Messaging, Standard S-9371.V3.0
S-9378.V1.0	04/22/2021	C-13781	Implemented. AAR Manual of Standards and Recommended Practices, Section K-IV Office Architecture and Railroad Electronics Messaging, Standard S-9378.V1.0
S-9353.V1.1	12/20/21	C-13916	Implemented, AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Office Architecture and Railroad Electronics Messaging, Standard S-9353.V1.1
S-9361.V3.1	12/20/2021	C-13917	Implemented, AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Office Architecture and Railroad Electronics Messaging, Standard S-9361.V3.1
S-9382.V1.0	07/19/2022	C-14002	Implemented, AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Office Architecture and Railroad Electronics Messaging, Standard S-9382.V1.0
S-9371.V4.0	08/25/2022	C-14012	Implemented, AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Office Architecture and Railroad Electronics Messaging, Standard S-9371.V4.0
S-9370.V1.0	08/26/2022	C-14014	Implemented, AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Office Architecture and Railroad Electronics Messaging, Standard S-9370.V1.0
S-9355.V2.0	08/26/2022	C-14015	Implemented, AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Office Architecture and Railroad Electronics Messaging, Standard S-9355.V2.0
S-9355 Appx A V1.0	08/26/2022	C-14016	Implemented, AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Office Architecture and Railroad Electronics Messaging, Standard S-9355 Appendix A V1.0
S-9362.V2.0	07/19/2023	C-14182	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Office Architecture and Railroad Electronics Messaging, Standard S-9362.V2.0
S-9372.V3.0	09/08/2023	C-14210	IMPLEMENTED. AAR Manual of Standards and Recommended Practices (MSRP), Section K-IV Office Architecture and Railroad Electronics Messaging, S-9372.V3.0
S-9363.V1.1	01/29/2024	C-14305	IMPLEMENTED. AAR Manual of Standard and Recommended Practices (MSRP), Section K-IV Office Architecture and Railroad Electronics Messaging, Standard S-9363.V1.1

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

CIRCULAR LETTERS

Section K-V—Electronics Environmental Requirements and System Management
(2014) (page 1 of 2)

Doc Affected	Date	CL No.	Title
S-9460.V1.0	06/28/2018	C-13167	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-5 Electronics Environmental Requirements & Systems Management, ITCSM Interface Control Document for Interoperable Train Control, Standard S-9460.V1.0
S-9452A.V2.0	08/16/2021	C-13839	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-V Electronics Environmental Requirements and Systems Management, Standard S-9452A.V2.0
S-9451A.V2.0	08/17/2021	C-13840	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-V Electronics Environmental Requirements and Systems Management, Standard S-9451A.V2.0
RP-9457.V2.0	08/17/2021	C-13842	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-V Electronics Environmental Requirements and Systems Management, Standard RP-9457.V2.0
S-9417.V1.0	07/19/2023	C-14183	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-5 Electronics Environmental Requirements and Systems Management, Standard S-9417.V1.0
S-9419.V1.0	09/08/2023	C-14208	Implemented. AAR Manual of Standards and Recommended Practices (MSRP). Section K-V Electronics Environmental Requirements and Systems Management, Standard S-9419.V1.0
S-9410.V1.0	02/20/2024	C-14310	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-V Electronics Environmental Requirements and Systems Management, Standard S-9410.V1.0
S-9411.V1.0	02/20/2024	C-14311	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-V Electronics Environmental Requirements and Systems Management, Standard S-9411.V1.0
S-9412.V1.0	02/20/2024	C-14312	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-V Electronics Environmental Requirements and Systems Management, Standard S-9412.V1.0
S-9414.V1.0	02/20/2024	C-14313	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-V Electronics Environmental Requirements and Systems Management, Standard S-9414.V1.0
S-9421.V1.0	03/08/2024	C-14322	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-V Electronics Environmental Requirements and Systems Management, Standard S-9421.V1.0
S-9418.V1.0	03/28/2024	C-14329	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-V Electronics Environmental Requirements and Systems Management, Standard S-9418.V1.0
S-9415.V1.0	04/12/2024	C-14335	IMPLEMENTED. Manual of Standards and Recommended Practices (MSRP), Section K-V Electronics Environmental Requirements and Systems Management, Standard S-9415.V1.0
S-9416.V1.0	05/07/2024	C-14357	IMPLEMENTED. Manual of Standards and Recommended Practices (MSRP), Section K-V Electronics Environmental Requirements and Systems Management, Standard S-9416.V1.0
S-9420.V1.0	07/12/2024	C-14397	IMPLEMENTED. AAR Manual of Standards and Recommended Practices (MSRP), Section K-V Electronics Environmental Requirements and Systems Management, Standard S-9420.V1.0

EFFECTIVE 10/28/2024

**AAR Manual of Standards and Recommended Practices
Tables of Content**

CIRCULAR LETTERS

**Section K-V—Electronics Environmental Requirements and System Management
(2014) (page 2 of 2)**

Doc Affected	Date	CL No.	Title
S-9452.V3.1	10/07/2024	C-14421	IMPLEMENTED. AAR Manual of Standards and Recommended Practices (MSRP), Section K-V Electronics Environmental Requirements and Systems Management, Standard S-9452.V3.1

**Section K-VI—Railway Electronics Data Management and Communications
(2014) (page 1 of 2)**

Doc Affected	Date	CL No.	Title
Book	08/01/2014	C-12211	New Release of Railway Electronics Standards Sections K-I through K-VI
S-9555.V1.1	06/10/2015	C-12401	New Circular Release: Implementation of Changes to MSRP, Section K-VI, Standard S-9555.V1.1, Railroad Use of IEEE 802.1X and DHCP Services in Support of 802.11 Interoperability.
S-9501.V2.0	07/24/2015	C-12426	New Circular Release: Implementation of Changes to MSRP, Section K-VI, Standard S-9501.V2.0—Positive Train Control Data Model Definition
S-9503.V2.0	08/13/2015	C-12427	New Circular Release: Implementation of Changes to MSRP, Section K-VI, Standard S-9503.V2.0 - Interoperable Electronic Train Management System (I-ETMS) Subdivision File
S-9557.V1.0	12/15/2015	C-12537	New Circular Letter Release: Implementation of New Standard within MSRP, Section K-VI, Standard S-9557.V1.0—Interoperable Train Control (ITC) Radio Identification Format.
S-9501.V3.0	10/30/2018	C-13224	IMPLEMENTED. AAR Manual of Standards and Recommended Practices (MSRP), Section K-VI Railway Data Management and Communications, Positive Train Control Data Model Definition, Standard S-9501.V3.0
RP-9511.V2.0	05/15/2019	C-13332	IMPLEMENTED. AAR Manual of Standards and Recommended Practices (MSRP), Section K-VI Railway Data Management and Communication, Interoperable Train Control (ITC) Onboard Track Database Field Survey and Validation, Recommended Practice RP-9511.V2.0
S-9502.V1.0	06/26/2020	C-13602	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-VI Railway Data Management and Communications, Standard S-9502.V1.0
S-9502.V1.1	10/29/2020	C-13671	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-VI Railway Data Management and Communications, Standard S-9502.V1.1
S-9558.V1.0	03/31/2021	C-13763	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-VI Railway Data Management and Communications, S-9558.V1.0
S-9503.V3.0	12/16/2022	C-14087	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-VI Railway Data Management and Communications, Standards S-9503.V3.0
S-9504.V1.0	07/19/2023	C-14184	Implemented. AAR Manual of Standards and Recommended Practices (MSRP). Section K-VI Railway Data Management and Communications, Standard S-9504.V1.0

EFFECTIVE 10/28/2024

**AAR Manual of Standards and Recommended Practices
Tables of Content**

CIRCULAR LETTERS

**Section K-VI—Railway Electronics Data Management and Communications
(2014) (page 2 of 2)**

Doc Affected	Date	CL No.	Title
S-9502.V2.0	03/08/2024	C-14323	Implemented. AAR Manual of Standards and Recommended Practices (MSRP), Section K-VI Railway Data Management and Communications, Standard S-9502.V2.0
S-9501.V4.0	06/24/2024	C-14389	IMPLEMENTED. AAR Manual of Standards and Recommended Practices (MSRP), Section K-VI Railway Data Management and Communications, Standard S-9501.V4.0
S-9501 Appendix A.V1.0	06/24/2024	C-14390	IMPLEMENTED. AAR Manual of Standards and Recommended Practices (MSRP), Section K-VI Railway Data Management and Communications, Standard S-9501 Appendix A.V1.0

Section M—Locomotives and Locomotive Interchange Equipment (2008)

Doc Affected	Date	CL No.	Title
Book	11/24/2020	C-13710	Implementation of Revised MSRP Section M, Locomotives and Locomotive Interchange Equipment, 2020
RP-545	01/04/2021	C-13731	Implementation of Retirement of MSRP Section M, Recommended Practice – RP-545 Testing Electrical Components
S-5512	02/22/2021	C-13745	Implementation of Retirement and Archival of AAR MSRP Section M - Standard S-5512 – Locomotive Event Recorder Download Standard
S-5513	11/03/2021	C-13880	Implementation of Revisions to the Manual of Standards and Recommended Practices (MSRP), Section M, Locomotives and Locomotive Interchange Equipment: Standard S-5513 – Locomotive Alerter Requirements
RP-589	04/25/2022	C-13966	Implementation of Proposed Revisions to MSRP, Section M, Recommended Practice - RP-589, Rating for Specific Fuel Consumption of Diesel Electric Locomotives
M-1005	10/12/2022	C-14030	Implementation of Revisions to MSRP, Section M Locomotives and Locomotive Interchange Equipment, Specification M-1005 Locomotive Electronics Safety Assessments and Analyses
M-915	04/07/2023	C-14119	Implementation of a New Specification to MSRP, Section M, Locomotives and Locomotive Interchange Equipment: Specification M-915 - Quality Assurance Requirements for Locomotives and Locomotive Components
RP-5209	05/20/2024	C-14373	Implementation of Retirement and Archival of AAR MSRP Section M - Recommended Practice - RP-5209 BASIC BRAKE DESIGN DATA FOR FREIGHT LOCOMOTIVES
RP-509	10/28/2024	C-14444	Implementation of Revisions to MSRP, Section M, LOCOMOTIVES AND LOCOMOTIVE INTERCHANGE EQUIPMENT: Recommended Practice RP-509 - BRAKING RATIOS FOR LOCOMOTIVES

EFFECTIVE 10/28/2024

**AAR Manual of Standards and Recommended Practices
Tables of Content**

CIRCULAR LETTERS

Section N—Multi-Level Manual (2017)

Doc Affected	Date	CL No.	Title
Book	05/08/2023	C-14144	Implementation of Revised AAR Manual of Standards and Recommended Practices Section N, Multi-Level Manual
M-950	12/20/2023	C-14291	Implementation of Revision to MSRP Section N, Specification M-950, Universal Wide-Body Tri-Level Fully-Enclosed Auto Rack Car (Low Deck)
M-950A	12/20/2023	C-14292	Implementation of Revision to MSRP Section N, Specification M-950A, Universal Wide-Body Bi-Level Fully-Enclosed Auto Rack Car
M-970	12/20/2023	C-14289	Implementation of Revisions to MSRP Section N, Specification M-970, Condition-Based Certification of Multi-Level Auto Rack Cars
M-992	07/10/2024	C-14396	Implementation of Revision to MSRP Section N, Specification M-992, Designated Satellite Shop Repair for Multi-Level Auto Rack Cars

Section S-I—Casting Details (2021) (page 1 of 2)

Doc Affected	Date	CL No.	Title
Book	10/05/2021	C-13852	Implementation of Revised MSRP Section S, Casting Details, 2021
M-211	03/29/2022	C-13945	Implementation of Revisions to MSRP Section S, Casting Details, Specification M-211, Foundry and Product Approval Requirements for the Manufacture of Couplers, Coupler Yokes, Knuckles, Follower Blocks, and Coupler Parts
M-220	03/29/2022	C-13944	Implementation of Revisions to MSRP Section S, Casting Details, Specification M-220, Casting Component Nondestructive Testing Requirements, regarding updates to NDT requirements
M-201	04/03/2023	C-14118	Implementation of Revisions to MSRP Section S, Casting Details, Specification M-201, Castings Steel, Regarding Changes to Section 4.0
M-212	04/14/2023	C-14120	Implementation of Revisions to MSRP Section S, Casting Details, Specification M-212, Couplers and Yokes, Secondhand-Classification and Reconditioning Procedure, regarding EF coupler butt reconditioning, hardness testing, and a new lug gage
M-214	04/14/2023	C-14121	Implementation of Revisions to MSRP Section S, Casting Details, Specification M-214, Side Frames and Bolsters Used and Reconditioned - Classification and Repair Procedure, regarding updates to marking and OEM Manuals
M-205 M-211 M-216	07/20/2023	C-14188	Implementation of Revisions to MSRP Section S, Casting Details, Specifications M-205, M-211, and M-216, regarding component testing and approval
M-214	03/08/2024	C-14321	Implementation of Revisions to MSRP Section S, Casting Details, Specification M-214, Side Frames and Bolsters Used and Reconditioned, regarding unit guide modifications and repair of bolster pocket top extensions
M-201	03/22/2024	C-14328	Implementation of Revisions to MSRP Section S-I, CASTING DETAILS, Specification M-201, Castings Steel, regarding updates to sections 5.0 (Heat Treatment) and 6.0 (Chemical Properties and Tests)

EFFECTIVE 10/28/2024

AAR Manual of Standards and Recommended Practices
Tables of Content

CIRCULAR LETTERS

Section S-I—Casting Details (2021) (page 2 of 2)

Doc Affected	Date	CL No.	Title
M-212A	03/22/2024	C-14327	Implementation of Revisions to MSRP Section S-I, CASTING DETAILS, Specification M-212, Couplers And Yokes, Secondhand-Classification And Reconditioning Procedure, and implementation of new Specification M-212A for coupler/draft system related parts
M-210	07/27/2024	C-14401	Implementation of Revisions to MSRP Section S-I, CASTING DETAILS, Specification M-210, Side Frame and Bolsters AAR Approved - Purchase and Acceptance, regarding Audit Quality Task Force updates
M-203	07/27/2024	C-14402	Implementation of Revisions to MSRP Section S-I, CASTING DETAILS, Specification M-203, Truck Side Frames Cast Steel - Design and Testing, regarding load range and use of stabilizing vertical preloads

Section S-II—Truck Details and Casting Codes (2019)

Doc Affected	Date	CL No.	Title
Book	02/15/2019	C-13281	Implementation of Revised MSRP Section S-II, Truck Details and Casting Codes, 2019

Section S-III—Coupler and Yoke Dimensions (2016)

Doc Affected	Date	CL No.	Title
Book	11/12/2020	C-13701	Implementation of Revised MSRP Section S-III, Coupler and Yoke Details, 2020
S-105	06/22/2021	C-13826	Implementation of Revisions to MSRP Section S-III, Coupler and Yoke Details, Standard S-105, Coupler E Type Detail Parts, regarding making reduced slack components standard
S-102 S-103 S-163	10/09/2024	C-14424	Implementation of Revisions to MSRP Section S-III, COUPLER AND YOKE DETAILS, Standards S-102, S-103, and S-163, regarding MSRP references and coupler butt dimensions and tolerances for E60EE, SBE60EE, and SE60EE couplers
S-103	10/24/2024	C-14431	Implementation of Editorial Revisions to MSRP Section S-III, COUPLER AND YOKE DETAILS, Standard S-103, Coupler E Type Top and Bottom Shelf SE60EE, Restoring missing text

Section T-I—Interoperable Fuel Tenders for Locomotives (2023)

Doc Affected	Date	CL No.	Title
Book	05/05/2023	C-14143	Implementation of New MSRP Section T-I, Interoperable Fuel Tenders for Locomotives, 2023

**AAR Manual of Standards and Recommended Practices
Tables of Content**

CIRCULAR LETTERS

Section T-III—Interchange Standards for Fuel Tender Components (2023)

Doc Affected	Date	CL No.	Title
Book	05/05/2023	C-14143	Implementation of New MSRP Section T-III, Interchange Standards for Fuel Tender Components, 2023

EFFECTIVE 10/28/2024

**AAR Manual of Standards and Recommended Practices
Tables of Content**

CIRCULAR LETTERS

EFFECTIVE 10/28/2024