

A Guide to TMC Recommended Practices

TM C's *Recommended Practices Manual* has been recognized throughout the heavy-duty commercial vehicle maintenance arena for more than 30 years as being one of the leading maintenance guides for commercial vehicles and contains the best equipment maintenance and maintenance shop management information available.

This comprehensive manual contains more than 500 Recommended Practices (RPs). A Recommended Practice is a specification or practice—the adoption of which is voluntary—that is used to assist fleets and equipment manufacturers in the purchase, design, maintenance and performance of their equipment. TMC issues two types of RPs: Recommended Maintenance Practices, and Recommended Engineering Practices.

Recommended Maintenance Practices are voluntary practices that assist equipment users, vehicle/component manufacturers, and other industry suppliers in the maintenance of commercial vehicle equipment. They also include informational documents that cover technical aspects of maintenance, equipment and supporting technologies.

Recommended Engineering Practices are voluntary practices that assist equipment users, vehicle/ component manufacturers, and other industry suppliers in the design, specification, construction and performance of commercial vehicle equipment.

What follows is a description of each RP that appear in the current edition of TMC's *Recommended Practices Manual*:

* Revised, or new, to appear in TMC's 2026-27
Recommended Practices Manual.

ELECTRICAL- S.1

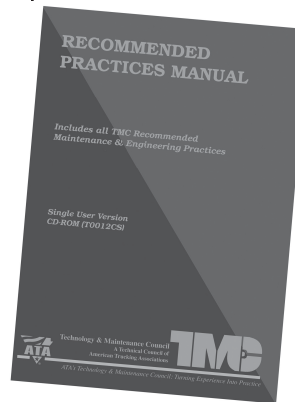
RP 101C Heavy-Duty Truck Alternator Mounting — Discusses location and installation procedures and mounting material selection for maximum charging system life. Procedure covers mounting bracket, adjusting strap, pulleys, bushings, and associated hardware. Also describes alternator mounting maintenance procedures.

RP 105D Battery Cable Assemblies — Gives recommendations for proper selection and installation of battery cables to obtain maximum cranking circuit performance. This RP covers battery cables, terminals, heat shielding, grounding techniques, wire gauge, and replacement wire selection.

RP 107C Seven Conductor Truck-Trailer and Converter Dolly Jumper Cable and Connector Selection — Covers the minimum requirements for heavy-duty tractor-trailer and converter dolly jumper cables and connectors.

Ordering Information

TMC's *Recommended Practices Manual*



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RP 109A	Battery Ratings and Engine Cranking Requirements — Defines cold cranking ampere and reserve capacity ratings and gives recommendations to achieve adequate engine cranking performance and long-term cranking system reliability.	RP 125A	Battery Vibration Standards — Replaces existing battery mounting guidelines with one to offer both truck manufacturers and fleets an alternative to mounting batteries between the frame rails to increase battery life.
RP 110E	Low-Tension Cable for Heavy-Duty Truck-Tractor Wiring Systems—Addresses requirements covering up to 60 volt direct current (Vdc) low-voltage electrical cable for heavy-duty tractor and trailer applications.	RP 127B	Fleet Service Light Bulb Specifications — Identifies heavy-duty lamps and includes a specifications chart for most light bulbs used in heavy-duty vehicle applications.
RP 111C	Circuit Protection — Covers guidelines for circuit protection of heavy-duty truck-tractor D.C. wiring systems.	RP 128B	Turn Signal and Warning Hazard Flashers. — Covers the design and application of motor vehicle turn signal and hazard warning flashers for heavy-duty vehicle applications.
RP 112A	Terminals for Heavy-duty Truck-Tractor Primary Wiring Systems — Covers design criteria, performance specifications, and application guidelines for primary wiring terminals.	RP 129B	Heavy-Duty Vehicle Cranking And Charging Troubleshooting: 12-Volt Systems — Provides preventive maintenance and troubleshooting procedures for heavy-duty vehicle starting and charging systems.
RP 113B	Electrical System Connectors- Covers minimum general guidelines for the design, performance, and application of connectors and insulators for heavy-duty motor vehicles.	RP 130	Guidelines to Determine Requirements of Charging Systems — Aids in fleet specification of charging system components by recommending the best charging system for a given vehicle designed for a specific use.
RP 114B	Wiring Harness Protection- Covers minimum guidelines for protection of wiring harnesses from the operating and environmental conditions encountered on heavy duty-truck tractors.	RP 131B	High-CCA Battery Applications for Commercial Vehicles — Offers specifying guidelines for selecting commercial vehicle batteries for applications requiring high cold-cranking amperage (CCA).
RP 115	Speedometer and Tachometer Cable Requirements — Discusses application, installation, testing, and lubrication of light-and heavy-duty speedometer and tachometer cables.	RP 132B	Battery Charging, Testing, and Handling — This updated RP covers proper procedures for heavy truck battery charging, testing and handling.
RP 116	Installing Instruments, Gauges & Speedometers — Discusses proper mounting, wiring, and reliability determination for electrical and mechanical gauges and transducers.	RP 133	High CCA Battery Applications for Class 2 to 6 Commercial Vehicles — Points out potential application problems for the entire cranking system when utilizing high CCA batteries in place of standard batteries in Class 2 to 6 commercial vehicles. Covers effects on the starter, battery cables, and effects on battery cycling and life.
RP 118B	Turn Signal Switches — Covers design criteria, minimum performance, and test specifications for heavy-duty truck turn signal switches.	RP 135	Multi-Pin Connector Repairs — Provides fleet managers with guidelines for obtaining proper multi-pin connector repair products and services from connector suppliers, as necessary to simply the repair of a wide range of types of multi-pin connectors used in wiring systems.
RP 120B	Wiring System Identification — Covers the minimum requirements for wiring system identification on heavy-duty trucks and tractor-trailers.	RP 136C	Managed/Isolated Battery Systems for Electric Start Systems — Provides guidelines for the design of isolated/split battery systems to enable cab accessory units to be electrically powered without drawing on the primary/starting system of the vehicle or retrofitting an existing vehicle to an isolated system.
RP 123A	Standardization of Speedometer and Tachometer Signals — Establishes a standard vehicle and engine speed signal and frequency that can be used by any electronic device on a heavy-duty vehicle requiring knowledge of speed/distance or engine revolution information.		
RP 124B	Heavy-duty Headlamp Design Specifications — Provides specifications for heavy-duty headlamps for use both by lamp users and lamp manufacturers.		

RP 137D Antilock Electrical Supply From Tractors Through the SAE J560 Seven Pin Connector — Specifies the power that is to be made available at end of the seven-conductor electrical cord from the tractor (or front of the trailer) for the trailer’s anti-lock braking system (ABS) through both the stop lamp and dedicated power circuit.

RP 138A Auxiliary Forward Lighting — Provides fleets, truck manufacturers, and component manufacturers with guidelines for the proper installation of auxiliary forward lighting devices to help conform to various state regulations.

*RP 139D Battery Selection Criteria — Offers guidelines on selecting batteries for commercial vehicles.

RP 140B Understanding Key-Off Parasitic Loads — Offers guidelines on understanding key-off parasitic loads.

RP 141B Trailer ABS Power Supply Requirements — Specifies performance recommendations for trailer electrical systems to ensure adequate power is available for trailer antilock braking system (ABS) needs.

RP 142 High-Speed Data Link Cable Repair Guidelines — Identifies recommended materials and methods to repair or add a device to high-speed data link cables.

RP 143 Light Emitting Diode (LED) Technology — Describes benefits and features of LEDs when specifying heavy-duty signaling and marking devices. Offers specifying recommendations on connectors and wiring for LEDs and offers return on investment formula for making purchasing decisions.

RP 144 Minimum Performance Requirements for In-Cab Trailer ABS Malfunction Lamps — Identifies minimum performance requirements for ABS warning lamps.

RP 145 Symbols for Electrical Circuit Protection — Endorses an SAE Recommended Practice that standardizes electrical circuit symbology.

RP 146 Identification of Standardized Electrical Circuits for Class 8 Vehicles — Endorses an SAE Recommended Practice that standardizes electrical circuit identification.

RP 147 SAE J560 Plug and Receptacle Wire-to-Terminal Interface Performance Guidelines — Establishes new equipment-user driven performance guidelines for the SAE J560 plug and receptacle wire-to-terminal interface.

RP 148 Exterior Lighting Systems for Signaling, Marker, Clearance and Identification Lamps — This RP offers guidelines for exterior lighting systems.

RP 149 Alternator Drive Standardization — Offers guidelines for alternator drive standardization.

RP 150 Alternator Terminal Standardization — Offers guidelines for alternator terminal standardization.

RP 151A Guidelines for Extending Headlamp Life — This RP offers guidelines for extending headlamp life.

RP 152 Performance Guidelines for Cab and Sleeper Interior Lighting — This RP offers guidelines for cab and sleeper interior lighting.

RP 153 Lamp-to-Connector Interface Guidelines — Offers guidelines on lamp-to-connector interfaces.

RP 154A Guidelines for Wiring Harness, Routing, Clamping and Protection — Offers guidelines on wiring harness, routing clamping and protection.

RP 155A Selection and Application of Corrosion-Preventing Materials For Sealed And Unsealed Electrical Connections — Covers selection and application of corrosion prevention materials.

RP 156B Electrical Circuit Protection Components — Covers electrical circuit protection components.

RP 157 Service And Installation Guidelines For Citizen Band Radio Antenna Systems — Covers service and installation guidelines for CB radio antenna systems.

RP 158 Wiring And Circuit Protection Guidelines For 12-Volt Cab And Sleeper Power Outlets-This RP covers wiring and circuit protection guidelines for cab and sleeper power outlets.

RP 159 Installation and Inspection Guidelines for Seven Conductor Truck-Trailer/Converter Dolly Jumper Cable and Connector — Covers installation and inspection guidelines for combination vehicle electrical connectors and cables.

RP 160 Wiring And Circuit Protection Guidelines For 12-Volt DC to 120-Volt AC In-Cab Inverter Systems — Covers wiring and circuit protection guidelines for in-cab inverter systems used on tractors.

RP 161 Forward Lighting Aiming Methods — Offers guidelines for forward lighting aiming methods.

RP 162A Design Guidelines For Electrochemical Capacitors Used In Starting Applications — Offers background information and specification guidelines for electrochemical capacitors used in starting applications.

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- RP 163 Power Inverter Selection Recommendations — Offers guidelines for selecting power inverters for Class 7-8 vehicle applications.
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- RP 164 Proper Jump Start Procedures — Offers safe and effective procedures for jump starting commercial vehicles equipped with a 12-volt starting system. It also categorizes jump starting devices by type and function, and addresses what impact jump starting devices and procedures can have on modern vehicle electrical systems.
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- RP 165 Proper Electric Arc Welding Procedures For Vehicles With Sensitive Electronics. — Offers guidelines for proper electric arc welding procedures in order to protect vehicle electronics.
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- RP 166A Low-Voltage Primary Electrical Cable Specification for Heavy-Duty Electrical Repair—Defines the proper terminology and specifications for a universal, low-voltage (maximum 60 volts) primary wiring cable that meets the performance requirements needed for servicing heavy-duty truck, tractor or trailer electrical systems.
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- RP 167 Vehicle Electrical Fires: Causes and Preventive Solutions. Provides insight into the causes of in-service vehicle electrical fires. It also offers preventive solutions based on maintenance and operational practices, covering Class 7-8 heavy-duty vehicles.
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- RP 168 Design Recommendations for Preventing Vehicle Fires. Provides design recommendations for preventing vehicle electrical fires. It covers Class 7-8 heavy-duty commercial vehicles.
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- *RP 169A Road Service Diagnostic Evaluation Process — Offers safe and effective procedures for systematically conducting a proper diagnostic evaluation of the primary electrical system — batteries, starter, alternator, and cabling — during a road service call.
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- RP 170B Chassis-To- Body Electrical Interface Guidelines for Refuse Trucks. Provides the refuse industry a common electrical interface connection that is environmentally sealed, contains all required electrical circuits and is located in an industry standardized location.
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- RP 171 High-Performance Coatings for Forward Lighting On Commercial Trucks. — Provides guidelines for specifying forward lighting coating systems for plastic headlamps that not only meet applicable federal requirements but also provide the basis for more robust coating performance in on-highway applications.
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- RP 172 Recommended Cleaning and Maintenance of Headlamps for Commercial Vehicles. — Provides guidelines for the cleaning, maintenance and restoration of headlamp systems used on commercial vehicles. It defines the expected performance requirements and augments, with specific requirements, the standards depicted in the SAE and TMC RP covering the general maintenance of forward lighting coating systems.
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- RP 173 Design Guidelines for ECM Harness and Connectors — Offers design guidelines for ECM harnesses and connectors. (Formerly RP 349.)
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- RP 174 Guidelines For Battery Disconnect Switches. — This RP offers guidelines for battery disconnect switches.
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- RP 175 Electric Truck and Bus Conductive Charge Interface Guidelines — Offers design guidelines for the vehicle-to-power-grid interface connector used to charge powertrain batteries on electric trucks and buses in commercial service. Covers the general physical, electrical, communication protocol, and performance requirements for the electric vehicle conductive charge system and coupler.
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- RP 177A Solar Power for Commercial Vehicles—Offers information on solar power components used in multi-voltage systems for commercial vehicles.
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- RP 178A Battery Management and Cable Guidelines For Meeting Hotel Load Requirements — Offers general guidelines for alternator and cable sizing when adding batteries to a commercial vehicle for the purpose of meeting driver comfort or “hotel load” requirements.
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- RP 179A Liftgate Charging and Pump Motor Diagnostic and Maintenance Guidelines — Offers guidelines for the maintenance and troubleshooting of liftgate battery charging and pump motor systems used on commercial combination vehicles.
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- RP 180 Guidelines for Establishing Alternator Efficiency Ratings — Sets forth standard procedures for establishing an average alternator efficiency number in a test environment for Class 6-8 commercial vehicles used in linehaul or pickup and delivery applications.
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- RP 181 Transport Solar Panels: Guidelines For Installation, Safety & Preventive Maintenance Inspection — Offers installation, safety and preventive maintenance inspection (PMI) guidelines for solar panels (affixed or portable) and related equipment used in heavy-duty commercial service.
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- RP 183 Video Camera and Sensor Connector and Cabling Guidelines — Provides performance guidelines for service and maintenance of video camera/monitor/sensor connector and cabling for use on medium- and heavy-duty commercial vehicles.
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- RP 184 High-Voltage Cable For Heavy-Duty Truck Wiring Systems— Provides guidelines for high-voltage cable used on heavy-duty truck wiring systems.
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- RP 185 Electrical Infrastructure, Safety and Interoperability For Transport Refrigeration Shorepower — Provides guidelines for electrical infrastructure, safety and interoperability for transport refrigeration shorepower.
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- RP 187 Guidelines For Fifth Wheel Ground Strap Installation — Offers guidelines for fifth wheel ground strap installation.
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- RP 188 Cable Identification for Multi-Voltage Electrical Systems. Offers basic color identification guidelines for multi-voltage electrical system cable used for heavy-duty truck electrical systems.
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- RP 190 Defining Inoperability Criteria For Rear-Facing Light-Emitting Diode Lamps — Defines inoperability criteria for rear-facing, light-emitting diode (LED) lamps that do not meet minimum Federal Motor Vehicle Safety Standard (FMVSS) 108 / Federal Motor Carrier Safety Regulation (FM-SCR) 393.13 requirements when the LEDs are failed within the lamp. Intended for fleet personnel, vehicle operators, and roadside inspectors of Class 7-8 commercial vehicles.
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- RP 191 Diagnosing Electrical Failures Using Oscilloscopes — Describes how an automotive oscilloscope can provide an alternative procedure for diagnosing intermittent circuit failures on all subsystems of commercial vehicles.
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- RP 192 Chassis-To-Body Electrical Interface Guidelines For Construction Trucks — Offers guidelines for chassis-to-body electric interface standardization for construction vehicles.
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TIRE & WHEEL — S.2

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- *RP 201F Tire Flap & Rim Dimensions — Relates tire width and diameter with recommended rim and flap widths.
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- RP 203D Truck Tire Regrooving — Summarizes two crucial federal regulations that must be followed when regrooving tires.
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- *RP 205E Use of Tire Bead Lubricants — Outlines proper selection and use of tire bead lubricants.
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- RP 206D Radial and Bias Tire Puncture (Nail Hole) Repair Procedures — Provides step-by-step procedures for performing puncture (nail hole) and reinforced shoulder repairs in Class 6-8 truck and bus radial and bias tires that can be easily followed by fleet tire technicians and which will consistently produce satisfactory repairs.
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- RP 208F Total Tire Cost Analysis — Designed to help fleet managers track and analyze annual heavy-duty vehicle tire costs, durability and fuel efficiency through the use of the worksheets described in the RP.
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- RP 209G Tire and Rim Safety Procedures — Offers persons servicing truck rims and wheels guidelines for tire and rim safety procedures based upon TMC guidelines, federal OSHA standards and other industry recommendations such as the United States Tire Manufacturers Association (USTMA).
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- RP 210F Radial Tire Construction Terminology — Describes radial tire construction terminology.
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- RP 211E Rim and Wheel Selection and Maintenance — Acquaints the user of highway tractors and trailers with rim/wheel nomenclature, types available, load inflation restrictions, potential dangers of mismatched multi-piece rim components, dual spacings, and proper maintenance practices.
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- RP 212F Industry Recommended Practice for Retreading Truck and Bus Tires. — Offers guidelines for the retreading of medium- and heavy-duty truck and bus tires used for highway service.
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- *RP 214F Tire/Wheel End Balance and Runout. — Offers equipment users suggestions that can help reduce the vibration, irregular tread wear, resulting maintenance costs and driver discomfort that accompany serious out-of-balance or out-of-round tire/wheel end assemblies.
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- RP 215F Sources of Tire & Wheel Information — Gives sources of information on tire retreading, wheels and rims, and tire rubber.
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- *RP 216E Radial Tire Conditions Analysis Guide. — A reference source and a training aid to assist users in tire grading. It advises users when it may be necessary to consult with a specialist (original manufacturer or retreader) for final determination of a tire's cause of failure.
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- *RP 217F Attaching Hardware for Aluminum Disc Wheels — Provides information to enable proper selection of compatible wheels, studs, and nuts for use with various types of disc wheel mountings.
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- RP 218G Tire Identification Numbers — Explains what tire identification numbers (TINs) mean and what they are required to include, as they apply to tires used on commercial vehicles.
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- *RP 219E Radial Tire Wear Conditions and Causes: A Guide To Wear Pattern Analysis. — Provides a reference source and training aid which will assist the user in identifying radial tire wear patterns and determining causes which can then be corrected to minimize irregular wear.
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- *RP 220F Tire Tread Design Selection. Helps fleet managers select the proper tread design for an intended application to maximize tire service life and minimize tire cost per mile. Applies to tread design selection for heavy-truck tires.
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- RP 221F Retread Plant Inspection Guidelines — Provides guidelines for the evaluation and selection of a tire retread supplier.
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- *RP 222E User's Guide to Wheels and Rims — Covers all aspects of wheel and rim damage, probable cause, and recommended actions.
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- *RP 223F Tire Selection Process — Intended to make the tire purchaser, fleet operator, or maintenance manager aware of major items for consideration, and to provide a step-by-step thought process for selecting the best type of tire for the application.
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- RP 224E Tire Retread Process — Assists the retread user in understanding the differences and characteristics of the various retread processes.
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- RP 226E Radial Tire Repair Identifier (Blue Triangle) — Explains how to properly apply tire repair identification patches to repaired heavy-duty vehicle tires. These patches can prevent the possibility of the tire (and vehicle) from mistakenly being placed out of service due to what a safety inspector or technician perceives as a dangerous tire defect and not a normal tire section repair bulge.
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- RP 228D Guidelines For Wireless Tire Pressure Monitoring Systems (TPMS) for Medium- and Heavy-Duty Truck Tires. — Offers guidelines for tire pressure monitoring systems (TPMS) that utilize wireless transponders and readers or processing modules to measure the actual tire inflation condition.
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- RP 229C Computerized Tire Recordkeeping — Provides guidance to fleets trying to establish a computerized tire recordkeeping system.
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- RP 230C Tire Test Procedures for Tread Wear, Serviceability and Fuel Economy. — Provides fleets guidelines on tire testing procedures.
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- *RP 231D Wheel System Maintenance Labeling Guidelines — Establishes a standard format for wheel system maintenance labels.
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- RP 232B Zipper Rupture Inspection Procedures for Light- and Medium-Duty Truck Tires — Establishes procedures for identifying “zipper” ruptures failures in tires.
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- RP 233D Radial Tire Puncture Repair Training Guidelines — Establishes minimum training guidelines for radial tire puncture repair and applies to all truck tire repair technicians working on radial tires used on medium- and heavy-duty vehicles.
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- RP 234C Valve Hardware Selection Guidelines — Focuses on the selection of valve hardware for light-, medium-, and heavy-duty truck wheels. It establishes tire valve, core and cap selection guidelines for fleet managers and provides information on additional accessories used with these components that facilitate tire inflation and are attached to the tire/wheel assembly.
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- RP 235C Guidelines For Tire Inflation Pressure Maintenance — Addresses the relationship between inflation pressure and tires, and provides a practical guide for better understanding the issues that stem from failing to address this issue properly in everyday fleet operations.
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- RP 236C Outsourcing Guidelines for Tire and Wheel Maintenance. — Helps fleet managers make decisions regarding outsourcing of tire and/or wheel maintenance. It offers guidelines for identifying appropriate roles, responsibilities, expectations, and exchange of information, as well as a method for measuring the benefit of outsourcing tire/wheel maintenance.
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- RP 237C Torque Checking Guidelines for Hub Piloted Disc Wheels — Designed to help fleets develop practical, fleet-specific guidelines for checking and retorquing (if required) fastener torque on hub-piloted disc wheels to support wheel system integrity — This RP applies to disc wheels used on Class 4-8 commercial vehicles.
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- RP 238C Troubleshooting Disc Wheel Looseness. — Provides fleets with a logical approach to troubleshooting loose stud-piloted and hub-piloted disc wheels used on Class 6-8 commercial vehicles.
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- RP 239B Commercial Vehicle Tire Inflation and/or Monitoring Systems Guidelines. — Covers current capabilities and basic operation of tire inflation and pressure monitoring systems. It is designed to help fleets select tire inflation and monitoring systems for commercial truck tires.
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*RP 240C	Steel Wheel and Rim Refinishing Guidelines. — Provides guidelines and inspection criteria for steel wheel and rim refinishing and for evaluating refinishing suppliers. Describes various types and processes of steel wheel and rim refinishing systems used for commercial vehicle applications.	RP 250B	Effects of Extreme Temperatures on Wheel Torque and Clamp Load. — Provides fleet managers and tire technicians information about the effects of extreme ambient and wheel end temperature changes on wheel nut torque and clamping force. This RP applies to hub-piloted disc wheels in applications using 22 mm phosphate/oil-coated studs and organic-coated nuts.
RP 241C	Tubeless Disc Wheel Inspection for Undersized Bead Seats —Covers inspection guidelines for undersized bead seats on tubeless disc wheels.	RP 251A	Irregular Wear In Low-Profile Metric Widebase Radial Tires Used In Trailer Service. — Describes the most likely causes of irregular tire wear for 50 and 55 series low-profile metric wide-base radial tires used in trailer service-specifically, tire sizes 445/50R22.5 and 455/55R22.5.
RP 242A	Guidelines for Evaluating Tire and Wheel Related Products and Systems — Offers guidelines for evaluating tire and wheel related products.	RP 252A	Troubleshooting Radial Tire Irregular Wear — Offers guidelines and a diagnostic process to identify the root cause or causes of radial tire irregular wear patterns that may develop during the useful life of the tire. This RP applies to radial tires used on Class 6-8 commercial vehicles.
*RP 243B	Tire and Wheel Match Mounting Markings — Covers identification of tire and wheel match mounting markings.	*RP 253B	Usage Guidelines for Retreaded Steer Axle Tires. — Offers fleets guidelines for the appropriate use of retreaded tires on steer axles of medium- and heavy-duty trucks and tractors.
RP 244C	Bias Tire Conditions Analysis Guide — Covers all aspects of bias tire damage and defects and includes multiple photographs.	*RP 254B	Usage Guidelines for Repaired Steer Axle Tires. — Offers fleets and service providers basic repair guidelines and minimum repair specifications for steer axle tires used on medium- and heavy-duty trucks, buses and tractors.
RP 245B	Tire Assembly Balancing with Wheel Weights — Provides guidelines for selecting and installing balance weights that may or may not contain lead in accordance with the U.S. Environmental Protection Agency’s (EPA) National Lead-Free Wheel Weight Initiative. It applies to tire/wheel balance weights used on commercial vehicles with a gross vehicle weight rating (GVWR) of more than 10,000 lbs.	RP 255A	Understanding Disc Wheel Outset, Inset and Offset — Offers guidelines for understanding disc wheel outset, inset and offset.
RP 246B	Considerations for Products Intended For Use Inside Tires — Identifies potential consequences and concerns associated with products intended for use inside tire/ wheel assemblies. It applies to products designed for use inside the air cavity of tubeless radial truck tire/wheel assemblies on commercial vehicles with a GVWR of more than 10,000 lbs.	RP 256A	Inspection Criteria for Steel and Aluminum Wheel Corrosion and Pitting — Provides inspection criteria for steel and aluminum wheel corrosion or pitting on wheels used on Class 4-8 commercial vehicles.
RP 247A	Tire Radio Frequency Identification (RFID) Device Guidelines (Passive Tags) for Medium- and Heavy-Duty Truck Tires. — Provides guidelines for the use of passive radio frequency identification (RFID) tags attached to medium- and heavy-duty tubeless truck tires.	RP 257A	Measuring Wheel End Assembly Runout — Provides fleets and service providers with a procedure and list of tools needed to check wheel end assembly runout at a service location. Applies to steel or aluminum wheels used on Class 4-8 commercial vehicles.
RP 248B	Guidelines for Tire Casing Data Marking in the Retread and/or Repair Process. — Offers tire casing marking guidelines for improving the availability of information on medium- and heavy-duty truck casing condition and/or history.	RP 258	Tire and Wheel Maintenance Guidelines For Covered Farm Vehicles & Low Use/Special Mobile Equipment Highway Vehicles — Offers guidelines for maintaining tires and wheels used on covered farm vehicles and low-use/special mobile equipment highway vehicles.
RP 249B	Safety Issues Related to the Use of Flammable Fluids During Tire Demounting. — Covers maintenance guidelines regarding the use of flammable fluids for the tire demounting process and how it impacts tire retreadability.		

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- RP 259A Maintenance Considerations For 6x2 Tractor Tires — Offers equipment users maintenance and operation guidelines for heavy-duty (Class 8) tractors equipped with a 6x2 configuration.
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- RP 260A Specification Considerations For 6x2 Tractor Tires — Offers guidelines for specifying heavy-duty (Class 8) 6x2 tractors so as to minimize the effect this configuration may have on tire service life, performance and operation.
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- RP 261 Considerations for Aerodynamic Wheel Covers — Describes important operational, inspection and maintenance considerations associated with the use of aerodynamic wheel covers in linehaul operations. It does not address the use of cosmetic hub cover caps.
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- RP 262A Guidelines For Jacking and Lifting Tractors and Trailers — Offers guidelines for jacking and lifting Class 7-8 tractors and trailers.
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- RP 263A Use of Scalloped/Star-Shaped Hubs for Disc Wheels — Provides OEMs and fleets guidelines when specifying disc brakes and inboard mounted drum brakes with hubs designed and manufactured with non-continuous, non-circular (e.g., scalloped, star-shaped, dented, or other) outer back-up diameter.
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- RP 264 Lean Practices for Tire and Wheel Management — Provides fleet managers a basic introduction to Lean principles to use for lowering tire and wheel costs. This RP applies to Class 7-8 commercial vehicles.
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- *RP 265A Understanding Rim Flange Wear — Provides an understanding of rim flange wear and how to address it. Covers the causes of rim flange wear and the actions that should be taken to determine if an out-of-service condition exists.
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- RP 266A Proper Shop Tools and Procedures For Demountable Rim Assemblies — Identifies the proper installation/removal/inspection procedures, tools, equipment and attaching parts for cast spoke wheels and demountable rims.
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- *RP 267A Guidelines For Repolishing Aluminum Wheels— Offers guidelines for repolishing aluminum wheels on commercial vehicles.
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- *RP 268A Tire Asset Identification and Tracking — Offers guidelines for tire asset identification and tracking.
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- *RP 269A Guidelines For Tire Shop Tools and Equipment — Offers guidelines for tire shop tools and equipment used on commercial vehicles.
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- RP 270 Driver Pre-Trip Inspection Guidelines For Various Tire Inflation/Deflation and Pressure Monitoring Systems — Provides guidelines for driver pre-trip inspection of tire inflation/deflation and pressure monitoring systems used on Class 7-8 commercial vehicles.
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- RP 271 Integration of Tire Pressure Monitoring Systems (TPMS) and Automatic Tire Inflation Systems (ATIS) With Vehicle Telematics — Provides guidelines on integrating tire pressure monitoring and automatic tire inflation systems on Class 7-8 vehicles equipped with telematics.
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- RP 273 Tire Selection Considerations For Electric-Powered Commercial Vehicles — Offers guidelines for selecting tires to be used on electric-powered commercial vehicles.
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- ENGINE & MOTOR — S.3**
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- RP 301D Maintaining Air Intake Systems — Covers maintenance and service procedures and discusses intake restriction for oil bath and dry element air cleaners and intake systems.
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- RP 302C Fleet Purchasing Specification for Low-Silicate, Ethylene Glycol-Base Antifreeze Engine Coolant Requiring SCAs — Lists minimum specifications for ethylene glycol coolant.
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- RP 303D Silicone Coolant Hoses and Hose Assemblies — Covers straight or pre-formed hose or hose assemblies of a superior quality polysiloxane (silicone) type used in diesel or gasoline engine coolant systems between engines, radiators, and heaters. Hose and/or hose assemblies are to be used where ultra-long life is required or extreme temperature conditions are prevalent.
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- RP 304D Minimum Specifications for On-Highway Diesel Fuel Type No. 2-D. — Covers minimum diesel fuel specifications for over-the-road, heavy-duty diesel-fueled vehicles. It is updated in accordance with ASTM D975-09a, “Standard Specifications for Diesel Fuel Oils.”
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- RP 309B Preferred Fuel Specification — 2D and Glossary of Fuel Terms — Contains suggested and recommended guidelines describing better quality diesel fuel.
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- RP 310B Water Ingestion Prevention — Discusses the consequences of water and salt (from rain and road deicing chemicals) entering heavy-duty vehicle air intake systems and gives methods to minimize the ingestion of water and road salt.
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- RP 311B Cold Weather Operation — Discusses the proper methods to use to prepare a heavy-duty truck for cold weather operation (+40 to - 40°F.) Covers readying the following for cold weather operation: engine coolant; engine, transmission, and differential lubricants; hoses and clamps; air starters; batteries and cables; diesel fuel; coolant, intake manifold, and oil heaters; fuel heaters; and winterfronts and radiator shutters.
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- RP 312C Qualifying Questions for Evaluating Aftermarket Diesel Fuel Additive Packages — Provides a list of questions fleet maintenance managers should keep in mind when considering the use of diesel fuel additives.
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- RP 313D Checklist for Cooling System Maintenance — Provides maintenance information to ensure optimal performance of medium- and heavy-duty diesel cooling systems.
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- RP 317C Fuel Filtration and Water Separating Devices — Offers guidelines for fuel filtration and water separating devices used on Class 7-8 vehicles.
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- RP 318D Used Engine Oil Analysis — Discusses reasons for oil analysis, oil analysis laboratory selection, sampling procedures, and test results. An oil analysis glossary is included.
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- RP 319C General Guidelines and Precautions On Supplemental Coolant Additives — Offers guidelines for the selection and use of supplemental coolant additives used to protect heavy-duty vehicles filled with conventional inorganic acid technology coolant.
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- RP 320E Inspection, Maintenance and Tension of Accessory Belt Drive Systems — Provides fleet maintenance personnel with correct procedures for inspecting and maintaining accessory belt drive systems. Also identifies factors which cause changes in belt tension and defines the impact proper maintenance procedures have upon drive system performance.
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- RP 321 Fuel Crossover Line Protection and Configuration Guidelines — Designed to reduce the possibility of crossover line ruptures which may result in fuel spills which pose safety problems and contaminate road/right-of-way-surfaces leading to environmental clean-up and fines.
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- RP 322B Coolant Pump Failure Modes and Life Extension — Contains information from a TMC fleet survey conducted by the Coolant Pump Failure Task Force, presentations made during Task Force meetings, and current Service Bulletins from various original equipment manufacturers (OEMs) and suppliers. This RP does not make suggestions about coolant pump design changes.
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- RP 323A Aqueous Propylene Glycol Coolant Guidelines — Presents a general guideline for the comparison of propylene glycol-based coolants to ethylene glycol-based coolants in heavy-duty truck systems. Identifies some of the precautions and application considerations when switching to an aqueous propylene glycol-based coolant.
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- RP 325A Radiator Integrity for On-Highway Trucks — Establishes time and mileage parameters, as well as service and maintenance characteristics for radiators in medium- and heavy-duty trucks used in on-highway service. It can serve as a guideline for OEM truck assembly and radiator manufacturers when designing cooling products for specific applications and help the end-user when purchasing new vehicles.
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- RP 326A Selecting Quality Recycled Engine Coolant — Offers guidelines for selecting quality recycled engine coolant/antifreeze. This RP applies to Class 7-8 diesel powered vehicles.
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- RP 327A Fan Drive Control Systems — Describes the control system for fan drives requiring the use of remote temperature sensing controls and override switches, and addresses maintenance and troubleshooting for such systems.
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- RP 328A Fleet Purchasing Specification for Nitrite-Containing Supplemental Coolant Additives — Covers general, physical, chemical, and performance requirements for SCAs that are used for pre-charging and periodic servicing of coolants for use in heavy-duty engines. This includes SCA concentrates in liquid, solid, or slurry form.
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- RP 329B Fleet Purchasing Specification for Nitrite-Containing Ethylene Glycol Base Coolant — Specifies requirements for concentrated and prediluted forms of fully-formulated ethylene glycol base antifreeze/coolant which does not require a pre-charge of supplemental coolant additives.
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- RP 330A Fleet Purchasing Specification for Nitrite-Containing Propylene Glycol Base Coolant — Specifies requirements for fully-formulated propylene glycol base antifreeze/coolant which does not require a precharge of supplemental coolant additives.
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- RP 331A Charge Air Cooler Design Guidelines — Designed to improve the design, maintenance, safety and performance of charge air coolers (CAC) while reducing CAC costs to equipment users.

RP 332C	Guidelines For Hoses, Clamps, and Fittings For Cooling And Charge Air Cooler Systems — Offers guidelines for hoses, clamps and fittings used on engine cooling and charge air cooler systems.	RP 345B	Diesel Fuel Housekeeping Guidelines — Offers guidelines for maintaining diesel fuel storage and delivery infrastructure to ensure quality fuel.
RP 333A	Heat Exchanger Maintenance and Cleaning — Provides guidance concerning the exterior maintenance and cleaning of heat exchangers/cooling modules used in Class 6-8 vehicles. Heat exchangers/cooling modules are defined as the radiator, charge air cooler, condenser, oil-to-air cooler, recirculation shields, and associated mounting brackets and hardware.	RP 346B	Accessory Belt Drive Pulley Standardization. — Offers guidelines for standardizing accessory belt drive pulleys.
RP 334C	Determining Extended Oil Drain Intervals for Heavy-duty Diesel Engines — Helps equipment users determine extended oil drain intervals for diesel engines over 8.0L displacement.	RP 347B	Fan Drive Maintenance and Troubleshooting — Offers guidelines on fan drive maintenance and diagnostics.
RP 335	Simplified Snap-Idle Acceleration Smoke Testing — Offers simplified, easy-to-understand instructions for conducting J1667 Snap-Idle Smoke Test Procedures.	RP 348B	Coolant Hose Rating Factors — Covers guidelines for coolant hose ratings.
RP 336A	Aluminum Radiator Maintenance — Offers interior and exterior maintenance recommendations for aluminum radiators.	RP 351A	Guidelines for Color Standardization of Engine/Coolant Antifreeze — Offers guidelines for standardizing engine coolant color schemes.
RP 337C	Determining the Validity of Low-Power Complaints. — Offers technicians and equipment users useful tips for determining the validity of low-power complaints for Class 7 & 8 vehicles.	RP 352	Fan Drive Design and Application Guidelines — Offers guidelines for fan drive design and application.
RP 338B	Extended Service Interval Coolants — Describes new extended service interval (ESI) coolant technologies and addresses common technician concerns regarding ESI and traditional coolants.	RP 353	Standard Fitting for Engine Coolant Handling — Offers standard fitting recommendations for engine coolant handling.
RP 339B	Maintaining Fuel/Water Separators — This RP offers guidelines for maintaining fuel/water separators used in Class 7-8 commercial vehicles.	RP 354A	Fuel Economy Tracking Guidelines — Offers guidelines for tracking fuel economy in Class 7-8 commercial vehicles.
RP 341B	Diesel Fuel Additive Functionality Groups and Winter Operability Guidelines — This RP offers guidelines for diesel fuel additive functionality groups and winter operability.	RP 355B	Maintenance and Inspection Guidelines for OEM-Installed Exhaust Particulate Filters for Diesel-Powered Vehicles — Describes the various types of original equipment diesel particulate filter (DPF) technology used on heavy-duty diesel-powered vehicles. Offers guidelines and information on DPF function, performance, diagnostics, maintenance, handling and cleaning.
RP 342A	Guidelines for Recording Electronic Engine Parameter Changes — Offers security guidelines for keeping track of parameter changes for electronic engines.	RP 356A	Cold Flow Operability Of Diesel Fuel — Addresses cold flow operability issues pertaining to diesel fuel.
RP 343B	Charge Air Cooler Winterfront Application and Design Guidelines — Offers guidelines for design and selection of CAC winterfronts.	RP 357A	Biodiesel Blended Fuels — Provides fleets and suppliers with guidelines on the use of biodiesel blends B2 through B20. Offers definitions and terminology for biodiesel blends, and addresses biodiesel blend performance, industry standards, engine manufacturer warranties, tax incentives and existing position statements on the use of such fuels.
RP 344A	Understanding Engine ECM Data — Offers information on interpreting and using engine data collected on-board vehicles.	RP 358B	Charge Air Cooler Maintenance and Testing Guidelines — Offers maintenance and testing guidelines to maximize durability, maintainability, safety and performance of charge air coolers while reducing costs to the end user.

RP 359A	Qualifying Questions For Evaluation of Supplemental Engine Oil Filtration Systems — Provides a list of questions that fleet managers should consider when evaluating the use of supplemental engine oil filtration systems—commonly referred to as bypass or secondary filtration devices used on Class 7-8 commercial vehicles.	RP 368A	Proper Coolant Draining and Filling Procedures for Heavy-Duty Diesel Engines. — Provides general guidelines for properly draining and filling heavy-duty diesel engines with coolant as part of normal maintenance or after flushing of the system due to a failure.
RP 360A	Diesel Exhaust Fluid Guidelines — Educates equipment users on selective catalytic reduction (SCR) technology and its use of diesel exhaust fluid (DEF).	RP 370A	Natural Gas Vehicle Specification and Implementation Guidelines — Offers guidelines for specifying and implementing engines using either compressed or liquefied natural gas as its primary fuel.
RP 361B	EGR Cooler Diagnosis and Cleaning — Offers guidelines for the cleaning and troubleshooting of exhaust gas recirculation (EGR) coolers used on Class 6-8 diesel-powered commercial vehicles.	RP 371A	Natural Gas Vehicle Inspection and Maintenance Guidelines — Offers guidelines for maintaining vehicles with engines using either compressed or liquefied natural gas as its primary fuel. For guidelines on specifying and implementing natural gas vehicles, see TMC RP 370, Natural Gas Vehicle Specification and Implementation Guidelines.
RP 362	Guidelines for Used Coolant Analysis of Heavy-Duty Vehicles — Provides guidelines for cooling system sampling procedures, commonly run field and laboratory tests, and warning/condemnation limits for used engine coolants. It applies to Class 7-8 commercial vehicles.	RP 372	Diesel Exhaust Fluid Tank Design Guidelines — Provides performance guidelines for the design of diesel exhaust fluid (DEF) tanks, caps, filters, heaters and vents used onboard medium- and heavy-duty commercial vehicles.
*RP 363B	Underhood Thermal Event Prevention — Addresses recommendations for preventing underhood vehicle fires.	RP 373	Diesel Exhaust Fluid System Maintenance — Provides fleet maintenance personnel with guidelines for inspecting and maintaining diesel exhaust fluid (DEF) systems used on heavy-duty commercial vehicles.
RP 364A	Fleet Purchasing Specification for Organic Acid Technology Extended Life Coolant — Provides a fleet purchasing specification for organic acid technology (OAT) extended life coolants for heavy-duty vehicles.	RP 374	Cleaning Diesel Particulate Filters and Diesel Oxidation Catalysts — Offers guidelines for cleaning diesel particulate filters and diesel oxidation catalysts.
RP 365A	Coolant Maintenance Guidelines — Provides guidelines for developing a program to identify various types of heavy-duty aqueous coolants and ensure proper coolant quality of each type of aqueous coolant to protect the entire cooling system. It applies to Class 7-8 commercial vehicles.	RP 375	Leak Detection In Engine Systems Utilizing Visible Vapor Technology — Offers guidelines for leak detection in engine systems utilizing visible vapor technology.
RP 366	Standardized Clutch Engagement Torque Requirements — Provides a test procedure for measuring clutch engagement torque of commercial medium- and heavy-duty diesel engines in a test cell environment. It helps the user accurately determine what clutch engagement torque value is needed for satisfactory vehicle startability. This metric also can help vehicle manufacturers properly design drivelines that satisfy customer expectations for a given vehicle vocation.	RP 376	Thermal Event Prevention In Natural Gas (CNG/LNG) Powered Vehicles — Offers guidelines for thermal event prevention in natural gas (CNG/LNG) powered vehicles.
RP 367A	Fuel Filters: Complaint, Cause & Correction — Offers guidelines for fuel filter diagnostics for diesel-powered commercial vehicles.	RP 377	Managing Transition to Lower Viscosity Engine Oils. — Helps fleet managers decide how best to transition fleets to American Petroleum Institute (API) designated, lower viscosity CK-4 and FA-4 engine oils. The RP applies to diesel-powered Class 7 and 8 vehicles.
		RP 378	CNG Post-Collision and Thermal Events Mitigation — Offers guidelines on mitigating post-collision- and thermal event-related incidents on compressed natural gas powered commercial vehicles.

*RP 379 Battery Electric Vehicle (BEV) Coolant Selection — Offers guidelines on selecting coolants for BEV motor systems.

CAB & CONTROLS — S.4

RP 401D Location and Operation of Instruments and Controls in Motor Truck Cabs — A recommendation to help avoid confusion when drivers shift from one truck to another; to promote safety and convenience; and to simplify design, production, and servicing.

RP 402A Windshield Washer Anti-Freeze and Cleaner Specification — Covers the general characteristics and performance requirements of windshield washer antifreeze products used for cleaning automotive windshields.

RP 403A Placement of Safety Equipment — Establishes guidelines for vehicle manufacturers to determine proper locations for the placement of safety equipment in their model truck cabs.

*RP 404C Truck and Truck-Tractor Access Systems — Gives recommendations allowing anyone entering or exiting a cab to have three limbs in contact with the truck or tractor at any time.

RP 405B Windshield Washer System Performance Recommendations — Establishes minimum performance requirements and test procedure for windshield washers used in heavier gross weight vehicles with a service life potential of 500,000 miles (804,500 km).

RP 406D Windshield Wiper System Performance Recommendations — Covers minimum performance requirements and test procedures for windshield wiper systems used on heavy-duty vehicles that have a potential service life of 500,000 miles.

RP 407C Defrosting, Defogging, And Heating Performance Requirements For Truck Cabs With And Without Sleepers. — Lists minimum requirements for defrosting, defogging, and heating of truck cabs for improved driver environment and visibility.

RP 408A Dash and Sleeper Heater and/or Air Conditioner Blower Motor Accessibility — Covers the minimum accessibility requirements for dash and sleeper heater and/or air conditioner blower motors. It should be considered by vehicle original equipment manufacturers (OEMs) and heater and air conditioner component suppliers on any new or revised designs.

RP 409A Maintenance of Wiping Quality of Wiper Blades. — Covers steps for maintaining an acceptable quality of wiping by the wiper blade.

RP 410C Seat Belt Assembly, Inspection and Maintenance Procedures— Provides a formal procedure for inspecting and maintaining vehicle seat belt assemblies in cab and sleeper applications.

RP 411A Vehicle Surface Preparation for Painting — Provides information to help commercial vehicle operators properly prepare vehicles for painting — This Recommended Practice may be used to ensure that painting service suppliers also properly prepare vehicles prior to painting.

RP 412B Air Pressure Wiper System Recommendations for Consideration in Future Designs — Addresses wipe area, wiper motor interchangeability, unitized wiper set, wiper component accessibility, motor oiler, and minimum pressure for the design of air-operated wiper systems.

RP 413A Heavy-duty In-Cab Air Conditioners, Refrigerant-12 Systems — Establishes recommendations for the maintenance of air conditioning equipment capable of meeting durability requirements of on-highway vehicles. Provides unit descriptions, and installation and preventive maintenance procedures for heavy-duty in-cab air conditioning systems.

RP 414C Truck Cab Air Conditioner Specification Guidelines — Designed to help industry professionals reduce heavy-duty truck air conditioner problems through better specifications when purchasing and designing new vehicles.

RP 415A Selecting Painting Systems for Commercial Vehicles — Provides information to help commercial vehicle operators select among the various paint systems available, both as originally specified on new vehicles and for refinishing used vehicles.

RP 416A Questions to Ask When Selecting a Commercial Vehicle Refinisher — Provides commercial vehicle operators with a list of questions to consider to aid in proper selection of a vehicle refinisher.

RP 417B Selection Guidelines for Pneumatic Tractor-Trailer Hookup Lines— Offers selection guidelines for coiled and straight pneumatic tractor- to-trailer hookup lines used on Class 7-8 combination vehicles.

RP 418C Heavy-Duty In-Cab R-134A Air Conditioning Systems — Offers guidelines for specifying cab air conditioning systems for commercial vehicles.

RP 420C Minimum Service Life Requirements for Heavy-duty HVAC Cab Controls — Establishes minimum service life requirements for heating, ventilation, and air conditioning (HVAC) systems in heavy-duty commercial vehicles that are acceptable to equipment users.

RP 421 In-Cab Air Conditioning Retrofit Procedure — Establishes a retrofitting procedure for fleets wishing to retrofit R-12 A/C systems to R-134a or other alternative refrigerants.

RP 422C Cab Insulation Testing Methodology — Establishes test procedures for determining heat or thermal transmission rates of heavy-duty vehicle driver and sleeper cabins. Also establishes rating method for heat/thermal transmission.

RP 423 Color Coding of Air Brake Systems — Establishes recommendations for standardized color-coding of air brake systems.

RP 424 Door Hardware Performance Requirements — Establishes minimum performance standards for tractor door hardware.

RP 425 Mirror Positioning and Aiming — Offers guidelines on cab mirror positioning and aiming.

RP 426B Service Guidelines for Primary and Supplemental Occupant Restraints — Offers recommendations on servicing and maintaining heavy-duty vehicle occupant restraints.

RP 428C Guidelines For Vision Devices. Specifies minimum driver vision requirements, and suggests various means of achieving these requirements. It applies to all commercial vehicles.

RP 429 Windshield Replacement and Repair — Offers guidelines on windshield replacement and repair.

RP 430B Guidelines For Collision Warning Driver Interface and Notifications — Offers guidelines for specifying collision warning driver interface and notifications used on commercial vehicles.

RP 431A Guidelines for Electrical Cab Power Points — Offers guidelines for specifying electrical cab power points.

RP 432C Engine Off HVAC Performance Requirements For Truck Cabs With Sleepers — Establishes performance requirements for engine-off heating, ventilation, and air conditioning (HVAC) systems in order to achieve driver thermal comfort in both winter or summer rest periods.

RP 433A Truck Washing and Cleaning Guidelines — Offers guidelines for truck washing and cleaning.

RP 434 Cab And Sleeper Insulation Efficiency Guidelines — Offers guidelines for cab and sleeper insulation.

RP 435B Installation and Inspection Guidelines for Pneumatic and Electrical Tractor-Trailer Hookup Lines — Offers installation and inspection guidelines for coiled and straight pneumatic tractor-to-trailer hookup lines used on Class 7-8 combination vehicles.

RP 436C Air Conditioning System Performance Requirements for Truck Cabs With and Without Sleepers—Helps equipment users select an air conditioning (A/C) system that best suits fleet operational needs by means of a standardized test used to compare factory-installed systems.

RP 437A Guidelines for Truck Stop Electrification Interface — Offers guidelines for the interface between vehicle and truckstop electrification systems.

RP 438B Engine Off HVAC Performance Requirements For Truck Cabs Without Sleepers — Establishes performance requirements for engine-off HVAC systems in order to achieve driver thermal comfort in both winter or summer rest periods.

RP 439A Minimum Performance Criteria for Auxiliary Power Units (APUs) and Gensets — Establishes minimum performance criteria for auxiliary power units (APUs) and generator sets (gensets) used on Class 6-8 day-cab and sleeper-equipped tractors operated within an ambient temperature range of -10°F to 120°F (-23 °C to 43°C).

RP 440 Seat Base Installation Standardization. — Establishes a common seat mounting interface zone for commercial vehicle cabs. Defines a minimum spacing for fastener locations in the truck floor within that zone, as well as separate zones for seatbelt anchorages. This RP is applicable to all Class 7 and 8 vehicles.

RP 441B Electrified A/C System Performance Specifications, Requirements, and Testing Criteria For Hybrid/Electric, All-Electric and Conventional Trucks — Offers guidelines for selecting an electrified A/C system by means of a standardized test used to compare factory-installed systems.

RP 442B Standardization of Speedometer and Tachometer Signals—Establishes a standard vehicle speed signal and frequency and a standard engine speed signal and frequency that can be used by any electronic device on a heavy-duty vehicle requiring the knowledge of ground speed/distance or engine revolution information.

RP 443A In-Cab Cleaning and Deodorizing Guidelines— Offers guidelines for the in-cab cleaning and deodorizing of commercial vehicles.

RP 444A Placement and Structural Requirements for Heavy Truck Navigation/Communication Devices— Provides guidance to vehicle manufacturers in the mounting provisions for installation of mobile communications systems such as Electronic Logging Devices (ELDs) and navigation devices on medium- and heavy-duty trucks.

RP 445	Power Management Strategies For In-Cab Medical Devices (PAP) — Offers guidelines for power management strategies for in-cab medical devices used in commercial vehicles.	RP 519A	Recommendations for an Employee Performance Evaluation Program — Provides fleet managers with a basic set of forms and instructions for the assessment and evaluation of maintenance and support personnel.
*RP 446	In-cab Gas Detector Specifications — Offers guidelines on specifying gas detectors for commercial vehicle cabs.	RP 520A	A/C System Refrigerant Flushing — Covers flushing material, equipment and procedures for flushing vehicle cab A/C systems in service, repair, or retrofit operations.
RP 447	Odometer Synchronization Guidelines — Offers guidelines for odometer synchronization on Class 7-8 commercial vehicles.	RP 521A	Cost Items Needed to Determine a Fully Burdened Technician Labor Rate — Identifies items that should be used to determine fully burdened labor rates.
FLEET MAINTENANCE MANAGEMENT — S.5			
RP 503C	Standardization of Training Aid Materials—Establishes guidelines for the development of audio-visual/multimedia training programs for the trucking industry.	RP 522	Survey Development Guidelines — Offers recommendations for developing and administering surveys.
RP 510B	Maintenance Facility Development Guidelines — Designed to help fleet managers plan for future maintenance facility requirements that adequately support their business plans.	RP 524	Advisory Annotation Guidelines — Offers recommendations for standardizing definitions for advisory annotation terms, such as “danger,” “warning,” etc.
RP 511A	Refrigerant Recovery/Recycling Procedures — Offers guidelines for refrigerant recovery and recycling procedures.	RP 525	ISO 9002 Certification Considerations — Offers guidelines for fleets considering ISO 9002 certification.
RP 512B	Technician Staffing Determination — Provides a basic formula to calculate the number of technicians required to adequately staff a heavy-vehicle maintenance shop.	RP 526	Guidelines for Shop Review Practices — Offers guidelines for shop review procedures.
RP 513	Estimating Number of Service Bays — Intended to assist fleets that are planning new maintenance shop facilities by giving an analytical methodology for estimating the number of service bays required in the new facility. Covers general maintenance shop facilities for all classes of vehicles.	RP 527B	Vendor Selection Guidelines for Towing and Recovery — Offers guidelines for selecting towing and recovery vendors.
RP 515	Maintenance Shop Design Considerations — Intended to assist fleets planning new maintenance shop facilities. It provides a list of critical elements that should be considered in the design.	RP 528A	Technician Certification Program Guidelines—Offers guidelines for planning, designing and implementing a technician development program that encourages professional development through technical certification.
RP 516A	Technician Training: A Model for Training Program Planners — Presents a guideline for the maintenance shop manager to use in preparing a training program for service technicians. It explains factors for consideration in developing a performance-based training program — whether the program is developed internally or provided by outside suppliers.	RP 529	Key Performance Indicators For a Maintenance Cost-Per-Mile Metric — Offers fleet executives key performance indicators (KPIs) for developing and implementing a maintenance cost-per-mile (CPM) metric for its use in calculating total fleet operational costs.
RP 518B	Fuel Station Planning — Offers guidelines for fuel station planning for diesel, gasoline and natural gas powered vehicles.	RP 530A	Fleet Guidelines for Parts Purchasing — Offers guidelines on parts purchasing.
		RP 531A	Parts Inventory Management Guidelines — Helps fleet management better manage parts inventory to maximize vehicle utilization and part return on investment.
		RP 532	Model Year Introduction Guidelines — Offers guidelines for standardizing model year introductions of vehicles.

RP 534	Guidelines For Determining Vehicle Lift Productivity Efficiencies — Offers guidelines for determining the productivity efficiencies of vehicle lifts in a maintenance shop.
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RP 535	Template for Establishing Fleet/Service Provider Relationships — Offers guidelines for establishing fleet/service provider relationships.
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RP 536A	Guidelines for Technician Exposure to Road Deicing Chemicals—Offers protective guidelines to technicians who may come in contact with road deicing chemicals during the course of vehicle maintenance.
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RP 537	Disaster Recovery Guidelines for Vehicle Maintenance Operations. — Offers guidelines for developing a disaster recovery plan covering pre-evaluation, planning, and duty assignment of assets, property and personnel.
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RP 538	Quality Shop Process Improvement — Provides basic guidelines for implementing a process by which shop efficiency and productivity can be continuously improved.
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RP 539A	Workflow Practices and Metrics for Unscheduled Repair Events—Establishes standard workflow procedures and practices for addressing unscheduled repair events involving commercial vehicles.
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RP 540	Proper Pilot Review Guidelines — Offers guidelines for conducting a proper pilot review tractors, straight trucks, trailers, and a variety of other trucking industry equipment.
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RP 541	Heavy-duty Vehicle Chassis Dynamometer Test Procedure — Provides a standard procedure for chassis dynamometer testing of heavy-duty vehicles for the purpose of determining power delivered through the drive tires. It also provides a method for correcting observed power to reference test conditions and explains how to analyze test data. (Formerly RP 1205.)
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RP 542	Maintenance Facility Development Guidelines For Natural Gas Vehicles — Offers design and retrofit guidelines for new or existing maintenance facilities used to service natural gas vehicles fueled by compressed natural gas (CNG) or liquefied natural gas (LNG).
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RP 543A	Guidelines for Lockout/Tagout Procedures — Offers guidelines for developing lockout/tagout (LOTO) practices to help maintenance personnel meet/comply with safety regulations issued by the U.S. Occupational Safety and Health Administration (OSHA). Applies to Class 2-8 commercial vehicles.
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RP 544	Cybersecurity Insurance Guidelines — Offers guidelines on obtaining cybersecurity insurance for fleet operations.
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RP 545	Developing Key Performance Indicators For Maintenance Operations — Offers guidelines for developing key performance indicators for maintenance operations.
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RP 546	Criteria for Commercial Vehicle Technician Apprenticeship Programs—Offers guidelines for developing an apprenticeship program for the development of medium- and heavy-duty commercial vehicle technicians.
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RP 547	Guidelines for Advanced Driver Assistance System (ADAS) Nomenclature—Provides a glossary of terms for Advanced Driver Assistance System (ADAS) technologies available for installation in commercial vehicles.
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RP 548	Technician Training For Advanced Driver Assistance Systems (ADAS) — Offers guidelines for training technicians on advanced driver assistance systems used on Class 6-8 vehicles.
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RP 549	Refrigerant Recovery and Recycling Equipment Specification Guidelines — Offers guidelines for refrigerant recovery and recycling equipment specification.
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RP 550	Guidelines For Specifying Vehicle Lifts For Maintenance Shops — Offers guidelines for specifying various types of vehicle lifts for commercial vehicle maintenance shops.
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RP 551	Root Cause Analysis Methodology — Offers guidelines for developing root cause analysis problem solving methods.
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RP 552	Electric Vehicle Shop Bay Planning — Offers guidelines for specifying maintenance shop bays for electric vehicle service and repair.
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RP 553	Parts Room Design Standardization Guide — Offers guidelines for standardizing parts rooms used in commercial vehicle maintenance.
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*RP 554	Pre-trip Inspection for Battery Electric Vehicles (BEVs) — Offers guidelines for pre-trip inspection of BEVs used in commercial service.
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CHASSIS & BRAKE SYSTEMS — S.6

RP 602B	Recovery Attachment Points for Trucks, Tractors, and Combination Vehicles — Establishes performance objectives of recovery attachment points for Class 6-8 on- and on-off highway trucks, truck tractors, and tractor-trailer combinations (both conventional and cab-over configurations). For recommendations on long-term towing of
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	disabled or wrecked vehicles see TMC RP 626, "Heavy-duty Truck Towing Procedures."		
RP 603C	Fifth Wheel Mounting—Aftermarket — Provides information to assist in the safe installation of heavy-duty vehicle aftermarket stationary and sliding fifth wheels.	RP 611	Driveline Maintenance Guidelines — Provides maintenance guidelines for drivelines. Adherence to these guidelines should provide satisfactory truck driveline performance.
RP 604D	Brake Chambers for Air-Braked Vehicles — Intended to familiarize users with the installation, maintenance, and safety procedures associated with diaphragm and spring brake chambers for air braked vehicles. Covers all on-highway trucks, tractors, or trailers using air brakes and equipped with service chambers or spring parking brakes.	RP 612B	Pneumatic Brake Balance — Provides general guidelines for brake balance on tractors, trailers, and combination vehicles.
RP 605C	Reconditioning Brake Shoes — Sets recommendations for brake shoe reconditioning specifications that will ensure consistent performance required for a balanced brake system. Covers drum brake stamped steel shoes used on Class 7-8 commercial vehicles.	RP 613	Brake System Torque Balance Test Procedure — Provides a method to determine the brake system torque balance for commercial vehicles.
RP 606B	Brake Relining Procedures — Covers legal marking requirements for drum brake linings air disc brake pads, and explains these markings. Also covers shoe/lining assembly and related procedures as they apply to heavy-duty commercial vehicles.	RP 614B	Air Brake (Nylon Reinforced) Tubing & Fittings — Covers minimum requirements for fleet maintenance of air brake connections utilizing fractional inch nonmetallic tubing. Included are dimensional, performance, and identification requirements and specifications.
RP 607C	Service and Inspection of S-Cam Brake Systems — Serves as a thorough guide for the inspection and servicing of all heavy-duty S-cam air brake system components. Identifies all appropriate brake system nomenclature and explains how each component interacts to ensure maximum braking performance.	RP 615	Hose Fitting Standard — Lists complete standards for SAE 45° flare seat fittings in sizes -4 through-12 and SAE 37° flare seat fittings in sizes -16 and above.
RP 608C	Brake Drums and Rotors. — Intended to familiarize users with the installation, maintenance, and safety procedures associated with spoke wheel and hub-mounted drums and rotors used on heavy-duty vehicles.	RP 616A	Uniform Labeling of Air Brake Valves. — Provides a means of identifying vehicle air brake system components with performance (input-output) characteristics. Applies to air brake system valves used to control the vehicle service brakes on heavy-duty commercial vehicles.
RP 609D	Self-Adjusting and Manual Brake Adjuster Removal, Installation and Maintenance. — Provides information regarding the removal, installation, operation, maintenance, and selection of heavy-duty vehicle manual and self-adjusting brake adjusters.	RP 617A	Contaminant Elimination Procedure for Tractor, Trailer or Dolly Air Brake Systems — Offers a procedure for eliminating contaminants from air brake systems.
RP 610B	Driveline Design Criteria — Provides workable guidelines for the evaluation of driveline designs and installations on Class 7-8 commercial vehicles. Adherence to these recommendations should provide satisfactory truck driveline performance.	RP 618C	Wheel Bearing Adjustment Procedures for Conventional/Manually Adjusted Wheel Ends.— Provides guidelines to achieve a verifiable wheel bearing end play of 0.001" to 0.005" (0.025 mm to 0.127 mm). on conventional wheel ends that are designed to be manually adjusted. It is not applicable to pre-set or unitized wheel ends.
		RP 619B	Air System Inspection Procedure — Provides guidelines for inspecting air systems used on air-braked commercial vehicles.
		RP 621	Specifications/Communications — Tries to identify and clarify specification communication among component suppliers, equipment users, and manufacturers by providing step-by-step guidelines for improving communications and establishing the necessary procedures to ensure that equipment users will get the options they specify.

- *RP 622C Wheel Seal and Bearing Removal, Installation, and Maintenance — Defines practices and procedures to perform a wheel seal replacement that meets fleet performance requirements. Also includes procedures and standards for storage, handling, and installation of wheel seals and wheel bearings for heavy-duty vehicles.
- RP 623A Uniform Diagnostics Guide for Heavy-duty Vehicle Power Steering Systems — Provides a uniform method of diagnosing heavy-duty truck and truck tractor power steering complaints and gives the maintenance technician general advice concerning the diagnosis and correction of commercial vehicle steering related problems.
- RP 624C Lubricant Fundamentals—Describes different types of lubricants used in commercial vehicles.
- RP 625A Brake Drum and Lining Compatibility — Offers maintenance and inspection guidelines to promote brake drum and lining compatibility on Class 7-8 vehicles equipped with S-cam air brakes.
- RP 626B Heavy-duty Truck Towing Procedures — Provides guidelines for equipment usage and to acquaint the tow truck operator with the general phases involved in heavy-duty truck towing. Should not be considered as a comprehensive guide to truck towing and recovery, but rather a brief introduction to some of the problems involved.
- RP 627C Brake Lining Structural Defects — Offers guidelines for diagnosing and repairing brake lining structural defects.
- RP 628D Aftermarket Brake Lining Classification — Provides information on judging the performance of aftermarket brake linings on 16.5 x 7-inch brakes when tested to the federally mandated, original equipment dynamometer test procedure contained in Federal Motor Vehicle Safety Standard 121.
- RP 629A Brake Lining Contamination — Identifies grease- and oil-contaminated lining conditions and provide guidelines for lining evaluation caused by such contamination.
- RP 630A Air Compressor Diagnosing For Excessive Oil Consumption — Offers guidelines for troubleshooting excessive oil consumption in air compressors.
- RP 631C Recommendations for Wheel End Lubrication — Offers recommendations and operational considerations for selecting, inspecting and using lubricants in wheel end applications in Class 3-8 trucks, buses, tractors and trailers.

- RP 632 Matching Air Brake Systems — Addresses vehicles with braking systems manufactured in accordance with Federal Motor Vehicle Safety Standard (FMVSS) 121 Docket 90-3. Specifically, it outlines some of the issues that could be encountered in vehicle combinations, where both pre- and post-Docket 90-3 vehicles are operated. Recommends maintenance practices for existing vehicles and specification details for new vehicles that will enhance the brake performance of combination vehicles. Identifies and addresses potential problems in mixing vehicles and brake systems manufactured pre- and post-Docket 90-3.
- RP 633B Effects of Drivetrain Torsionals — Informs fleet managers of a number of drivetrain torsional issues that must be considered when specifying drivetrains. Presents a hierarchy of high risk vehicle configurations and usages, lists the specific failure modes that are attributable to drivetrain torsionals, and suggests specific corrective actions that will result in enhanced durability and driver comfort levels. This RP is designed to supplement the information contained in TMC RP 610A, "Driveline Design Criteria."
- RP 634A Ride Height Concerns and Adjustment Procedures for Truck/Tractor Air Ride Suspensions — Points out the potential problems caused by improper ride height and provides recommendations for maintaining proper adjustment of air ride suspensions. Also describes procedures for adjusting air ride suspension ride height and recommends that manufacturers clearly label correct ride height settings on the vehicle.
- RP 635A Long-Stroke Brake Chambers — Provides fleets information on the use of long-stroke brake chambers.
- RP 636B Specifying Auxiliary Retarders — Offers guidelines for specifying auxiliary retarders on Class 7-8 vehicles.
- RP 637A Tractor Air Dryer Guidelines — Offers recommendations for specifying, installing and maintaining tractor air dryers.
- RP 638A Heavy-Duty Clutch Maintenance Guidelines — Provides information for the proper maintenance of heavy-duty clutches, including troubleshooting, installation and removal guidelines.
- RP 639A Spec'ing Heavy-Duty Clutches. —Offers guide for the proper spec'ing of heavy-duty clutches.
- RP 640C Alternate Wheel Bearing Adjustment Systems — Offers information on alternate wheel bearing adjustment systems.

RP 641B	Maintenance Guidelines for Hydraulically Actuated Clutches. — This RP offers guidelines for maintaining hydraulically activated clutches.	RP 655B	Drive Axle Maintenance Guidelines — Offers guidelines for drive axle nomenclature, maintenance practices and procedures.
RP 642B	Total Vehicle Alignment: Recommendations for Maximizing Tire and Alignment-Related Component Life — Offers comprehensive alignment guidelines for medium- and heavy-duty vehicles.	RP 656B	Hub and Spoke Wheel Fastener Maintenance — Offers guidelines on hub and spoke wheel fastener maintenance.
RP 643B	Air-Ride Suspension Maintenance Guidelines — Offers guidelines for air-ride suspension maintenance on Class 7-8 vehicles.	RP 657A	Heavy-Duty Drivetrain Specification Guidelines — Offers guidelines for specifying heavy-duty drivetrains on Class 7-8 vehicles.
RP 644A	Wheel End Conditions Analysis Guide — Offers guideline on wheel end conditions and how to identify them.	RP 658	Target Deceleration Value Guidelines for Performance-Based Brake Testers — Provides target deceleration value guidelines for performance-based brake testers (PBBTs) used in fleet maintenance programs. It also provides information about the type of tests that can be performed and the differences that exist among the various types of PBBTs.
RP 645A	Tie Rod Inspection and Maintenance Procedure — Offers guidelines on tie rod inspection and maintenance.	*RP 659A	Air Release Fifth Wheel Function Guidelines — Provides a standard guideline for the installation and operation of in-cab, air-release fifth wheels to ensure maximum safety and optimum performance. Covers all on-highway commercial vehicles equipped with in-cab, air-release fifth wheels in both new and aftermarket applications.
RP 646A	Driveline Fastener Preventive Maintenance— Provides guidelines for driveline fastener preventive maintenance.	RP 660A	Tractor Crossmember Specifications for Pintle Hook Applications — Offers specification guidelines that standardize tractor rear crossmembers for the purposes of installing pintle hook connections. Provides recommended specifications for the rear crossmember itself, crossmember bracing, attachment locations for safety chains and air/electrical connection locations. Applies to Class 7-8 tractors used for on-highway towing of converter dollies.
RP 647	Guidelines for Care and Use of Onboard Lubrication Systems — Offers guidelines for care and use of onboard lubrication systems.	RP 661	Considerations for Use of Outset Wide-Base Wheels on Drive, Trailer, and Auxiliary Axles. — Provides guidelines for selecting, specifying and inspecting wide-base tires/wheels for drive, trailer, and auxiliary axles. The scope of this RP is limited to wide-base outset wheels on drive, trailer, and auxiliary (e.g, dolly, tag, or pusher) axle applications. Does not cover singled inset (dual-type) wheels.
RP 648A	Troubleshooting Ride Complaints—Offers procedures to identify the “root cause (s)” of vehicle ride complaints and guidelines to help address these issues.	RP 662A	Outboard Drum Removal and Installation Procedures For Class 7-8 Wheel Ends — Offers guidelines for outboard drum removal and installation procedures for Class 7-8 wheel ends.
RP 649A	Diagnostic Guidelines for Performance-Based Brake Testing — Offers troubleshooting guidelines for vehicles following unsuccessful testing using a performance-based brake tester.	RP 663	Rear Suspension Inspection Guidelines — Offers guidelines for rear suspensions on heavy-duty commercial vehicles.
*RP 650A	Guidelines for Fifth Wheel Pre-Delivery Inspection, Preventive Maintenance and Troubleshooting — Offers guide for fifth wheel pre-delivery, inspection, preventive maintenance and troubleshooting.		
RP 651B	Steer Axle Maintenance Guidelines — Establishes guidelines for the maintenance and inspection of non-driven, steer axle systems and suspensions and associated components.		
RP 652A	Service and Inspection of Air Disc Brakes—Offers guidelines for the service and inspection of air disc brakes used on medium- and heavy-duty vehicles.		
RP 653	Fifth Wheel Coupling And Uncoupling Guidelines —Offers guidelines on fifth wheel coupling and uncoupling.		
RP 654A	Torque Rod Selection and OEM Installation Guidelines for On-Highway Vehicles —Offers guidelines for torque rod selection and OEM installation.		

RP 664A Wheel End Thermal Event Mitigation— This RP helps fleet personnel prevent wheel end thermal events — i.e., fires — from occurring during commercial vehicle operation.

TRAILERS, BODIES & MATERIAL HANDLING — S.7

RP 701 Mud Flap Mounting Brackets and Drilling Pattern — Diagrams mud flap mounting brackets and mud flap drilling pattern for mud flap installation.

RP 702D Trailer Lamp and Reflector Placement — Covers lamp and reflector replacement on all van, open top, reefer, platform, pole, convertible side, grain and dump trailers, and tankers.

RP 703C Electrical and Gladhand Connector Placement. — Offers guidelines for electrical and gladhand connector placement and increasing efficiency and personnel safety.

RP 704C Heavy-Duty Lighting Systems for Trailers. — Helps equipment purchasers specify a safe and effective heavy-duty trailer lighting system that is low-maintenance, durable, and corrosion-free for a minimum service life of 12 years. This service life interval should apply to the integrity of all system connectors, wiring and support components.

RP 705A Standard Trailer Landing Gear Mounting Pattern — Provides a template to produce a standard trailer-mounting bracket to which all models of landing gear can be applied, using a standard 5/8-inch hole for mounting.

*RP 707B Rear Bumper Dimensions — Standardizes rear bumper dimensions on trailers.

RP 708D Trailer Axle Alignment— Provides equipment users with guidance on performing trailer axle alignment.

RP 709 Hubcap Standardization: Bolt-on Type — Diagrams the Type I and Type II bolt-on hubcap, two types recommended for use on trailer axle hubs.

*RP 710B Overhead Door Selection, Installation, and Maintenance for a Dry-Van or Body — Offers guidelines for selection, installation and maintenance of overhead doors used on dry-van trailers or bodies.

RP 711 12-Year Life Swing-Type Dry Freight Van Trailer Doors — Gives manufacturing specifications for dry freight van trailer swing (hinged) doors, which will provide 12 years of useful service with routine maintenance that includes repair or replacement of door gaskets.

RP 713C Procedure for Hooking Double Trailers — Gives steps to properly hitch doubles with one person.

RP 714 Piggy-Back Trailers — Gives names of four Truck Trailer Manufacturers Association Recommended Practices that assist in specifying piggy-back options for trailers.

RP 716 Kingpin and Upper Coupler Requirements for Trailers — Gives kingpin and upper coupler requirements for trailers when specified for trailer on flatcar (TOFC) service.

RP 717B Guidelines For Infrared Thermographic Testing Of Refrigerated Trailers — The purpose of infrared thermography is to scan or inspect insulated trailers or truck bodies for localized insulation abnormalities and/or voids in wall cavities and air infiltration/exfiltration at the doors or other openings. This RP offers guidelines on the use of this technology as it applies to insulated trailers and truck bodies.

RP 718B Method for Classification of Controlled Temperature Vehicles. — Establishes a method for classifying controlled temperature vehicles and domestic containers (hereafter referred to as vehicles). Applies to vehicles equipped with temperature control devices and covers only new vehicles.

RP 720 Emergency Contaminant Removal From a Refrigeration Unit — Establishes process for cleaning trailer reefer systems that have become contaminated internally (i.e., loss of refrigerant coupled with system contamination from dirt and moisture.)

RP 721A Practices for Safe Maneuvering of Converter Dollies — Offers guidelines for safe maneuvering of converter dollies.

RP 722B Large Vehicle Conspicuity Markings — Establishes the minimum design, configuration, and dimensional criteria for reflective marking systems to improve the night conspicuity of large vehicles.

RP 723A 12-Year Life Domestic Laminated Hardwood Flooring For Dry Freight Van Trailers — Designed to assist in the writing of specifications for domestic laminated hardwood flooring which will provide 12 years of useful service. Addresses preparation, construction, and finishing of the wood component only; does not address the floor as a structural system within the dry freight van.

RP 724 Fiberglass Reinforced Plywood (FRP) Construction Specifications — Intended to provide minimum standards for fleet operators purchasing fiberglass reinforced plywood (FRP) trailers and van bodies. Also intended to inform fleet operators of the availability of various FRP options. It considers the structural components

	of FRP trailers and van bodies as a total system. Specifications considered include plywood core and fiberglass thickness and construction, fiberglass finish coats, scuff liners, bottom side rails, fasteners, and moisture protection.		
RP 725	FRP Panel Maintenance and Repair — Designed to serve as a guide for the proper care, maintenance and repair of fiberglass reinforced plastic (FRP) panels used in the trucking industry.	RP 737	Recommendations for a Universal Replacement Horizontal Rear Impact Guard — Offers recommendations for a universal replacement impact guard.
RP 727A	Liftgate Specifications and Installation — Designed to assist equipment users in specifying rear- or side-mounted, hydraulic liftgates. It covers liftgates used on straight trucks and combination vehicles. It addresses proper equipment identification, proper vehicle specification and liftgate installation, and proper identification of liftgate operating specifications (i.e., number of performance cycles, driving [recharge] time, proper power supply, etc.)	RP 738	Spec'ing Guidelines for Cargo Securement Systems Used on Flatbed Vehicles — Offers guidelines for spec'ing cargo securement systems used on flatbeds.
RP 728A	Trailer Axle Maintenance — Offers guidance on improving the efficiency and performance of trailer axle equipment and its maintenance. It specifically covers welding hardware to axles, installing axles and associated components, inspecting axles and associated components, and lubricating axle components.	RP 739	Maintenance, Inspection, and Operating Guidelines for Cargo Securement Systems Used on Flatbed Vehicles — Offers guidelines for maintenance, inspection, and operation of cargo securement systems used on flatbed vehicles.
RP 729A	Trailer Fastener Specification — Offers fleets guidance on trailer fastener specification.	RP 740	Corrosion Protection From Dissimilar Metals — Offers guidelines for corrosion prevention related to contact between dissimilar metals.
RP 730	Air Line Antifreeze Recommendations for Trailer Air Brake Systems — Offers guidance on the use of air line antifreeze for trailer air brake systems.	RP 741	Guidelines for Flatbed, Van Trailer, and Truck Body Entry and Egress — Offers guidelines on trailer entry and egress.
RP 731A	Lube Free Coupling Guidelines — Offers guidelines for lube-free tractor-trailer coupling systems.	RP 742	Minimal Specifications for Van Trailers Shipped on Railcars — Offers recommendations for spec'ing van trailers to be shipped on railcars.
RP 732	Trailer Rear Impact Guard Repair Guidelines — Offers repair guidelines for trailer rear impact guards.	RP 743	Cargo Securement Systems For Van-Type Trailers And Truck Bodies — Offers recommendations for cargo securement systems for van-type trailers and bodies.
RP 733	Liftgate Preventive Maintenance Inspection — Offers guidelines for liftgate preventive maintenance and inspection.	RP 744A	Pintle Hook Maintenance Guidelines — This RP offers maintenance guidelines for pintle hooks.
RP 734A	Spec'ing Guidelines for Minimizing Van Moisture Contamination. — Addresses moisture contamination in van trailers caused by external sources and internal condensation.	RP 745A	Inspection And Maintenance Guidelines For Cargo Securement Systems Used With Van-Type Trailers And Truck Bodies — Offers inspection and maintenance guidelines for cargo securement systems used on van-type trailers and bodies.
RP 735	Battery Recommendations for Engine Powered Material Handling Vehicles — Provides nine recommendations and standards to minimize battery problems in material handling vehicles.	RP 746B	Drawbar Length Considerations — Offers guidelines for drawbar length.
RP 736	Repair, Section, and Replacement of Longitudinal Van Rails — Offers guidelines for repair, section and replacement of longitudinal van rails.	RP 747	Drawbar Eye Maintenance Guidelines — Offers guidelines on drawbar eye maintenance.
		RP 748A	Trailer Refrigeration Unit Preventive Maintenance Inspection Guidelines — Offers preventive maintenance inspection guidelines for trailer refrigeration units.
		RP 749	Composite Van Trailer Repairs — Offers guidelines for repairing composite van trailers.
		RP 750A	Upper Coupler Inspection Guidelines — Offers guidelines for inspecting upper couplers.
		RP 751	Safety Chains and Attachments — Offers guidelines on safety chains and attachments.

RP 752A	Forklift Preventive Maintenance Inspection Guidelines — Offers guidelines on forklift preventive maintenance inspection.
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RP 753	Guidelines for Liftgate Decals. — Offers guidelines for designing liftgate advisory decals.
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RP 754B	Liftgate Charging and Power Circuits — Provides specification and operating guidelines for liftgate charging and power circuits to improve efficiency, uptime, profitability and user satisfaction.
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RP 755B	Alternative Liftgate and Material Handling Charging Methods — Helps equipment users identify supplementary or alternative charging methods for recharging batteries used on Class 6-8 combination vehicles equipped with power liftgates and/or material handling equipment. Defines alternative charging methods as those not already defined within TMC RP 754, “Liftgate Charging and Power Circuits.”
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RP 756	Ergonomic Design Parameters for Safe Maneuvering of Converter Dollies — Offers ergonomic design guidelines for facilitating the safe handling of heavy-duty, single-axle converter dollies (also known as converter gear) used in Class 7-8 tractor-trailer applications.
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RP 757	Proper Forklift Specifications. — Helps fleets determine operational needs for specifying a forklift, and what forklift type is needed for a particular application, such as regional, longhaul, or temporary storage of freight. Applies to forklifts with a carrying capacity range of 3000-8000 lbs. and the options available on such units.
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RP 758	Van Moisture Contamination Maintenance and Repair Guidelines. — Offers maintenance and repair guidelines for moisture contamination in van trailers caused by external sources and internal condensation. This RP applies to van trailers used in Class 7-8 combination vehicles.
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RP 759	Splash and Spray Suppression Guidelines. — Identifies fleet equipment specifications, driver training issues, and evaluation methods for reducing road spray at highway speeds in inclement weather, thereby improving highway safety for all motorists traveling in those conditions. This RP applies to Class 8 combination vehicles.
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RP 760	Dock Equipment/Trailer Interface Guidelines — Offers guidelines for the proper design of loading docks and the interface between dock equipment and trailers used in combination vehicle applications. Not intended to endorse any single design, method or equipment manufacturer.
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*RP 761A	Overhead Door Maintenance Guidelines for a Dry Van or Body — Provides maintenance and inspection guidelines for overhead doors installed in the rear of trailers and truck bodies.
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RP 762	Liftgate Electrical Usage Profile — Offers recommendations for an electrical usage profile for material handling equipment.
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RP 763	Cryogenic Cooling of Refrigerated Trailers — Offers guidelines for cryogenic cooling of refrigerated trailers.
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RP 764	Interior Van Trailer and Box Wash-Out Procedures — Offers guidelines for interior van trailer and box wash-out procedures.
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COST CONTROL METHODS — S.8

RP 801D	Bar Coding Guidelines — Provides guidelines and minimum performance criteria for the use of bar code technology for parts identification and inventory tracking in the trucking industry. The use of Symbology 3 of 9 and UPC Symbology are discussed.
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*RP 802H	TMC/ATA Vehicle Maintenance Reporting Standards (VMRS) — Provides an outline of TMC/ATA VMRS, its advantages to the fleet operator, and guidance on the basic requirements for implementation of the VMRS System.
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RP 803B	Pre-Service Vehicle Inspection. — Provides a form which contains most of the standard items to be inspected prior to a truck or tractor being put into service. Enables users to have a basic format to which they can add high-frequency repair items and special equipment needs.
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RP 804	Labor Productivity Measurement — Provides a basic set of forms and instructions to aid measurement of maintenance shop productivity.
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RP 805A	Parts Vendor Performance Evaluation—Helps fleet maintenance managers choose vehicle parts vendors in a fair and impartial manner.
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RP 806A	Service Vendor Performance Evaluation. — Guides the fleet maintenance department in rating the quality of service provided by outside service vendors and to assist fleets in making objective decisions when choosing among competing vendors.
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RP 807B	Universal Equipment Claim Process — Offers guidelines for standardizing claim processing.
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RP 806B	Service Vendor Performance Evaluation—Assists fleets in making objective decisions when choosing among competing vendors.
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RP 809A	Guidelines for Electronic Repair Orders—Provides guidelines for standardizing the transmission and capture of electronic repair order transactions.	RP 1109C	Type IV Fuel Economy Test Procedure. — Provides a test procedure for comparing the fuel consumption of two vehicles of similar capabilities, or one unit of a combination vehicle to the same unit of another combination vehicle. This procedure also provides for evaluation of the effects of certain components or systems on fuel economy. Permits valid comparison of vehicles using both particulate trap aftertreatment and diesel exhaust fluid (DEF).
RP 811	Extended Warranty Cost Benefit Analysis Calculator—Provides guidelines for establishing an extended warranty cost benefit analysis calculator.	RP 1110	Aerodynamic Devices: Inspection and Maintenance Procedures — Describes the effects that aerodynamic drag reduction devices can have on truck and combination vehicle operation and maintenance.
SUSTAINABILITY & ENVIRONMENTAL TECHNOLOGIES — S.11			
RP 1102A	TMC In-Service Fuel Consumption Test Procedure-Type II. — Provides a standardized test procedure for comparing the fuel consumption of two conditions of a single test vehicle or of one test vehicle to another when it is not possible to run the two or more test vehicles simultaneously.	RP 1111C	Relationships Between Truck Components and Fuel Economy. — Provides equipment operators with a basic awareness of the relationships between truck components and fuel economy-along with an understanding of how other variables also affect fuel consumption. The scope of this RP is limited to Class 8 tractors coupled to 48-53 ft. single and double trailers with maximum gross weights of 80,000 lbs.; in dry or refrigerated van applications with maximum vehicle speeds of 65-70 mph.
RP 1103A	TMC In-Service Fuel Consumption Test Procedure— Type III. — Provides a standard test procedure for comparing the fuel economy of components or systems of the type which cannot be switched from one vehicle to another in a short period of time. This test procedure is also ideally suited for comparing the fuel consumption of one vehicle to another, and one component of a combination vehicle to the other vehicle without the component in another. This procedure is specifically designed to be completed in one day.	RP 1112A	Lightweight Components Effect on Fuel Economy. — Identifies the relationship between gross vehicle weight and fuel consumption. It applies to heavy-duty commercial trucks and trailers.
RP 1104A	Computer Application Technology — Offers suggestions for parameters to consider when running truck and engine manufacturers' computer simulations to assist in vehicle spec'ing.	*RP 1113A	Guidelines for Driver Incentive Programs — Offers guidelines for the successful implementation of driver incentive programs.
RP 1105B	Idling Limiting Systems — Offers guidelines on spec'ing idle limiting systems.	RP 1114B	Driver's Effect on Fuel Economy — Describes driver's effect on vehicle fuel economy and offers guidelines on improving driver performance.
RP 1106A	Guidelines For Recording Comparative Fuel Usage For In-Service Vehicles — Provides a consistent and repeatable method of recording fuel usage data for vehicles that yields accurate comparisons of fuel used by vehicles with differences in specifications that the fleet is interested in comparing.	*RP 1115B	Guidelines for Qualifying Products Claiming a Fuel Economy Benefit — Offers guidelines for qualifying products claiming a fuel economy benefits.
RP 1107A	Computer Application Technology Related To Drivetrain Specifications — Can be used as a general guideline of the type of input that is required when developing driveline specifications for heavy-duty commercial vehicles.	RP 1117A	Guidelines for Shop Sustainability Efforts. — Offers guidelines for transitioning traditional fleet maintenance shop processes to more sustainable efforts that reduce the energy and consumables waste typically associated with shop operation.
RP 1108	Analysis of Costs from Idling and Parasitic Devices for Heavy Duty Trucks — Identifies sources of cost associated with engine idling and provides methods for estimating these costs, including a simple method for determining the horsepower demand of optional accessories for truck/tractor trailer combinations.	RP 1118A	Fuel Savings Calculator for Aerodynamic Devices — Provides an interactive mathematical tool to evaluate the potential fuel and economic savings of an aerodynamic device that has been tested using one of TMC's fuel economy testing procedures. It applies to Class 6-8 tractors coupled to commercial trailers of all types.

RP 1119 Electric Terminal Tractor Assessment Guidelines — Offers guidelines for specifying and implementing terminal tractors/yard spotters using electrified powertrains as the primary source of motive power.

*RP 1120 Guidelines for Charge Cycle Optimization and Energy Management of Battery Electric Commercial Vehicles — Offers guidelines for charge cycle optimization and energy management of battery electric vehicles used in commercial service.

*RP 1121 Guidelines for Electric Vehicle Charging Infrastructure Planning, Installation and Operation — Offers guidelines for electric vehicle charging infrastructure planning, installation and operation used in commercial service.

ONBOARD VEHICLE ELECTRONICS — S.12

RP 1201 Joint TMC/SAE Recommended Practice for Serial Data Communications Between Microcomputer Systems in Heavy-duty Vehicle Applications — Defines a general-purpose serial data communication link that may be utilized in heavy-duty vehicle applications. It is intended to serve as a guide toward a standard practice to promote serial communication compatibility among microcomputer-based modules.

RP 1202C Off-Board Diagnostic Standards. — Standardizes the hardware and systems used for off-board diagnostics of heavy-vehicle electronic and related systems. Not intended to define the diagnostic and repair procedures, but rather to define a common environment to allow for the widest possible use of cost effective standardized tools and procedures to simplify the diagnostics of heavy trucks.

RP 1203A Electronic Term Standardization — Provides definitions for the numerous electronic terms and acronyms used throughout the trucking industry by vehicle manufacturers and others.

RP 1204A Technician's Electrical Skill Evaluation — Prepared as an aid to fleets in evaluating the electrical skill level of their technicians. The evaluation results are intended to be used to determine the required training programs needed for the mechanic to properly maintain truck electronic control systems.

RP 1206 Placement and Structural Requirements For Heavy-duty Navigation/Communication Devices — Provides guidelines to manufacturers for provision of power and ground connections in the vehicle cab to support end-user installed trip recorders, mobile communication equipment, etc.

Designed to cover connection of such devices to 12-volt negative ground electrical systems requiring 20 amps or less of unswitched power or 15 amps of switched power, the in-cab accessory power interface is intended to simplify end-user installation, maintenance, and transfer of user-installed electronic and electrical equipment by providing power and ground connection access.

RP 1207A Cab Electronic Accessory Power Interface — Establishes general guidelines for OEM vehicle electrical power wiring design to support the proper installation of quote "add-on" equipment by end-users.

RP 1208E PC Selection Guidelines for Service Tool Applications—Addresses the acquisition and use of off-board personal computers for vehicle diagnosis, repair, and maintenance management.

RP 1209 Sensor Diagnostics — Covers troubleshooting, maintenance and installation issues regarding many types of vehicle sensors.

*RP 1210E Windows Application Program Interface (API) — Describes a standardized application program interface (API) for personal computer (PC) to on-board vehicle ECU communications under the Microsoft Windows™ family of operating systems. It establishes a standard API interface between the physical datalink (i.e., CAN/J1939), a VDA, and Windows™-based software applications running on a personal computer.

RP 1211 Electronic Dash Display Guidelines — Establishes a standard protocol for transmission of electronic messages to and from a dash-mounted display device.

*RP 1212B PC-to-User Interface Recommendations for Electronic Engines — Offers guidelines for developing user interfaces for engine-related software packages to minimize technician training requirements.

RP 1213A Vehicle to Off-Board Computing Devices Component User Interface Guidelines — Offers guidelines for component user interface between the vehicle and off-board technology.

RP 1214A Guidelines for Event Recording: Collection, Storage & Retrieval — Offers guidelines for event data recording, storage and retrieval.

RP 1215 Software Compatibility Guidelines — Offers guidelines for software compatibility between service programs.

RP 1216 Vehicle to Office Data Communications — Offers design and specification recommendations for

	establishing industry voluntary practices for vehicle to office data communications as it applies to on-board technologies.		communications. This RP establishes a standard API interface between the physical datalink (i.e., CAN/J1939), the vehicle datalink adapter (VDA), and mobile software applications.
RP 1217B	Tractor-Trailer Interface Guidelines — Defines the minimum requirements for a new and optional replacement/supplemental connector for the SAE J560 connector.	RP 1228	Fleet Validation of RP 1210 OEM Applications — Provides a list of the necessary components to perform bench testing of all common original equipment manufacturer (OEM) diagnostic software currently available as of the publication date of this RP. It applies to Class 2-8 commercial vehicles.
RP 1218	Guidelines for Remote Disablement of Commercial Vehicles — Offers guidelines for remote disablement of commercial vehicles.	RP 1229	Open Wireless Vehicle Diagnostic Adapter Application Program Interface (API) — Defines a standardized application programming interface (API) for primarily for handheld mobile devices to onboard electronic control unit (ECU) communications that can be implemented on any platform that supports TCP/ IP communications (i.e., WiFi – 802.11).
RP 1220A	Guidelines For Forward Collision Warning and Collision Mitigation Systems For Class 5-8 Vehicles — This RP provides guidelines for selection and specification of forward collision warning systems and collision mitigation systems used on Class 5-8 commercial vehicles.	RP 1230	Accessory Databus Message Standardization— Provides guidelines for standardizing accessory databus messaging on commercial vehicles.
RP 1221A	Guidelines for Lane Departure Warning Systems—Provides guidelines for the selection and specification of a lane departure warning system (LDWS) used on Class 7-8 combination vehicles.	LAST MILE & VOCATIONAL VEHICLES — S.14	
RP 1222A	Guidelines For Heavy-Duty Vehicle Stability Systems —Offers guidelines for heavy-duty vehicle stability systems.	RP 1401	Cab and Body Preventive Maintenance Inspection Procedures — Offers a standardized, effective preventive maintenance (PM) procedure for truck bodies using a checklist worksheet that covers all popular types of light- and medium-duty cabs and bodies. This RP is one section of a comprehensive PM manual for light- and medium-duty vehicles (Class 2-6 vehicles).
RP 1224	Driver Communications Interface. — Offers minimum requirements for a common driver communications interface — also referred to in this document as a human-machine interface (HMI) — which should facilitate a standard look and feel among various HMI units in different makes and models of vehicles. Applies to all commercial vehicles equipped with onboard vehicle communications equipment that utilize an electronic driver display for wireless communications.	RP 1402	Tire Selection for Commercial Light Trucks — Designed to assist fleets in the selection of tires for Class 2-5 vehicles used in commercial applications. The RP explains tire size designations; tire speed and load index designations, and tire construction options.
RP 1225A	General Guidelines for Security Risk Analysis of Electronic Driver Log Systems. — Defines a guideline for identifying security risks associated with an electronic driver log system.	RP 1403	Determining Engine Oil Drain Intervals for Light- and Medium-Duty Trucks — Designed to help fleets establish optimum oil change intervals for light- and medium-duty vehicles used in short-haul, pickup and delivery, and/or “peddle-type” applications. This Recommended Practice applies to gasoline, diesel, and other alternatively fueled internal combustion engines used in Class 2-6 vehicles.
RP 1226A	Vehicle Accessory Connector Guidelines — Offers specifications for a standardized, non-OEM specific vehicle accessory connector to interface aftermarket vendor electronics with a vehicle. Makes it easier for an aftermarket vendor to connect a device to the vehicle, while at the same time ensuring the integrity of the vehicle’s electrical or network/communication systems and following appropriate industry specifications.	RP 1404A	Wiring System Standards For the Light-and Medium-Truck Chassis/Body Interface — Designed to help light- and-medium duty truck chassis and body manufacturers standardize the truck chassis-to-body wiring interface on commercial vehicles.
RP 1227	Mobile Device Communication API — Defines a standardized Application Programming Interface (API) for mobile-platform-application-to-on-board-vehicle electronic control unit (ECU)		

RP 1405	Minimizing Dirt and Water Intrusion in Cargo Areas — Offers fleets guidance on how to minimize dirt and water intrusion in light/medium vehicle cargo areas.	RP 1417	Lubricant and Fluid Sampling Guidelines — Offers guidelines for lube and fluid sampling.
RP 1406	Basic Electric/Electronic Diagnostic Procedures — Offers recommendations for basic electrical/electronic troubleshooting procedures for Class 2-6 vehicles.	RP 1418	Effects of Drivetrain Torsionals on Light- and Medium-Duty Vehicles — Offers guidelines on the effects of drivetrain torsionals on Class 2-6 vehicles.
RP 1407	Hydraulic Brake Maintenance Guidelines — Offers technicians guidelines in the proper inspection, diagnosis, and repair of hydraulic brake systems used in light- and medium-duty vehicles.	RP 1419	Trailer Towing With Light- and Medium-Duty Vehicles — Offers guidelines on trailer towing with Class 2-6 vehicles.
RP 1408	Cab Interior Noise Standard for Light- and Medium-Duty Walk-in Vans — Establishes equipment user-driven performance guidelines for cab interior noise for light- and medium-duty walk-in vans.	RP 1420	Fluid Analysis For Class 2-6 Vehicles. — Offers guidelines for fluid analysis pertaining to Class 2-6 commercial vehicles.
RP 1409A	Light- and Medium-Duty Automatic Transmission Operation, Design and Specifications — Offers spec'ing and operation guidelines for light- and medium-duty automatic transmissions.	RP 1421A	Truck Body Wiring Harness Design Guidelines — Offers guidelines for truck body wiring design and installation. It standardizes the overall design of the truck body harness and addresses chassis interface, circuit requirements, color code, routing, clipping and other protective measures. It applies to dry freight truck bodies mounted on Class 3-7 vehicles and is not all-inclusive.
RP 1410A	Maintenance Guidelines For Automatic Transmissions in Light/Medium/Specialty Trucks — Offers general guidance on preventive maintenance and repair for automatic transmissions (having a torque converter) used in light- and medium-duty and specialty trucks.	RP 1423	Specifications to Prevent Galvanic Corrosion in Aluminum Walk-in Van Bodies — Offers guidelines on spec'ing aluminum walk-in van bodies to minimize corrosion.
RP 1411A	Light- and Medium-Duty Automatic Transmission Fluid Guidelines — Offers recommendations for spec'ing automatic transmission fluid and establishing maintenance practices for automatic transmissions. Applies to automatic transmission fluids used in light- and medium-duty vehicles (Class 2-6).	RP 1424	Maintenance Guidelines for Minimizing Corrosion in Aluminum Walk-in Van Bodies — Offers maintenance guidelines for minimizing corrosion in aluminum walk-in van bodies.
RP 1412A	Walk-in Van Electrical System Routing and Load Requirements — Offers design guidelines for electrical system routing and load requirements for walk-in van applications.	RP 1425	Guidelines for Mounting Fixed Second Unit Bodies. — A variety of body-to-chassis interface variables can complicate the mounting of a second unit body (SUB) onto a Class 3-6 truck chassis frame. Offers truck body manufacturers system performance guidelines for mounting a fixed SUB to a Class 3-6 truck chassis cab.
RP 1413	Dry Freight Body Components — Offers guidelines for maintaining/spec'ing dry freight bodies.	RP 1426	Guidelines for Mounting Fixed Second Unit Bodies on Van Based Chassis — Offers truck body manufacturers system performance guidelines for mounting a fixed SUB to a Class 2-4 van-based chassis cab (also referred to as cut-away or chop vans).
RP 1414	Guidelines for Evaluating Preventive Maintenance Programs for Light- & Medium-Duty Vehicles — Offers guidelines for evaluating preventive maintenance programs for Class 2-6 vehicles.	RP 1427	Standard Body-To-Chassis Connector — Intended to assist truck body manufacturers, truck chassis manufacturers and equipment users with the design and installation of the end-of-frame (EOF) chassis connector. Successful implementation of this RP will not only help ensure long service life and reduced maintenance, it will also simplify the troubleshooting process should maintenance be required.
RP 1415	Hydraulic Brake Rotor Durability and Diagnostic Guidelines — Offers guidelines for durability and troubleshooting of hydraulic brake system rotors.		
* RP 1416A	Guidelines For Used Engine Coolant Analysis — Offers guidelines for used engine coolant analysis for Class 2-6 vehicles.		

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- RP 1428 Entry And Egress Guidelines for Vehicles With Fold-Under Type Liftgates — Provides practical location guidelines for steps and handhold/grab handles used for entering and exiting the rear and side doors of a Class 3-6 truck body equipped with a fold-under style liftgate. These guidelines should help provide both improved entry and egress and a more uniform placement of steps and handles that is ergonomically friendly for the operator.
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- RP 1429 Understanding Automatic Transmission Fluid Diversity — Describes differences among automatic transmission fluids (ATFs) currently used in Class 2-6 light- and medium-duty vehicles. It is designed to help fleet managers make informed decisions when selecting ATF and describe factors that have led to the industry's current ATF diversity.
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- RP 1430 Lamp and Reflector Placement For Light- and Medium-Duty Vehicles With Liftgates. — Provides placement guidelines for lamps and reflectors on Class 2-6 vehicles equipped with various styles of liftgates (e.g., rail-type, fold-under, slide-under, etc). Identifies specific areas for locating the required reflectors and lamps that must be used to supplement or replace the required vehicle lighting when liftgates have been installed.
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- RP 1431 Fuels and Motive Energy Identification Label — Offers guidelines for fuels and motive energy identification labels.
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- RP 1432 Service and Utility Truck Body Safety Features — Provides guidelines for safety- and ergonomic-related features used on service and utility truck bodies.
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- RP 1433 Backup Alarm Specification and Installation Guidelines — Offers guidelines on specifying and installing backup alarm systems on light- and medium-duty commercial vehicles.
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- RP 1434 Backup Alarm Maintenance and Inspection Guidelines — Offers guidelines on maintaining and inspecting backup alarm systems on light- and medium- duty commercial vehicles.
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- RP 1435 Guidelines For Contracting Maintenance Of Light- & Medium-Duty Vehicles — Offers guidelines for fleet management to consider when determining the feasibility of outsourcing vehicle maintenance to a third- party service provider.
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- RP 1436 Aftertreatment Serviceability Guidelines — Offers vehicle manufacturers design recommendations to facilitate the serviceability of diesel particulate filters (DPFs), diesel oxidation catalysts (DOCs) and other aftertreatment system components used on EPA 2007 generation and newer Class 3-5 trucks.
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- RP 1437 Commercial Motor Vehicle Axle Fluid Level Inspection Guidelines — Offers guidelines for commercial motor vehicle axle fluid level inspection.
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- RP 1438 Cost Analysis Calculator for Electric Power Take-Off (ePTO)s — Provides a methodology for evaluating electrical- and/or hybrid-driven power take off (ePTO) systems on Class 4-8 vocational vehicles by means of a spreadsheet format calculator. The purpose of this calculator is to assist fleet managers in assessing and justifying an ePTO solution for powering upfitted equipment. The methodology accounts for various factors needed for this assessment.
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- * RP 1439 Understanding Lumen Ratings For White Light-Emitting Diode (LED) Work Lamps — Provides guidelines for understanding lumen ratings for white light-emitting diode (LED) work lamps.
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- RP 1440 Tire Maintenance Considerations For Light-Duty Commercial Vehicles— Provides fleet managers with guidelines for tire maintenance of light-duty commercial vehicles.
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- SPECIALTY TRUCKS — S.15**
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- RP 1501 Preventive Maintenance Guidelines for Specialty Vehicle Hydraulic Systems — Offers preventive maintenance guidelines for hydraulic systems used on specialty vehicles.
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- RP 1502 Spec'ing Guidelines for Hydraulic System Fluids, Hoses, and Filters — Offers spec'ing guidelines for hydraulic system fluids, hoses and filters used on specialty vehicles.
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- RP 1503 Brake Maintenance Guidelines for Severe Vocational Applications — Offers maintenance guidelines for braking systems used in severe-service vocational applications, such as refuse operations.
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- RP 1504 Refuse Chassis-to-Body Electrical System Circuit and Load Requirements — Offers guidelines for chassis-to-body electrical system circuit and load requirements for refuse vehicles.
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- RP 1505 Torque Rod Selection and OEM Installation Guidelines for Vocational Vehicles — Offers torque rod selection and installation guidelines for vocational vehicles.
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- RP 1506 Torque Rod Maintenance Guidelines for Vocational Vehicles — Offers torque rod maintenance guidelines for vocational vehicles.

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- RP 1507 Recommendations for a J1939 Network Interface Strategy — Offers recommendations for developing J1939 network interfaces for vocational vehicles.
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- RP 1508 Drive Axle Suspension Selection Guidelines for Vocational Vehicles — Offers guidelines for specifying drive axle suspensions for vocational vehicles.
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- RP 1509 Drive Axle Suspension Maintenance and Inspection Guidelines for Vocational Vehicles — Offers maintenance and inspection guidelines for vocational vehicles.
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- RP 1510 Power Take-Off (PTO) Selection Guidelines — Offers fleet managers guidelines for power take-off (PTO) selection. This RP applies to transmission-mounted PTOs used in vocational applications.
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- RP 1511 General Safety Guidelines for Servicing Commercial Vehicles With Hybrid Drive Systems — Offers general safety guidelines for servicing hybrid electric drive systems used on Class 1-8 commercial vehicles. This RP applies to charge-sustaining and charge-depleting hybrid systems employing series or parallel architecture with rated voltages between 50-800 volts.
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- RP 1512 Guidelines for Specifying Pneumatic Supply on Vocational Vehicles — Helps equipment users specify pneumatic systems used on Class 8 vehicles in vocational applications. It also offers recommendations for upgrading specifications on vehicles where the existing pneumatic supply is not adequate. This RP applies to refuse, construction, dump, mixer, tank, concrete, and bulk off-loading applications, as well as other vocational applications in which the vehicle is frequently used on-highway.
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- RP 1513A In-Cab Control Placement Guidelines For Refuse Vehicles — Offers guidelines for standardizing the layout and labeling of in-cab controls for refuse vehicles so that operators may be familiar with control placement, function and accessibility, regardless of vehicle manufacturer.
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- RP 1514A Hydraulic System Failure Analysis. — Helps maintenance personnel troubleshoot and maintain hydraulic systems used on Class 7-8 vocational trucks.
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- RP 1515 Auxiliary Axle Maintenance. — Offers guidelines for properly maintaining auxiliary axles used on commercial vehicles in vocational applications.
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- RP 1516 Auxiliary Axle Specification Guidelines. — Offers guidelines for selecting auxiliary axles used on commercial vehicles in vocational applications.

SERVICE PROVIDER — S.16

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- RP 1601 Guidelines for Measuring Equipment User Customer Satisfaction. — Offers service providers voluntary guidelines for developing and implementing a successful customer satisfaction index (CSI) system.
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- RP 1602 Repair Order Authorization and Approval. — Offers a template for effective communication between equipment owners and third party maintenance providers. Focuses on strategies that leverage the purchase order (PO) number and other key points of interaction/communication to promote mutual satisfaction with the service experience.
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- RP 1603 Warranty Workflow Procedures. — Establishes standard workflow procedures to expedite a warranty repair, and communicate the results of that repair back to the equipment owner. These standardized procedures should facilitate efficient and thorough warranty repairs so as meet fleet customer expectations.
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- RP 1604 Rapid Repair Assessment. — Provides basic guidelines for a service provider to implement and manage a rapid repair assessment process in its operation.
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- RP 1605 Justification for a Parts & Service Assistant. — Helps service managers justify and implement the hiring of a Parts and Service Assistant.
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- RP 1606 Standard Repair Time Implementation Guidelines. — Leads third-party maintenance service providers through the process of selecting and implementing a standard repair time (SRT) guide for providing estimates on applicable repairs.
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- RP 1607 Technician Career Development. — Provides maintenance and human resource managers a model for designing, developing and implementing a technician career development program in both fleet and service provider operations. It focuses on developing technician candidates and the responsibilities of key participants in the development process.
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- RP 1608 Conflict Resolution Guidelines — Offers a template for the resolution of conflicts which may take place during different forms of business transactions between equipment owners and third-party maintenance providers (otherwise known as service providers). Designed to provide a structure so that communication stays on point and the end result is a mutual agreement and resolution of the conflict.

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- RP 1609 Quality Control Guidelines — Provides a formal, structured, and repeatable framework for establishing a quality assurance program within a service provider repair facility. The goal of the program is to ensure customers (both internal and external) that all serviced vehicles are ready for operation after a maintenance/repair event.
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- RP 1610A Emissions Tampering Guidelines — Provides vehicle owners and service providers information regarding emissions defeat strategies/tampering devices and associated liabilities. It also provides samples of tampering policies as well as inspection protocols designed to reduce the risks associated with emissions tampering. This RP applies to diesel-powered commercial vehicles that must comply with 2004 model year and newer emissions regulations (including October 2002 “pull-ahead” models).
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- RP 1611 Parts Acquisition For Service Providers — Designed to help parts and service personnel ensure that all available resources are considered when sourcing an out-of-stock item needed to execute a repair.
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- RP 1612 Service Event Data Transparency — Offers guidelines for defining the electronic interface communication process between third-party maintenance providers (service providers) and commercial vehicle owners/customers. This RP should help ensure a consistent and transparent method of communicating repair status between service providers and customers, helping customers make better informed decisions regarding equipment repairs/service and their business.
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- RP 1613 Shop Workload and Prioritization — Provides a logical and systematic approach to scheduling shop workload that takes into consideration available labor, skill levels, work complexity, and customer urgency. This RP applies to all repairs and maintenance brought into a service provider’s location under both scheduled and emergency situations.
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- RP 1614 Technician Mentor Program Guidelines — Offers guidelines for establishing a program to mentor commercial vehicle technicians operating in a service provider environment. It covers various aspects of the mentor development process including return on investment (ROI) metrics, control planning, minimum qualifications, on-the-job-training, compensation, selection, roles and responsibilities.
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- RP 1615 Parts Core Management For Service Providers — Offers general guidelines for the proper and effective handling of core claims. This includes both clean and dirty cores, warranty cores, return eligibility, acceptance criteria and core holding area management.
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- RP 1616 Mobile Maintenance Safety – Offers guidelines for mobile maintenance safety procedures in service provider operations.
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- RP 1617 Leveraging Next Generation Leaders—Offers guidelines for a generic, comprehensive road map to develop next generation leaders. It applies to fleet and service provider organizations responsible for commercial vehicle maintenance.
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- * RP 1618 Vehicle Lifting Procedures and Equipment Guidelines — Offers guidelines on the operation, use and maintenance of full-rise lifting equipment that is used in maintenance operations on a daily basis.
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- RP 1619 Safety Aspects of Servicing Battery Electric Vehicles— Provides guidelines on the safety aspects of servicing battery electric vehicles.
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- RP 1620 Guidelines For Keeping, Trading or Selling A Class 7-8 Tractor — Provides guidelines for keeping, trading or selling a Class 7-8 tractor.
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- COLLISION & CORROSION CONTROL — S.17**
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- RP 1701 Corrosion Repair Guidelines For Vocational Vehicles — Offers guidelines for properly identifying repair procedures concerning paints and coatings used during the maintenance, repair and modification of Class 7-8 vocational vehicle bodies and equipment. The methods described are suitable for typical mechanical repair facilities where professional paint refinishing provisions are not readily available.
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- RP 1702 Mitigating Corrosion Of Hydraulic Components On Vocational Vehicles — Offers guidelines for the selection of components, design features, quality details and/or maintenance practices that will mitigate the effects of corrosion on hydraulic components on vocational vehicles. Examples of such vocational vehicles include, but are not limited to, snow and ice removal trucks, refuse collection trucks, concrete mixer trucks, car haulers, mobile cranes, utility vehicles, chassis mounted cranes and other mobile mounted hydraulic equipped vehicles.
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- RP 1703 Corrosion Control Maintenance Guidelines For Hydraulic Brake Systems — Offers guidance on how to minimize the damaging effects of corrosion on hydraulic brake systems typically found on Class 2-6 light- and medium-duty vehicles.
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RP 1704 Guidelines For Replacing Damaged Exhaust Or Emission System Sensor Bosses — Provides guidelines for replacing a damaged sensor boss in the exhaust or emission systems of Class 6-8 medium- and heavy-duty commercial vehicles (CMVs).

RP 1705 Guidelines For Corrosion Protection During Chassis Modifications — Offers guidelines to those making chassis modifications to ensure that corrosion protection is maintained throughout the modification process and afterward.

RP 1706 Corrosive Effects Of Wash Solutions — Identifies wash practices which will minimize the potential for corrosion of tractor and trailer components.

RP 1707 Failure Characteristics of Powertrain and Suspension Cushioning/Isolating Materials — Offers guidelines for identifying and correcting failure characteristics of powertrain and suspension cushioning/isolating materials.

RP 1708 Refinishing To Maximize Adhesion — Offers guidelines for refinishing paint surfaces to maximize adhesion.

RP 1709 In-Cab Corrosion Control Guidelines — Offers guidelines to minimize in-cab corrosion on commercial vehicles.

AUTOMATED VEHICLES — S.18

RP 1801 Selection and Specification of Advanced Driver Assistance Systems (ADAS) — Offers guidelines for the selection and specification of advanced driver assistance systems (ADAS) used on commercial vehicles, primarily in SAE Automation Level 2-3 applications.

*RP 1802 Optimization of Driver Training for Advanced Driver Assistance Systems (ADAS) — Offers guidelines for optimizing driver training for ADAS used on commercial vehicles.

OFFBOARD DATA SYSTEMS — S.22

RP 2201 Transportation and Linerless Label Media Specification — Offers recommendations for specifying transportation and linerless label media.

RP 2202 Transportation and Linerless Printer Product Specification — Offers recommendations for specifying transportation and linerless printer product.

RP 2203 Trailer Tracking Interface Standard — Standardizes trailer-tracking interfaces.

RP 2204 Guidelines for Wireless Data Connectivity at Fixed Points of Presence — Offers guidelines for wireless data connectivity and fixed points of presence such as truckstops.

NOTE: RPs marked with a “*” are expected to be published in TMC’s *2026-2027 Recommended Practices Manual*, which will be released by June 2026.