

# TMC

Technology & Maintenance Council  
SEPTEMBER 15-19, 2019  
RALEIGH CONVENTION CENTER,  
RALEIGH, N.C.

TMC'S 2019 FALL MEETING  
+ NATIONAL TECHNICIAN  
SKILLS COMPETITIONS

NEW PROSPECTS  
FOR TECHNICAL  
ACHIEVEMENT



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EQUIPMENT  
CHALLENGES  
AHEAD



- TMC FALL MEETING - Sept 17-19
- TMC SuperTech 2019 - Sept 15-17
- TMC FutureTech 2019 - Sept 16-17



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# New Prospects for Technical Achievement

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Today's challenging world of increasing vehicle complexity and rapid technological change demands diligent attention to detail and careful consideration. Shipper expectations, government regulations, engineering advances, and CSA compliance issues all require commercial vehicle fleets to be ever vigilant in order to stay safe, efficient and profitable. Smart fleets scrutinize the investments they make into their operations and vehicle maintenance programs and many turn to ATA's Technology & Maintenance Council (TMC) to help them make smart business decisions on maintenance and spec'ing issues.



Technology is transforming the way fleets specify and operate equipment in both intentional and unintended ways. Staying ahead of the learning curve is paramount to maintaining and securing fleet operations. That's why it is appropriate that the theme of TMC's 2019 Fall Meeting is "New Prospects for Technical Achievement."

Comprised of a broad collection of experienced fleets, equipment suppliers and service providers, TMC is the only industry association that is focused solely on truck technology and maintenance. Using their real world experience, members work together to create the industry's best practices in truck technology and maintenance to help improve trucking equipment and transportation efficiencies throughout North America.

Finding a trusted source for proven maintenance solutions is a challenge for every segment of the industry—from the biggest fleets to individual owner-operators; from vehicle manufacturers to service providers; from fleet maintenance executives to equipment technicians. Attending TMC's 2019 Fall Meeting is one of the best choices an industry professional can make—a decision that could mean the difference between profitability and disaster.



*"My take home information from all of TMC's meetings has been trends in equipment, where technology fits into what we see in our current fleet. TMC provides education and information to help maintain a fleet and keep up with the latest technology challenges we face each day."*

*— Dave Piliro, director of maintenance, Dunbar Armored*



TMC's 2019 Fall Meeting offers a comprehensive collection of educational sessions designed to keep your maintenance personnel on the cutting edge of vehicle technology. In addition to TMC's educational session lineup, we're also offering the following unique opportunities:



**TMC SuperTech 2019** — Trucking's 15th annual National Technician Skills Competitions, at which technicians will compete for top honors and valuable prizes.

The competition kicks off first thing on Sunday, Sept. 15, and features three tracks — traditional (heavy-duty), trailer, and light/medium vehicle. Winners will be announced at Tuesday evening's TMC SuperTech 2019 Awards Banquet, which is open to both contestants and meeting attendees. See pages 14-15 for details.



Sponsored by:  
TIF TECHFORCE FOUNDATION

**TMC FutureTech 2019** — Our sixth annual National Student Technician Competition, sponsored by TechForce Foundation. TMC FutureTech 2019 consists of a set of skill stations for technician students to be held on Monday, Sept. 16.

Winners will be announced at Tuesday evening's TMC SuperTech 2019 Awards Banquet.



**TMC's PTDC Technician Training Fair**

— Our Professional Technician Development Committee (PTDC) is offering an expanded and more in-depth series of training sessions for technicians and supervisors spanning 1-1/2 days. See page 15 for details.



**Trailblazers in Thought Leadership** —

Moreover, TMC is a trailblazer in thought leadership. For fleets, this means having direct access to information on equipment and technology specifications and maintenance best practices. At TMC, equipment and technology professionals can:

- Participate in TMC's Future Truck Initiative. As the only industry association that is focused solely on truck technology and maintenance, TMC and its member companies work together with OEMs to create the industry's standards for future truck technology and equipment that help ensure that the truck of the future is one that is the most efficient to operate and maintain.
- Gain and share information with hundreds of your peers at TMC's Shop Talk, a free-form discussion on equipment issues.
- Resolve troubling equipment issues at TMC's Town Meeting and Fleet Operators' Forum.
- Participate in voluntary standards-setting efforts through TMC's Study Groups and Task Forces, which are tackling important issues such as electronic logging devices, natural gas powered vehicles and emerging onboard technologies.

What's more, TMC meetings are designed for the cost-conscious. In addition to the industry's best educational programming, fully registered attendees enjoy several full meals, our competition awards banquet and our Wednesday evening social event as part of their registration fee. **That's a \$300 value alone, and there are no registration fee increases for 2019!**

Browse this brochure, and we think you'll agree. TMC's 2019 Fall Meeting should be an indispensable part of your company's strategic planning.

Without question, TMC meetings are the trucking industry's best bargain by far!

**Register now online! <http://tmcfall.trucking.org>**

**See you in Raleigh!**



# 2019 FALL MEETING SCHEDULE

## FRIDAY, SEPT. 13

**9 am – 6 pm**

TMC SuperTech 2019 Competition Setup (Freeman)

## SATURDAY, SEPT. 14

**9 am – 5 pm**

Registration/Welcome Desk Open

**10 am – 6 pm**

TMC SuperTech 2019 Competition Setup

**2:30 – 4 pm**

PTDC Judges Meeting  
(For Sunday; on the Competition Floor)

**4:30 – 5:30 pm**

Professional Technician Development  
Committee Meeting

## SUNDAY, SEPT. 15

**6 am – 6 pm**

Registration/Welcome Desk Open

**6 – 7 am**

Breakfast

**7 – 8:30 am**

TMC SuperTech 2019 Heavy-Duty Track Orientation &  
Qualifying Written Exams

**8:30 am – 5 pm**

TMC Leadership Presentation Training (Closed)

**9 – 11:30 am**

TMC SuperTech 2019 Heavy-Duty Track Qualifying  
Rounds

**11:30 am – Noon (approx.)**

TMC SuperTech 2019 Lunch Break

**Noon – 1 pm**

PTDC Judges Meeting  
(For Monday; on the Competition Floor)

**Noon – 4 pm**

TMC SuperTech 2019 Heavy-Duty Track Qualifying  
Rounds (continued)

**5 – 6 pm**

TMC SuperTech 2019: Orientation for Trailer, Light/Medium &  
TMC FutureTech 2019 (Sponsored by TechForce Foundation)  
Competition Tracks

**7 – 8 pm**

TMC SuperTech 2019 Welcome Reception &  
Hands-on Skills Challenge Finalists Announcement

## MONDAY, SEPT. 16

**6:30 am – 5 pm**

Registration/Welcome Desk Open

**6:30 – 7:30 am**

Breakfast

**7:30 am – 4 pm**

- TMC FutureTech 2019 National Student Technician Competition (Sponsored by TechForce Foundation)
- Trailer Track Competition
- Light/Medium Track Competition

**8 am – 4 pm**

TMC SuperTech 2019 National Technician Skills Competitions:  
Heavy-Duty Track Hands-on Skills Challenge

**9 – 10 am**

Strategic Planning Committee Meeting (Closed)

**10 – 11 am**

Future Truck Committee Meeting (Closed)

## MONDAY, SEPT. 16 (continued)

**10 – 11 am**

Member Outreach Committee Meeting

**11 am – Noon**

Mentor Committee Meeting

**11 am – Noon**

Future Truck Task Force Leadership Meeting (Closed)

**11 am – Noon**

TMC Officers Meeting (Closed)

**11:30 am – Noon (approx.)**

TMC SuperTech 2019 Lunch Break

**12:15 – 2:15 pm**

Study Group & Meeting Planning Committee Meetings  
(Closed)

**2:30 – 4:30 pm**

Board of Directors Meeting (Closed)

**4:30 – 5:30 pm**

Sergeant at Arms & Meeting Mechanics  
Committee Meeting (Closed)

**5:30 – 6 pm**

Secretaries' Meeting (Closed)

**6 – 7 pm**

Recognized Associates Meeting (Closed)

## TUESDAY, SEPT. 17

**6:30 am – 6 pm**

Registration/Welcome Desk Open

**6:30 – 7:30 am**

Study Group Leadership Breakfast Meetings (Closed)

**8 am – 4 pm**

Task Force Meetings

**8 am – 5 pm**

PTDC Technician Training Fair

**9:30 – 9:45 am**

Coffee Break

**Noon – 1 pm**

First Timer Orientation and Lunch

**3 – 4 pm**

Technician Apprenticeship Standards Committee

**4 – 4:30 pm**

Study Group Business Sessions Only—

- S.1 Electrical
- S.3 Engine
- S.4 Cab & Controls
- S.14 Light- & Medium-Duty and Specialty Trucks Study Group
- S.18 Automated & Electric Vehicles
- Educator Committee

**4:30 – 5:30 pm**

Fleet Talk (Fleets Only)

**4:30 – 5:30 pm**

General Associates Meeting (Associates & Service  
Providers Only)

**5:30 – 6:45 pm**

Town Meeting/Fleet Operators' Forum

**7:30 – 9:30 pm**

TMC SuperTech 2019 & TMC FutureTech 2019 (sponsored by TechForce Foundation)  
Awards Banquet

## WEDNESDAY, SEPT. 18

**6:30 – 7:30 am**

Board Nominating Committee Mtg. & Breakfast  
(Closed)

**7 am – 5 pm**

Registration/Welcome Desk Open

**7 – 8 am**

Buffet Breakfast

**8 am – Noon**

PTDC Technician Training Fair

**8 – 9:30 am**

Technical Session #1— How to Navigate Aftertreatment System Maintenance, Breakdowns and Vendor Management Best Practices

**9:30 – 9:45 am**

Coffee Break

**9:45 – 11:15 am**

Study Group Sessions—  
• S.12 Onboard Vehicle Electronics  
• S.16 Service Provider

**11:30 am – 1 pm**

TMC Industry Luncheon —  
Keynote Speakers: Meagan and Larry Johnson

**1:15 – 2:45 pm**

Study Group Session—  
• S.5 Fleet Maintenance Management

**2:15 – 4 pm**

TMC of Tomorrow Leadership Training  
(Class of 2020)

**3 – 4:30 pm**

Study Group Sessions—  
• S.2 Tire & Wheel  
• S.7 Trailers, Bodies & Material Handling

**4 – 6 pm**

TMC of Tomorrow Leadership Training  
(Class of 2021)

**4:45 – 6 pm**

Study Group and Technical Sessions  
• New Technology Presentations  
• S.17 Corrosion Control

**6 – 6:30 pm**

Silver Spark Plug Reception (Closed)

**6:30 – 9:30 pm**

Evening Social Event

## THURSDAY, SEPT. 19

**6:30 am – Noon**

Registration/Welcome Desk Open

**6:30 – 7:30 am**

Buffet Breakfast

**7:30 – 9 am**

Technical Session #2—  
New Approaches to Preventive Maintenance, Vehicle Triage and Shop Design

**9 – 9:15 am**

Coffee Break

**9:15 – 10:45 am**

Study Group Sessions—  
• S.6 Chassis & Brake Systems Study Group  
• S.11 Sustainability & Environmental Technologies

**11 am – 12:30 pm**

Shop Talk & Fleet Operators' Forum Wrap-up

**12:45 – 1:45 pm**

Administrative Wrap-up Meeting (Closed)

**2 – 3 pm**

Board of Directors Meeting (Closed)

## Pattern For TMC's 2019 Fall Meeting and Technician Competitions

*TMC's 2019 Fall Meeting schedule is designed to optimize attendees' potential to participate in our study groups, task forces, educational sessions and technician competitions. For 2019, the meeting schedule will be as follows:*

TMC SuperTech 2019

TMC FutureTech 2019

TMC's Fall Meeting

**SUNDAY**  
Sept. 15

- The National Technician Skills Competitions — TMC SuperTech 2019 — starts at 7 am on Sunday, September 15 with the Contestant Orientation & Qualifying Written Exams.
- The TMC SuperTech 2019 Contestant Qualifying Rounds take place from 9 am to 4 pm.
- The TMC SuperTech 2019 Welcome Reception & Hands-on Skills Challenge Finalists Announcement take place on Sunday evening.

**MONDAY**  
Sept. 16

- The TMC FutureTech 2019 National Student Technician Competition — sponsored by TechForce Foundation — takes place on Monday, September 16.
- The Trailer and Light/Medium Vehicle Technician Tracks take place on Monday, September 16.
- The Traditional (Heavy-Duty) Track Hands-on Skills Challenge finals also takes place on Monday.
- TMC's pre-event Study Group/Meeting Planning Committee and Board Leadership Meetings, which usually take place on Sunday, will be held on Monday instead.

**TUESDAY**  
Sept. 17

- TMC's 2019 Fall Meeting officially opens on Tuesday, September 17.
- Tuesday is Task Force Day.
- Tuesday also features the PTDC Technician Training Fair, which has been expanded to run from 8 am to 5 pm.
- TMC's First-Timer Orientation and Lunch takes place from Noon to 1 pm.
- The Town Meeting and Fleet Operators' Forum takes place Tuesday afternoon.
- The TMC SuperTech 2019 & TMC FutureTech 2019 Awards Banquet will be held Tuesday evening.

**WEDNESDAY**  
Sept. 18

- The PTDC Technician Training Fair continues on Wednesday from 8 am to Noon.
- Technical Sessions and Study Group Sessions take place throughout Wednesday, September 18.
- TMC's Industry Luncheon takes place on Wednesday.
- TMC's Evening Social Event and Dinner takes place Wednesday evening.

**THURSDAY**  
Sept. 19

- Technical Sessions, Study Group Sessions and Shop Talk take place on Thursday, September 19.
- TMC's 2019 Fall Meeting concludes at 12:30 pm.

**S.1 Electrical—Chairman: Chris Disantis**

Future Electrical/Electronic Systems (Joint Future Truck/S.1)  
 RP Updates (S.1)  
 Fifth Wheel Ground Strap Installation Guidelines  
 Electrical Infrastructure Safety and Interoperability for High-Power Electrical Refrigeration  
 High-Voltage Cable for Heavy-Duty Truck-Tractor Wiring Systems  
 Non-Connector Based Wiring Repairs  
 RP 110C Update (Low-Tension Cable For Heavy-Duty Truck-Tractor Wiring Systems)

A. Lesesky 8 – 9 am  
 A. Mihic 9 – 9:30 am  
 A. Puckett/L. Rambeaux 9:30 – 10 am  
 M. Smec 10 – 10:30 am  
 F. Kelley 11 – 11:30 am  
 L. Rambeaux 11:30 – 12:30 pm  
 F. Kelley 1 – 2 pm

**S.2 Tire & Wheel—Chairman: David Piliro**

Tire Asset Management (Cradle to Grave)  
 RP Updates (S.2)  
 Specification of Tires for Heavy-Duty Electric Vehicles  
 Repolishing Aluminum Wheels  
 Driver Pocket Guide for Tires and Wheels  
 Kill the Mallet **NEW**  
 Effects of Regenerative Braking on Tires **NEW**  
 Proper Tire Inflation Procedures Outside the Safety Cage **NEW**

P. Fisher 8 – 9 am  
 P. Fisher 10 – 11 am  
 D. Shy 11 am – Noon  
 C. Bartley 1 – 1:30 pm  
 P. Fisher 1:30 – 2 pm  
 N. Ball 2 – 2:30 pm  
 A. Sharp 2:30 – 3 pm  
 P. Meisenholder 3 – 3:30 pm

**S.3 Engine—Chairman: Radu Mihai**

RP Updates (S.3)  
 RP 371 Update (LNG/CNG)  
 LNG/CNG Thermal Events  
 RP 326 Update (Recycled Engine Coolant)  
 RP 364 Update (Fleet Purchasing Specification for Organic Acid Technology Extended Life Coolant)  
 Guidelines for Diesel Particulate Filter Cleaning  
 Smoke Detection Guidelines  
 RP 365 Update (Coolant Maintenance Guidelines) **NEW**  
 RP 338 Update (Extended Service Interval Coolants)  
 Managing Oil Viscosity Transition Exploratory Meeting

P. Cigala 8 – 9 am  
 D. Martin 9 – 9:30 am  
 D. Martin/M.Louzon 9:30 – 10:30 am  
 G. Mixon 10:30 – 11 am  
 P. Woyciesjes 11 am – Noon  
 W. Juchno/B. Balfour 1 – 2 pm  
 M. Hawkins 2 – 2:30 pm  
 M. Hawkins 2:30 – 3 pm  
 R. Schornstein 3 – 3:30 pm  
 P. Cigala 3:30 – 4 pm

**S.4 Cab & Controls—Chairman: Mark Kennedy**

RP Updates (S.4)  
 RP 401C Update (Location and Operation of Instruments and Controls in Motor Truck Cabs)  
 RP 406C Update (Wiper System Performance) **NEW**  
 RP 417/435 Update (Tractor-to-Trailer Air/Electric Lines)  
 RP 430 Update (Guidelines for Collision Warning)  
 RP 443 Update (In-Cab Cleaning & Deodorizing Guidelines)  
 Conversion of Rear View Mirrors to Cameras  
 Odometer Synchronization  
 In-cab Gas Detectors

J. Adami 8 – 8:30 am  
 G. Paoletti 8:30 – 9:30 am  
 D. Redding 9:30 – 10:30 am  
 B. McKie 10:30 – 11 am  
 B. Wilkerson 11 am – Noon  
 M. Winchell Noon – 1 pm  
 S. Fox 1 – 2 pm  
 G. Selby 2 – 3 pm  
 K. Altrichter 3 – 4 pm

**S.5 Fleet Maintenance Management—Chairman: Amanda Schuier**

RP Updates (S.5)  
 RP 512A Update (Technician Staffing)  
 VMRS Codes Committee  
 Developing Key Performance Indicators  
 Cybersecurity Issues  
 Right to Repair  
 Internet of Things  
 Exploratory Session

D. Weider 8 – 9 am  
 A. Schuier 9 – 10 am  
 P. Moszak 10 – 11 am  
 L. Flowers 11 am – Noon  
 M. Zachos Noon – 1 pm  
 L. Flowers 1 – 2 pm  
 A. Schuier 2 – 3 pm  
 A. Schuier 3 – 4 pm

**S.6 Chassis & Brake Systems—Chairman: Joey Young**

RP Updates (Chassis-Related RPs)  
 RP Updates (Brake-Related RPs)  
 RP 602/626 Update (Towing Procedures)  
 RP 605 Update (Reconditioning Brake Shoes)  
 RP 614A Update (Air Brake Tubing & Fittings)  
 RP 608B Update (Brake Drums and Rotors)  
 RP 648 Update (Troubleshooting Ride Complaints)  
 Disc and Drum Brake Integration Issues  
 RP 638 Update (Heavy-Duty Clutch Maintenance)  
 RP 642B Update (Total Vehicle Alignment)  
 Rear Suspension Inspection Procedure  
 Proper Diagnosis of S-cam Out-of-Service Criteria  
 RP 652 (Air Disc Brake Service/Inspection)  
 Wheel End Thermal Events (Joint S.6/S.7 Task Force)

J. Vander Geissen 8 – 9 am  
 J. Vander Geissen 9 – 10 am  
 R. Nissen 10 – 10:30 am  
 M. Williams 10:30 – 11 am  
 J. Kruse 11 – 11:30 am  
 G. Sturdy 11:30 am – Noon  
 J. Holman Noon – 12:30 pm  
 G. Sturdy 12:30 – 1 pm  
 J. Cordes 1 – 1:30 pm  
 K. Silver 1:30 – 2 pm  
 J. Knutson 2 – 2:30 pm  
 G. Cram 2:30 – 3 pm  
 R. Petresh/M. Karich 3 – 3:30 pm  
 L. Long/H. Schneider 3 – 4 pm

**S.7 Trailers, Bodies & Material Handling—Chairman: Richard Brown**

RP Updates (S.7)  
 RP 708C Update (Trailer Axle Alignment)  
 Van Trailer Washing Procedures and Testing  
 Cryogenic Cooling Systems  
 Heavy Haul Trailer Issues  
 RP 755 Update (Alternative Liftgate and Material Handling Charging Methods)  
 Wheel End Thermal Events (Joint S.6/S.7 Task Force)

H. Schneider 8 – 10 am  
 D. Cordier 10 – 10:30 am  
 M. Gordon 10:30 – 11 am  
 P. Jacobsen 11 am – Noon  
 K. Tomlinson/S. Bartlein 1 – 2 pm  
 L. Disque/L. Rambeaux 2 – 3 pm  
 L. Long/H. Schneider 3 – 4 pm

**S.11 Sustainability & Environmental Technology—Chairman: Jarit Corneilus**

RP 1112 Update (Lightweight Components and Fuel Economy)	C. Herpel	8 – 9 am
RP 1105 Update (Idle Limiting Systems)	B. Wilson	9 – 10 am
Future Energy Conservation (Joint S.11/Future Truck Task Force)	D. Memering	10 – 11 am
SmartWay Activities	D. Johnson/S. Waltzer	11 am – Noon
Alternative Energy Implementation Elements	J. Corneilus	1 – 2 pm
Terminal Tractor Powertrain Options	P. Seeberg	2 – 3 pm
RP 1118 Update (Cost Modeling for Aerodynamic Devices)	A. Winfield/ D. Memering	3 – 3:30 pm
Exploratory Session	J. Corneilus	3:30 – 4 pm

**S.12 On-Board Vehicle Electronics—Chairman: Brandon Fackey**

RP 1226 Messaging Standardization	C. Villa	8 – 8:30 am
RP 1208D Update (PC Selection Guidelines for Service Tool Applications)	L. Lackey	8:30 – 9 am
RP 1210C Update (Windows API)	K. DeGrant	9 – 9:30 am
RP Updates (S.12)	K. DeGrant	9:30 – 10 am
Mobile Device Communication API	C. York	10 – 10:30 am
RP 1210 Compliance	J. Bate	10:30 – 11 am
RP 1210 OEM Application Validation Testing	L. Long	11 – 11:30 am
Connected Vehicle	M. Ahart	1 – 2 pm
Electronic Logging Devices (ELDs)	M. Ahart	2 – 3 pm
Open Wireless Vehicle Data Adapter API	B. Fackey	3 – 3:30 pm

**S.14 Light- & Medium-Duty / Specialty Trucks—Chairman: Paul Wion**

RP 1411 Update (Light- & Medium-Duty Auto Transmission Fluid Guidelines)	P. Wion	8 – 9 am
Inspection of CMV Axle and Transmission Fluid Levels	L. Stumpp	9 – 10 am
Work Truck Platform Hybridization	P. Wion	10 – 11 am
RP 1412 Update (Walk-in Van Electrical System Routing/Load Requirements)	L. Stumpp	11 am – Noon
RP 1514 Update (Hydraulic System Failure Analysis)	P. Wion	1 – 2 pm
RP Updates (S.14)	P. Wion	2 – 3 pm

**S.16 Service Provider—Chairman: Homer Hogg**

Refinishing to Maximize Adhesion <b>NEW</b>	C. Sterwerf	9 – 10 am
Safety Guidelines for Mobile Maintenance	J. Bodkins	10 – 10:30 am
Implementing TMC RPs in Fleet & Service Provider Operations	J. Gingrich/B. Olsen	10:30 – 11:30 am
RP Updates (S.16)	P. Savage	11:30 am – Noon
Frame Correction <b>NEW</b>	B. Hinchcliffe	Noon – 1 pm
Proper Vehicle Lifting Procedures and Equipment <b>NEW</b>	R. Pop	1 – 2 pm
Developing and Leveraging Next Generation Leaders	R. Jameson	2 – 3 pm
Heavy-Duty Collision Repair Roadmap	J. Fassett	3 – 4 pm

**S.17 Corrosion Control—Chairman: Nick Forte**

Cab & Control Corrosion Control	T. Brune	8 – 9 am
Corrosion of Non-Ferrous on Chassis and Suspension	B. Herrington	9 – 10 am
Corrosion Manual Update	D. Winn	10 – 11 am

**S.18 Automated & Electric Vehicles—Chairman: Kyle Mitchell**

Electrified Vehicle	K. Otto	9 – 10 am
Platooning	R. Bishop	10 – 11 am
Automated Vehicles <b>NEW</b>	A. Pandey	11 am – Noon

**Educator Committee—Chairman: Jack Werner**

Curriculum Development	E. Brennan	8 – 10 am
Educator Involvement	G. Arrants	10 – 11 am
NATMI Curriculum Advisory	R. Braswell	11 – 11:30 am
Credentials for Truck Program Instructors <b>NEW</b>	C. Toland	1 – 2 pm
Grant Writing for Medium/Heavy Truck Programs <b>NEW</b>	C. Toland	2 – 3 pm

**NOTE:** Technician Apprenticeship Standards Committee (to be held in Educator Committee room)

G. McDonald	3 – 4 pm
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**Professional Technician Development Committee—Chairman: Benjamin Phillips**

No PTDC Task Forces will meet at TMC's 2019 Fall Meeting

**Future Truck Committee—Chairman: Anthony Marshall**

Future Electrical/Electronic Systems (Joint S.1/Future Truck Task Force)	A. Lesesky	8 – 9 am
Future Tire Reliability/Durability	A. Reese	9 – 10 am
Future Energy Conservation (Joint S.11/Future Truck Task Force)	D. Memering	10 – 11 am
Future Cab and Driver Interface	J. Adami	10 – 11 am
Future Trailer Productivity	C. Lee	11 am – Noon
Sensor-Enhanced Maintenance	W. Stegall	Noon – 1 pm
Future Chassis and Brake Systems	E. Bengel	1 – 2 pm
Augmented and Virtual Training	A. Summers	2 – 3 pm
Future Alternate Propulsion Systems	L. Stumpp	3 – 4 pm



# 1 How to Navigate Aftertreatment System Maintenance, Breakdowns and Vendor Management Best Practices



**D**iesel-powered commercial vehicles have made great strides at improving engine emissions, but the aftertreatment technologies required have proven problematic for many fleet in a variety of vocations.

Since 2008, fleet managers have reported substantial increases in maintenance costs due to aftertreatment/emissions-related systems, causing significant downtime and shorter-than-anticipated maintenance service intervals. These reports are reflected in the Council's TMC/

FleetNetAmerica Vertical Benchmarking Program, which identified double-digit increases in roadside breakdown related repairs for aftertreatment systems in 2018 — with exhaust systems moving into the top five vehicle systems associated with all roadside breakdowns.

The severity of the problem is not universal, however. Some fleets are managing their aftertreatment maintenance without major disturbance

to their scheduled maintenance programs and costs are within expectations. Others are struggling. The question is, "why?" During this session, a panel of fleet, manufacturer and service provider representatives will discuss best practices for leveraging vendor relationships to minimize costs and downtime when dealing with both local and over-the-road vendors. Topics to be covered include:

- Outsourced maintenance management
- Purchase order process management
- Cost management strategies
- Route optimization and service provider relationships
- Third-party vendor communication practices
- Enforcing fleet standards when outsourcing maintenance tasks
- How to work with independent shops or outside-of-dealer-network facilities for non-warranty repairs
- Adjusting preventive maintenance programs to deal with aftertreatment realities.

Attend this session and learn how fleet practices and procedures — good or bad — directly impact a company's ability to successfully manage aftertreatment-related costs. If you run diesel-powered equipment, this session is a must.

**Technical Session #1—  
Wednesday, September 18  
8 – 9:30 am**

# 2 New Approaches to Preventive Maintenance, Vehicle Triage and Shop Design

**P**reventive maintenance is the systematic and periodic inspection and servicing of vehicles and their components. The chief purpose of preventive maintenance is to ensure the operation of safe, roadworthy vehicles.

Through timely, quality preventive maintenance inspections (PMI), fleet operators should be able to detect, correct and prevent the development of costly vehicle breakdowns. In addition, a quality PMI program should provide fleets with the maximum return on assets by attaining optimum component life of major vehicle systems before failure or replacement. A PMI program should also provide management with an instrument for predicting vehicle operating costs more accurately.

Technology is revolutionizing the way fleets approach PMI programs. Telematics systems and condition- or sensor-based maintenance prognostics are helping fleets make more effective use of their maintenance resources. This is impacting all aspects of vehicle maintenance including how vehicles are scheduled, serviced, and specified.

TMC has recently completed work on the Instructor Edition of its Preventive Maintenance Inspection Manual, which comple-



ments its already updated Preventive Maintenance Inspection (PMI) Guidelines series for heavy-duty diesel, trailer, and light- and medium-duty vehicle technicians.

Attend this session and learn what the latest recommendations are for preventive maintenance. Panelists will also present how technology is changing their approaches to vehicle triage, repair strategies, and shop design. This session will provide attendees practical suggestions and insights they can put to work to reduce PMI costs and increase asset availability.

**Technical Session #2—  
Thursday, September 19  
7:30 – 9 am**

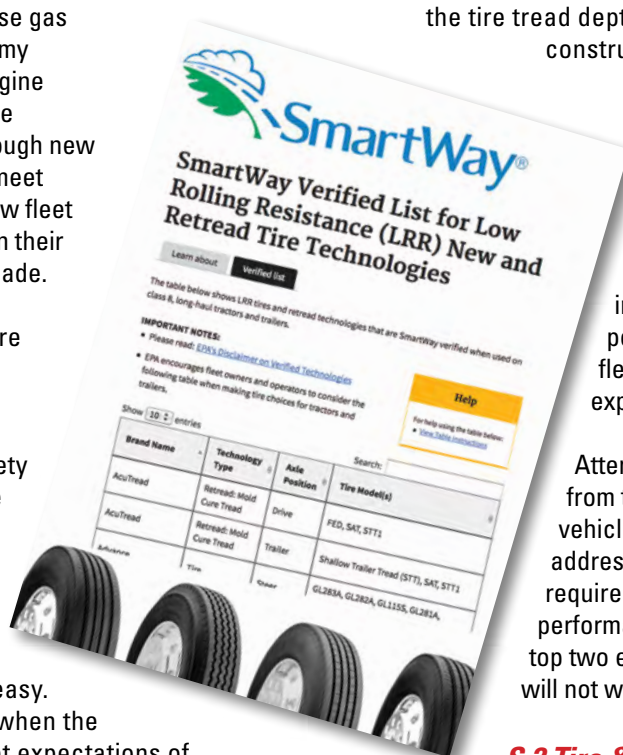


## S.2 Rolling Into Greenhouse Gas (GHG) Phase 2

Federal "Phase 2" greenhouse gas emission (GHG)/fuel economy requirements aren't just for engine and vehicle manufacturers. Tire manufacturers have to meet tough new standards, too; and how they meet these mandates will impact how fleet managers specify and maintain their rolling stock in the coming decade.

New coefficient targets for tire rolling resistance set jointly by the U.S. Environmental Protection Agency (EPA) and National Highway Traffic Safety Administration (NHTSA) have been lowered from 7.7 to 6, depending on the vehicle and its vocation. Reducing rolling resistance is not so much the challenge facing tire manufacturers — that's easy. The trick is doing so by 2021 when the rules kick in and meeting fleet expectations of traction, performance, durability and service life.

There's more to hitting these new targets than just changing



the tire tread depth. Manufacturers are looking at a variety of construction changes that include use of new tread designs, tire compounding and advanced materials for both truck/tractor and trailer tires.

The benefits for fleets should be significant when it comes to fuel economy, as tire manufacturers have reported fuel consumption improvements of one percent for every three percent improvement in rolling resistance. But will fleets have to sacrifice their current performance expectations to reap these benefits?

Attend this session and learn what to expect from the next generation of Class 7-8 commercial vehicle tires. Tire manufacturer representatives will address their strategies for meeting the new federal requirements and meeting fleet expectations for tire performance. Since fuel and tires represent most fleets top two equipment-related costs, this is a session you will not want to miss.

**S.2 Tire & Wheel Study Group—  
Wednesday, September 18  
3 – 4:30 pm**

## S.5 Overcoming Capital Expenditure Restraints and Timing Economic Disposal

Whether it's good times or bad, fleet managers face challenges with capital expenditure restraints and timing economic disposal of assets. Sometimes these challenges are simple cash flow problems. In other instances, upper management remains unconvinced that the money being requested is going to be well spent.

Economic disposal of equipment can often be challenging and depends on a variety of factors. For complete vehicles or other pieces of equipment, some of these factors include current year tax regulations, maintenance costs, vehicle modernization, predictive maintenance models, technology advances, and more.

During this session, panelists will present details of proven strategies for overcoming these situations and others. For example, cash flow problems might be addressed by turning to short-term equipment rentals or longer-term equipment leasing. If purchasing, longer-term financing or less expensive spec'ing options might do the trick. We'll also present ideas for building a more effective return on investment (ROI) strategy, such as finding ways to extend service life or achieve longer amortization.

Making do with less and maximizing the value of end-of-life assets are things all fleet managers must master. Attend this session and learn tried and true lessons from industry experts.



**S.5 Fleet Maintenance Management Study Group—  
Wednesday, September 18  
1:15 – 2:45 pm**

## S.6 A Fresh Look at Automated Manual Transmissions and Clutches

While it's true some veteran drivers will always prefer traditional manual transmissions, many are singing the praises of the automated manual gearbox. Automated manual transmissions (AMTs) help drivers stay better focused on driving and be less fatigued while on duty. Fleet owners recognize AMTs help them recruit and retain drivers, as well as improve overall fleet fuel economy. In fact, AMTs are the primary spec in many fleets now because of these and other benefits.

AMTs are basically manual transmissions with the benefit of computer-assisted shifting. Computer control helps optimize engine and transmission communication so the optimal shift points are easily attained by rookie and veteran drivers alike, largely taking out the 35 percent swing in fuel economy that is attributable to driver skill.

Servicing AMTs can be more complicated than traditional manuals, however. New diagnostic tools and procedures are needed for fleet operations new to AMTs. Properly spec'ing AMTs will also save a lot of maintenance headaches in the long run and must be considered.

Attend this session and learn what your fleet needs to know about spec'ing and maintaining the latest generation of AMT



offerings. We will cover tooling and training requirements for technicians, as well as strategies for improving driver training and acceptance. We'll also provide insights into what the next generation of AMT technology will look like in the coming decade.

***S.6 Chassis & Brake Systems Study Group—  
Thursday, September 19  
9:15 – 10:45 am***

## S.7 How to Spec and Maintain Trailers for Your Operation's Life Cycle

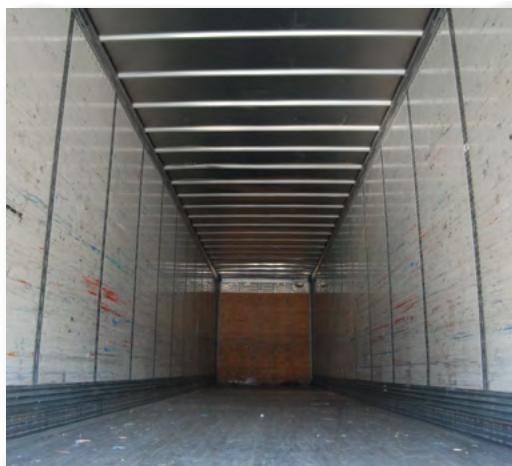
Trailers take a pounding, even in typical over-the-road applications. That's why it's so important to make sure your trailer specifications match the reality of your fleet operations.

Fleets that don't pay close attention to trailer spec's will ultimately learn the hard way that the 12- to 20-year trailer they purchased is not going to experience the service life they expected from it at the time of purchase. Disposing of units that don't meet the first owner's expectations will be just that much more challenging when it comes time to sell to a second

owner. Doing all of this isn't easy as it is very vocation dependent. What works well in one operation can be a disaster in another.

Attend this session and learn from our panel of experts how to spec and maintain a trailer to your operation's expected duty cycle. We'll present recommendations based on fleet experience and existing TMC recommended practices covering trailer bodies, flooring, doors, chassis and much more. If you want to maximize the service life of your trailers, this is a session you'll want to attend.

***S.7 Trailers, Bodies and Material Handling Study Group—  
Wednesday, September 18  
3 – 4:30 pm***





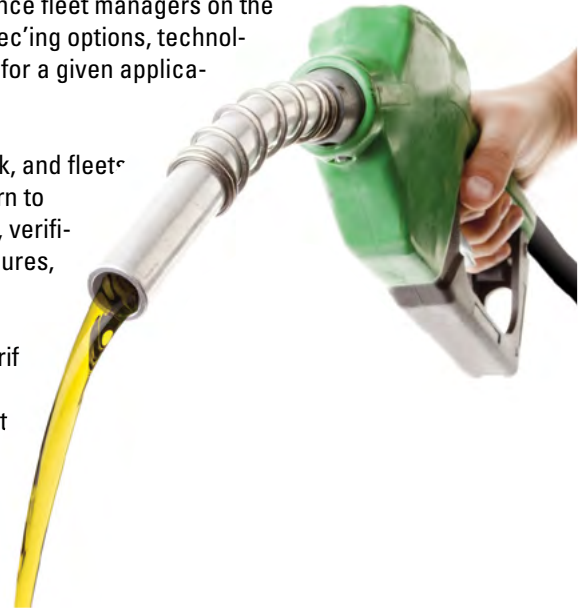
## S.11 Fleet Experiences in Achieving Fuel Efficiency Gains

If there's one constant truth about fleet management — you don't have to convince fleet managers on the virtues of saving fuel. The trick is, of course, finding the right combination of spec'ing options, technology and techniques to maximize one's efforts at achieving maximum fuel savings for a given application.

Fuel economy testing is an important aspect of proving what does or doesn't work, and fleets have many options now in this area whether they do the testing themselves or turn to reputable third-parties. Using legitimate test methodologies that yield repeatable, verifiable results, such as the suite of TMC Type II, III and IV fuel economy test procedures, also helps.

Attend this session as presenters will offer fleet experiences in achieving and verifying fuel efficiency gains. Representatives from fleets as well as fleet testing and research organizations will share data and case studies as to what works when it comes to maximizing fuel economy for a range of different industry applications.

**S.11 Sustainability & Environmental Technologies Study Group—  
Thursday, September 19  
9:15 – 10:45 am**

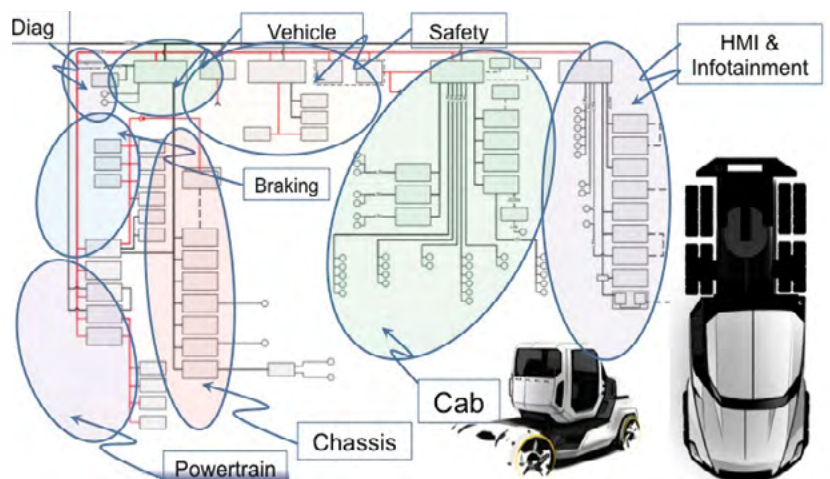


## S.12 What's Next in Vehicle Databus Architecture and Diagnostics?

Automated vehicle technologies are revolutionizing all aspects of commercial vehicle design and vehicle database architecture is no exception. In order for driver assist and automated technologies to be successfully implemented, improvements are needed to support all the additional data that will be required for automated/autonomous operation. Those changes are coming sooner, rather than later.

"Automotive Ethernet" and the Mobile Industry Processor Interface (MIPI) promise to provide faster data rates and lower latency — what experts say is needed for driver assist/automated driving systems. But what does this mean for fleet operations?

Attend this session and learn from our panel of experts what's coming when it comes to current and future databus technology to support the specialty and higher data throughput requirements of future electronic systems. We will cover "CAN with Flexible Data Rate (CAN-FD)", "Local Interconnect Network (LIN)", and "Automotive Ethernet" and shed light as to when these will be appearing on your fleet's vehicles.



Truck manufacturers will be asked to present the databus types they will be using for 2020 vehicles — both at the diagnostic connector as well as behind the diagnostic connector. We'll also address the issue of using specialty cables instead of software scanning the channels on the diagnostic connector and what that means for vehicle maintenance operations and RP 1210 compliance.

**S.12 Onboard Vehicle Electronics Study Group—  
Wednesday, September 18  
9:45 – 11:15 am**

## S.16 The Evolution of a Professional Diesel Technician

Great technicians and shop leaders aren't born – they're developed. Given our industry's technician shortage, it's critical that maintenance operations "get it right the first time" when it comes to onboarding, training and developing their technical talent — especially at a time when the equipment technicians are expected to service is evolving as rapidly as the training environment itself.

The primary goal of technician career development is to cultivate and retain valued technicians by demonstrating organizational commitment to their long-term career growth. This benefits the organization by providing an environment that supports a more stable workforce and increases employee morale. This environment provides employees with new opportunities and a clear direction on how to increase their skills and advance their careers. With an expanded skill set, they have more tools to help meet your organization's overall business objectives.

The complexity of modern trucks requires technicians to continuously update their knowledge and skills. Couple this with a customer's need to keep trucks moving and get them back on



the road quickly in the event of a service or repair need, then developing new technicians becomes essential. The lack of skilled technicians entering the workforce escalates the challenge.

Given the competition for talent, it's so important to ensure your operation keeps open lines of communication with its technicians so they know they are valued team members and have opportunities for advancement, commiserate with their level of interest, training and ambition. One the most frequent reasons cited for technicians leaving a company is lack of appropriate communication with their supervising manager.

Attend this session and learn from our panel of experts how to create opportunities for the greenest rookies all the way to the most seasoned veterans and thereby ensuring continued success and improvement for your company's maintenance services operations. We'll focus on the process of transitioning technicians to supervision, management and other maintenance departments/roles such as warranty and training.

**S.16 Service Provider Study Group—  
Wednesday, September 18  
9:45 – 11:15 am**

## S.17 Corrosion of Suspension and Underride Components

Anything in the "hot zone" of the vehicle is subject to the corrosive effects of salt and deicing chemicals, but the hidden underbelly of the truck is especially susceptible to this serious and costly problem. If not properly addressed through specification and maintenance, corrosion can quickly degrade critical components of frames, spring and air suspensions and substructures such as rear impact guards on trailers.

"Soft" or non-ferrous components are not safe either. Bushings, grommets, and other rubber or synthetic equivalents can be compromised, as can connectors, wiring, and many other parts. The implications for aerodynamic devices and their mounting systems, as well as automated driver assist and braking systems are profound.

There's also the issue of proper repair techniques to prevent corrosion from starting even when corrosion protections are in place. For maximum service life, it is important to ensure that manufacturer-provided corrosion protection is maintained when performing chassis modifications and following such

modifications. When performing chassis modifications, one can inadvertently introduce dissimilar metals, leave exposed metal, or make poor repairs in the area of the chassis modification.

Attend this session and learn what your fleet needs to know to protect itself from the perils of corrosion. We'll review the latest activity from the S.17 Corrosion Control Study Group, including RP 1705, "Guidelines For Corrosion Protection During Chassis Modifications."



**S.17 Corrosion Control Study Group—  
Wednesday, September 18  
4:45 – 6 pm**



# REGISTRATION, ACCOMMODATIONS & TRAVEL

## **How to Register For TMC's 2019 Fall Meeting**

You can fully register for TMC's 2019 Fall Meeting by mail, fax or online.

**Online is your fastest option. Go to:**  
<http://tmcfall.trucking.org>

If you cannot register online, you may download a TMC registration form at <http://tmcfall.trucking.org> to register by mail or fax.

Mail: ATA Event Services  
 PO Box 101360  
 Arlington, VA 22210-4360  
 FAX: (703) 838-1701

TMC **will not** process your meeting registration over the telephone. Payment or credit card information must accompany your registration. Be sure to register before August 16, 2019. Registration fees will increase after that date.

## **Registration Fees**

First-time fleet attendees are eligible for a \$200 discount if registered on or before August 16, 2019.

### **On or before August 16, 2019**

TMC or ATA Member	\$575
First-Time Fleet Member (TMC or ATA)	\$375
Non-Member	\$675
First-Time Fleet Non-Member	\$475
Spouse Program (2-day event)	\$350

### **After August 16, 2019**

TMC Member	\$675
TMC Non-Member	\$775
Spouse Program (2-day event)	\$400

## **TMC SuperTech & TMC FutureTech 2019 Contestants, Judges and Observers:**

All contestants must complete a printed form and sign disclosure prior to mailing or faxing. Download the registration form PDF at <http://tmcfall.trucking.org>. A unique email is required to receive competition study materials and rules prior to the event.

Registration for contestants is \$275 for TMC/ATA members; \$375 for non-members. Registration for judges and observers is \$275 for TMC/ATA members; \$350 for non-members.

## **Meeting Confirmation**

Registrants will receive emailed confirmations up to 24 hours after payment is processed. If you do not receive a confirmation, call ATA Event Services at (866) 821-3468, or email [registrations@trucking.org](mailto:registrations@trucking.org).

## **Cancellations/Refunds**

If your plans to attend the meeting change, you may receive a refund up until August 16, 2019, less a \$50 administrative charge. There will be no refunds or credits after August 16, 2019. Written cancellations accepted by fax (703) 838-1701 or email at [tmc@trucking.org](mailto:tmc@trucking.org).

## **Substitution Policy**

You must be a TMC Member to receive the TMC Member rate. Non-members however, may substitute for a TMC Member if he or she cannot attend. To substitute for another member, print below the name of the member for whom you are substituting. Otherwise, you will be charged the non-member rate.

## **Fall Meeting Dress Code**

Attire for TMC's 2019 Fall Meeting is business casual. However, all TMC Officers and Study Group Chairmen are expected to wear ties and TMC blazers during the meeting. It is also strongly recommended that panelists wear professional business attire during Technical/ Study Group Sessions.

## **How to Make Hotel Reservations**

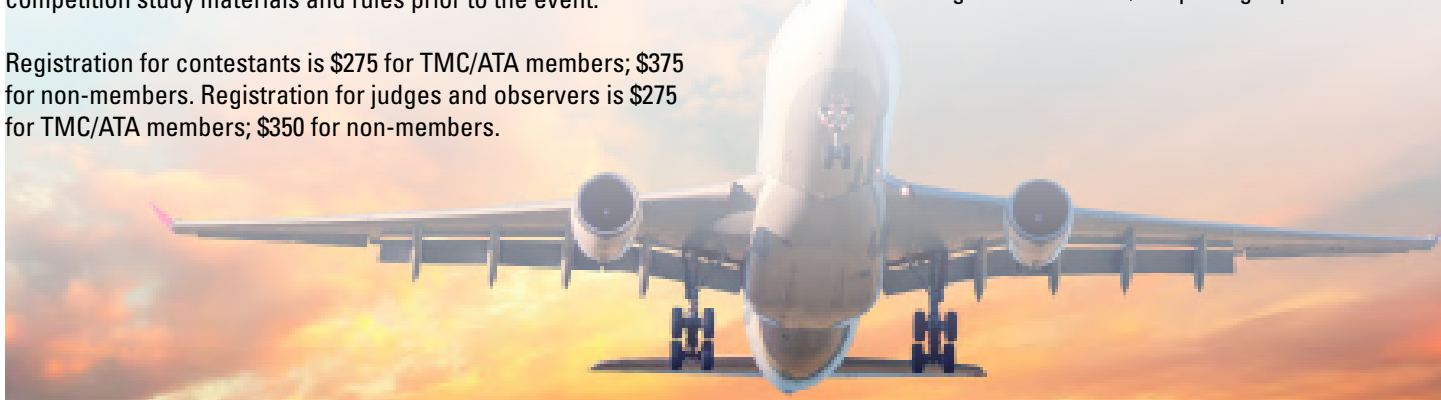
Only individuals registered for the meeting or competition may reserve a room at the TMC discounted rate using the link embedded in their Meeting/Competition confirmation email. If you have trouble with the process or questions, call ATA Event Services at (866) 821-3468; however, you may not register or provide registration payment over the phone.

You must make your hotel reservation by August 16, 2019. TMC cannot guarantee availability of discounted rooms after that date. Contact the hotel directly if you require a change in arrival/ departure dates, or must cancel your reservation.

**Host Hotel:** Raleigh Marriott City Center – \$195 per night plus tax (single/double)

### **Overflow Hotels:**

Sheraton Raleigh Hotel – \$197 per night plus tax (single/double)  
 Residence Inn Raleigh Downtown – \$187 per night plus tax



# TMC is once again looking for the industry's best technician. Think you know someone that's up to the challenge?



If you or one of your employees, thinks they have what it takes to place their diagnostic and problem solving skills up against trucking's best of the best, then come to TMC SuperTech 2019! TMC SuperTech 2019 marks the 15th anniversary of our National Technician Skills Competitions, designed to determine the industry's top technician through a variety of troubleshooting tests and skills challenges.

Organized by TMC's Professional Technician Development Committee (PTDC), TMC SuperTech 2019 will showcase the high degree of skill and knowledge shown everyday by trucking industry technicians. And it's trucking's only industry-wide competition dedicated both to honoring

technician professionalism and acknowledging the "best of the best." What's more, top winners will receive valuable prizes! This year's competition schedule includes a written test, series of qualifying rounds, and the final Hands-on Skills Challenge. For 2019, there will be three professional tracks — traditional (heavy-duty), trailer, and light/medium vehicle. The traditional (heavy-duty) track spans two-days — Sunday and Monday. The trailer and light/medium tracks will take place on Monday.

For the traditional (heavy-duty track), the contestant orientation and written qualifying test will take place on Sunday, Sept. 15 at 7 - 8:30 am. Qualifying Rounds (Day 1) will be held Sunday, Sept. 15 from 9 am to 4 pm. The Hands-on Skills Challenge Finals (Day 2) will be held on Monday, Sept. 16 from 8 am to 4 pm. The orientation and competition for the trailer and light/medium tracks will take place on Monday, Sept. 16.

## HERE'S HOW TO GET INVOLVED IN TMC SUPERTECH 2019:

### Step 1—Register for TMC SuperTech 2019!

Any technician employed in the trucking industry may register for TMC's National Technician Skills Competitions. The entry fee for TMC technician members is \$275. The entry fee for non-member technicians is \$375, which also includes TMC technician membership for the balance of 2019. The entry fee is waived for verified champions of 2019 state trucking association technician skills contests. See the registration form for information about securing hotel accommodations. The registration deadline is Friday, August 16, 2019.

If your state trucking association or company is interested in holding their own preliminary SuperTech-styled event as a means of selecting finalists for TMC SuperTech 2019, refer to TMC's "How to Conduct a Technician Skills Competition" brochure, which can be downloaded at <http://www.trucking.org/tmcupertech.aspx>. You can also view a short video about TMC SuperTech there, too.

NOTE: TMC will be hosting a series of training webinars in advance of the competition, based on some of the skills stations to be featured at TMC SuperTech 2019. Registered technician competitors will be notified of the training schedule after registration.

### Step 2—Come to Raleigh for TMC SuperTech 2019!

The competitions will be held at the Raleigh Convention Center, Sept. 15-16. Registration opens as early Saturday, Sept. 14, where you will be given your TMC SuperTech credentials. The orientation takes place Sunday, Sept. 15 at 7 am.

### Step 3—Compete in the TMC SuperTech Qualifying Rounds

All traditional (heavy-duty) track contestants will compete in qualifying rounds on Sunday, Sept. 15 consisting of several hands-on skill pre-qualification tests. There are no qualifying rounds for the trailer or light/medium technician tracks.

### Step 4—Attend the TMC SuperTech 2019 Reception

After the qualifying rounds, it's off to the TMC SuperTech 2019 Reception, at which we announce the names of the contestants who will compete in the traditional (heavy-duty) track finals on Monday, Sept. 16. A maximum of 119 traditional track contestants (subject to change) will advance to compete in Tuesday's Hands-on Skills Challenge. Certified grand champions from State Trucking Association contests will automatically be included in the Hands-on Skills Challenge.

### Step 5—Enjoy the TMC SuperTech Finals!

On Monday from 8 am to 4 pm, qualifying contestants will compete in a series of stations, covering a variety of diagnostic skills areas. Contestants will be provided the list of stations in advance when they receive their welcome packet and official rules and guidelines manual

in August. Lunch will be provided for all contestants, judges and other registered guests. Observers will be welcome on the competition floor, too.

### Step 6—Attend Tuesday's Training Fair and Awards Banquet

The PTDC Technician Training Fair will be held on Tuesday, Sept. 17 and Wednesday, Sept. 18. See page 15 for details. We'll announce the winners of the competition and present trophies and prizes during TMC's Tuesday's Industry Awards Banquet. Awards will be given for 1st, 2nd and 3rd best in the overall competition and separately for the trailer, and light/medium tracks. Winners will also be named for those receiving the best score at each skills station.

1st Place: TMC SuperTech Grand Champion will receive an expense-paid trip to the 2020 Daytona 500, plus other prizes. The winner will also be presented with special trophy and his or her name will appear on the TMC SuperTech Grand Champion Banner that is displayed at every TMC meeting. Second place and third place winners will also receive trophies and valuable prizes.



The National Student Technician Competition consists of a set of skill stations for technician students to be held on Monday, Sept. 16. Winners will be announced at Tuesday's TMC SuperTech 2019 Awards Banquet, which is open to both contestants and meeting attendees. Student

registration is limited to 80 individuals for 2019. The student competition registration fee is \$200. The registration cutoff is August 16.

"TMC's Professional Technician Development Committee organizes skills competitions to further our efforts to promote careers for professional commercial vehicle technicians in all segments of the trucking industry," said Robert Braswell, executive director of ATA's Technology & Maintenance Council. "For 2019, TMC is able to continue the National Student Technician Competition thanks to our official sponsor — the TechForce Foundation."



## PTDC TRAINING FAIR SESSIONS

All TMC attendees and TMC SuperTech 2019 contestants may attend the PTDC's Training Fair, a series of hands-on training sessions designed for technicians, shop supervisors and fleet managers. This training qualifies for continuing education credit units accepted by the National Automotive Technicians Education Foundation (NATEF). There will be a mix of in-depth/hands-on as well as classroom style sessions during the one-and-a-half-day Training Fair, so you can maximize the number of training opportunities.



### **Innovative Approaches to Electrical Diagnostics & Repair**

During this session we will cover basic and advanced electrical diagnostic and repair techniques to help you improve your ability to understand the concepts needed to work on today's vehicle electrical systems. This is an in-depth, four-hour training session to be held on the competition floor.

**PTDC Session 1: Tuesday, Sept. 17 — 8 am to Noon**

### **Vehicle Aftertreatment Systems: Maintenance, Diagnostics and Repair**

During this session we will cover basic and advanced diagnostic and repair techniques you need to effectively service and maintain today's vehicle emissions aftertreatment systems. This is an in-depth, four-hour training session to be held on the competition floor.

**PTDC Session 2: Tuesday, Sept. 17 — 8 am to Noon**

### **Innovative Approaches to Vehicle Electronics/Databus Diagnostics and Repair**

During this session we will cover basic and advanced vehicle electronic and databus diagnostic and repair techniques to help you more effectively service and maintain today's vehicle electronic systems. This is an in-depth, four-hour training session to be held on the competition floor.

**PTDC Session 3: Tuesday, Sept. 17 — 1 to 5 pm**

### **Roll-up Doors: Fundamentals of Inspection and Preventive Maintenance**

This session will provide participants the opportunity to take a deep dive into TMC RP 761, "Overhead Door Maintenance Guidelines For A Dry Van Or Body," and its detailed maintenance and inspection checklist. The presentation will cover routine checkpoints to consider when inspecting a roll up door system, what to diagnose, and how to set corrective action if needed.

**PTDC Session 4: Tuesday, Sept. 17 — 1 to 2 pm**

### **Sensors, SPNs, and FMIs: What Every Technician Should Know**

This session will cover the relationship between sensors and subject parameter numbers (SPNs). An explanation of failure mode identifiers (FMIs) and how they are linked to various modes of failures will be included along with sensor theory of operation and failures.

**PTDC Session 5: Tuesday, Sept. 17 — 2 to 3 pm**

### **Tool Box Talk**

Patterned after TMC's successful Fleet Talk and Shop Talk, Tool Box Talk is a free and open discussion of shop floor issues just for technicians. Bring your most pressing questions and best ideas to share with your peers. This session will be facilitated by industry veterans.

**Wednesday, Sept. 18 — 8 to 9:30 am**

### **How to Implement LEAN/Six Sigma Techniques on the Shop Floor: For Technicians and Managers**

During this two-hour session, technicians and managers will work through real diagnostic problems using LEAN/Six Sigma approaches, designed to eliminate waste and increase efficiency in finding solutions. A cross-disciplinary approach will help technicians and managers see each others' perspectives during this interactive session.

**Wednesday, September 18 — 9:45 am to Noon**

## SCHEDULE OF COMPETITIONS

### FRIDAY, SEPT. 13

9 am – 6 pm  
TMC SuperTech 2019  
Competition Setup

### SATURDAY, SEPT. 14

9 am – 5 pm  
Registration Desk Open

10 am – 6 pm  
TMC SuperTech 2019  
Competition Setup

2:30 – 4 pm  
PTDC Judges Meeting (For  
Sunday; on the Competition  
Floor)

4:30 – 5:30 pm  
Professional Technician  
Development Committee Meeting

### SUNDAY, SEPT. 15

6 am – 6 pm  
Registration Desk Open

6 – 7 am  
Breakfast

7 – 8:30 am  
TMC SuperTech 2019  
Heavy-Duty Track Orientation &  
Qualifying Written Exams

9 – 11:30 am  
TMC SuperTech 2019 Heavy-Duty  
Track Qualifying Rounds

11:30 am – Noon (approx.)  
TMC SuperTech 2019  
Lunch Break

Noon – 1 pm  
PTDC Judges Meeting (For  
Monday; on the Competition  
Floor)

Noon – 4 pm  
TMC SuperTech 2019 Heavy-  
Duty Track Qualifying Rounds  
(continued)

5 – 6 pm  
TMC SuperTech 2019:  
Orientation for Trailer, Light/  
Medium & TMC FutureTech 2019  
(Sponsored by TechForce  
Foundation) Competition Tracks

7 – 8 pm  
TMC SuperTech 2019  
Welcome Reception &  
Hands-on Skills Challenge  
Finalists Announcement

### MONDAY, SEPT. 16

6:30 am – 5 pm  
Registration Desk Open

6:30 – 7:30 am  
Breakfast

7:30 am – 4 pm  
• TMC FutureTech 2019  
National Student Technician  
Competition  
• (Sponsored by TechForce  
Foundation)  
• Trailer Track Competition  
• Light/Medium Track  
Competition

8 am – 4 pm  
TMC SuperTech 2019  
National Technician Skills  
Competitions:  
Heavy-Duty Track Hands-on  
Skills Challenge

11:30 am – Noon (approx.)  
TMC SuperTech 2019  
Lunch Break

### TUESDAY, SEPT. 17

6:30 am – 6 pm  
Registration Desk Open

8 am – 5 pm  
PTDC Technician Training Fair:  
• PTDC Session 1 — 8 am to  
Noon  
• PTDC Session 2 — 8 am to  
Noon  
• PTDC Session 3 — 1 to 5 pm  
• PTDC Session 4 — 1 to 2 pm  
• PTDC Session 5 — 2 to 3 pm

7:30 – 9:30 pm  
Awards Banquet

### WEDNESDAY, SEPT. 18

7 am – 5 pm  
Registration Desk Open

7 – 8 am  
Buffet Breakfast

8 am – Noon  
PTDC Technician Training Fair:  
• Tool Box Talk — 8 to 9:30 am  
• How to Implement LEAN/Six  
Sigma Techniques on the Shop  
Floor: For Technicians and  
Managers — 9:45 am to Noon

**TMC's TOWN MEETING & FLEET OPERATORS' FORUM**



TMC's best-attended event is always its Town Meeting and Fleet Operators' Forum. TMC's Town Meeting provides an opportunity for the Council to present members and attendees with information about what's happening within TMC. Reports are provided regarding Council

membership, meetings, and exhibits, as well as TMC Recommended Practices, information reports, technical policy advisories and products. Additionally, a federal regulatory report is provided by the head of ATA's Engineering Department. TMC's Fleet Operators' Forum immediately follows the Town Meeting. At the Fleet Operators' Forum, fleet attendees bring up equipment problems that they have been unable to resolve successfully with their product manufacturer or supplier. An update is given later during the week at TMC's Fleet Operators' Forum Wrap-up. If you have an issue you wish raised, please contact TMC at (703) 838-1763.

**Tuesday, September 17 — 5:30 – 6:45 pm**

**FLEETTALK / SHOPTALK**

Fleet Talk and Shop Talk rank consistently as the most popular features at TMC general meetings. TMC's Fleet Talk is a lively dialogue based on TMC's successful Shop Talk format, but open only to fleet attendees. Topics of interest that emerge from this session will be raised at Shop Talk later in the week for open discussion before the entire Council. Shop Talk, open to all registered attendees, offers a unique chance to learn and share the tricks of the trade from the industry's best experts. At both sessions, two veteran fleet managers will lead what will be a spirited discussion on what works or doesn't work in vehicle maintenance. Our Shop Talk session also features the wrap-up to Tuesday's Fleet Operator's Forum at which resolutions to fleet concerns raised are presented.

**FLEETTALK**

**Tuesday, September 17 — 4:30 – 5:30 pm**

**SHOPTALK**

**Thursday, September 19 — 11 am – 12:30 pm**

**TMCSUPERTECH 2019 & TMC FUTURETECH 2019 AWARDS BANQUET**

TMC will announce the winners of the TMC SuperTech and TMC FutureTech competitions at this event. Awards will be presented to the 2019 Grand Champion, second and third place finalists, and those performing best at the various technician tracks and individual skills stations.

**Tuesday, September 17 — 7:30 – 9:30 pm**



**TMC FIRST-TIME ATTENDEE ORIENTATION AND LUNCH**

This is a special welcome to first-time attendees of a TMC general meeting. First-timers will have a chance to mingle with experienced TMC veterans, be introduced to a TMC mentor, and learn more about how to maximize their TMC experience. Lunch will be provided.

**Tuesday, September 17 — Noon – 1 pm**

**TMC's INDUSTRY LUNCHEON**

**"Managing Employees From Different Generations"**

**Keynote Speakers: Meagan and Larry Johnson**

People from different generations often see the world quite differently. And though many of these differences can be attributed to the normal variations among all human beings, some can be traced to the time period in which each generation was raised and the common experiences it had. We call these events "generational signposts" and they influence how we think and behave long after our childhoods are over.



Our Industry Luncheon Speakers — Generation Expert Meagan Johnson and her father, Workplace Culture Expert Larry Johnson — will explain the differences between generations, the reasons each generation tends to behave as it does, and what the audience can actually do to improve their inter-generational relationships. Meagan offers insightful content with outrageous humor while Larry will focus on how you can increase productivity, spur innovation, enhance customer satisfaction and reduce employee turnover.

**Wednesday, September 18 — 11:30 am – 1 pm**

**TMC NEW TECHNOLOGY PRESENTATIONS**

TMC's New Technology Presentations inform Council members of innovative features or applications of new technologies without engaging in blatant merchandising, advertising, or harmful competitive references. Products presented should be in production and available to the industry at the time the request is made. Products on the market for more than two years will not normally be considered. Products shown must be a component, tool, or service used in the commercial transportation industry that is conceptually unique in its design — from a manufacturer or service supplier company which is an active TMC member in good standing. Marginal improvements or 'upgrades' of existing products will not be considered for presentation.

**Wednesday, September 18 — 4:45 – 6 pm**

**TMC EVENING SOCIAL EVENT:**

Wednesday's social event will feature a special Blues, Brews and BBQ themed-party, complete with a buffet dinner, musical entertainment, and other fun attractions. Attire for the social event will be casual.

**Wednesday, September 18 — 6:30 – 9:30 pm**



## SPOUSES PROGRAM

### *Experience Raleigh!*

TMC invites you to experience Raleigh! A dynamic and unique place, Raleigh is surrounded by an amazing myriad of entertainment and natural wonders. Here's what our Spouses' Program has in store for you at TMC:



### *Discover Your Sweet Tooth, Brews and BBQ*

Meet at the Raleigh Convention Center and walk to The Pit, authentic barbeque for a true North Carolina BBQ experience. After The Pit, the group will walk across the street to Videri Chocolate Factory for a tour. Videri Chocolate Factory began as the shared dream of three chocolate lovers: Sam, Starr, and Chris. From the moment Sam first sunk his hands into a bag of cocoa beans, he knew he had a love for making delicious gourmet chocolate, and the talent to match. His mission was to turn his passion for handcrafted bean-to-bar chocolate into his profession. Sam's wife, Starr, and his longtime friend, Chris, came on board to head up the business side of the company, and the three have been having a blast ever since. Following the tour of Videri, the group will head next door to the Crank Arm Brewery for a Tour and Tasting. The idea for the brewery came from Adam in 2012; he loves cycling and felt the need for more quality craft beer in downtown Raleigh. The founders, Adam, Craig, and Mike combined their varying talents to create Crank Arm with the goal of making Raleigh an even better place with even better beer.



**Tuesday, September 17**

**10:30 am – 2:30 pm**

### *Historic Downtown Raleigh Walking Tour*

The group will be met by a tour guide before departing the Raleigh Convention Center and walking to visit The State Capital & grounds, N.C. Museum of History, N.C. Museum of Natural Science, N.C. Legislature Building, Raleigh's Four Ecclesiastical Anchor Churches (one is African American), Governor's Mansion, Fayetteville Street & others in the downtown core, Briggs Building, Festival Plaza, Duke Energy Performing Arts Center, Moore Square, Marbles Museum and Shaw University. Visit the "hidden gardens" in the community that will still be lovely in Raleigh's Indian summer. Following the tour, we will stop for lunch at a hot spot in downtown Raleigh, The Whiskey Kitchen.



**Wednesday, September 18**

**10:30 am – 2:30 pm**

### *TMC Spouse Planning Meeting*

All spouses are invited to help us plan future events and provide feedback on how we can improve our programs. Refreshments and morning snacks will be provided.

**Wednesday, September 18**

**9 – 10 am**

### *TMC Evening Social Event*

**Wednesday, September 18**

**6:30 – 9:30 pm**

# NATMI

North American Transportation Management Institute

## Certification Courses Offered This September for Maintenance Directors and Supervisors by NATMI, TMC

Want to become a certified maintenance professional?

Now you can do it for less money and in less time!

TMC and the North American Transportation Management Institute (NATMI) have teamed up to strengthen and increase the visibility of the Certified Director of Maintenance certification (CDM/E) and Certified Supervisor of Maintenance certification (CSM/E). TMC's Education Subcommittee and NATMI's Oversight Committee have collaborated on examining, updating and enriching all aspects of the program, including certification requirements, scope, class schedules and locations, and educational content. The courses will be held at the Raleigh Convention Center, September 19-20 immediately following TMC's 2019 Fall Meeting.

### COURSES

Essentials of Fleet Maintenance Management will be held on Thursday, September 19, 2019

Cost Containment Strategies for Fleet Maintenance Managers will be held on Friday, September 20, 2019

### Certification Exams

will take place on Friday, September 20, 2019.

These courses are applicable toward NATMI's nationally recognized, university accredited certification programs. Taking the courses are the first steps toward earning a credential that will help you become a more competent professional, earn industry recognition and credibility in court testimony. For more information on membership or how to become certified, call (303) 952-4013.

If you have the job experience, you can pay one lump sum that covers all fees for certification, and complete the process within 60 days of taking the training and exam.

### *How to Become a Certified Maintenance Professional...*

Job Experience Required: Certified Director of Maintenance/Equipment (CDM/E): 5 Years (or 4 years if you have a college degree) experience in fleet maintenance management  
Certified Supervisor of Maintenance/Equipment (CSM/E): 2 years in fleet maintenance profession

There are education and experience certification requirements as well. CDM/E and CSM/E candidates are full-time administrators who have ably demonstrated their expertise and leadership in establishing programs, policies, setting standards, and mastering new technologies and systems.

**For more information, or to register, visit NATMI's website at [www.natmi.org](http://www.natmi.org).**

# TASK FORCE DESCRIPTIONS

**NOTE: Not all Task Forces listed below will meet at TMC's 2019 Fall Meeting. For a list of all TMC Task Forces that will meet in Raleigh, see pages 6-7.**

## S.1 — ELECTRICAL

### RP Updates (S.1)

*Chairman: Albert Mihic, Delco Remy, (765) 778-6541*

The RP Updates Task Force determines which S.1 (Electrical and Instruments) Study Group Recommended Practices are current and which ones are in need of update for inclusion in future editions of TMC's Recommended Practices Manual.

### Fifth Wheel Ground Strap Installation Guidelines

*Chairmen: Aaron Puckett, Fontaine Fifth Wheel, (205) 915-4854;  
Larry Rambeaux, Purkeys, Inc., (479) 531-7769*

This Task Force will develop a Recommended Practice to provide a systems approach to properly install ground straps on heavy-duty truck fifth wheels and truck frames. The proposed RP will provide specific guidelines for the top selling fifth wheel product lines in the North American market and general guidelines for all fifth wheel product lines.

### RP 110C Update (Low-Tension Cable for Heavy-Duty Truck-Tractor Wiring Systems)

*Chairman: Fred Kelley, General Cable/Prestolite Wire, (586) 764-5422*

This Task Force will update RP 110C Low-Tension Cable for Heavy-Duty Truck-Tractor Wiring Systems.

### Electrical Infrastructure Safety and Interoperability for High-Power Electrical Refrigeration

*Chairman: Matt Srnc, Thermo King Corp., (952) 852-2660*

This Task Force will develop a Recommended Practice for high-power electric trailer refrigeration unit plug-in standby trailer and ground-based infrastructure for safety and interoperability.

### Troubleshooting 12-Volt Cranking and Charging Systems Equipped with Electrochemical Capacitors

*Chairmen: Jeff Brakley, Maxwell Technologies, Inc., (619) 248-2935 and  
Dan Cox, Ioxus, (630) 842-2427*

This Task Force will develop starting and charging system diagnostic procedures for vehicles equipped with 12-volt electrochemical capacitors as opposed to conventional batteries.

### High-Voltage Cable for Heavy-Duty Truck-Tractor Wiring Systems

*Chairman: Fred Kelley, General Cable/Prestolite Wire, (586) 764-5422*

This Task Force is developing recommended practices for high-voltage cable used in heavy-duty commercial vehicles.

### Non-Connector Based Wiring Repairs

*Chairman: Larry Rambeaux, Purkeys, Inc., (470) 419-4800*

This Task Force is developing procedural guidelines for wiring repairs not involving connectors.

## S.2 — TIRE & WHEEL

### RP Updates (S.2)

*Chairman: Peggy Fisher, Tire Stamp, (248) 373-0312*

The RP Updates Task Force updates out-of-date Tire and Wheel Study Group Recommended Practices for inclusion in future editions of TMC's Recommended Practices Manual. Includes RP 222, and RP 216/219 updates.

### Tire Shop Tools and Procedures

*Chairman: Randy Patterson, Bridgestone Americas Tire Ops., (601) 209-1946*

This Task Force will develop a recommended practice on tools and procedures used in tire shops.

### Tire Asset Management (Cradle to Grave)

*Chairman: Peggy Fisher, Tire Stamp, (248) 373-0312*

This Task Force will develop a recommended practice on tire asset management—cradle to grave.

### Specification of Tires for Heavy Duty Electric Vehicles

*Chairman: Daniel Shy, The Goodyear Tire & Rubber Company, (330) 283-3817*

This Task Force will study and evaluate the need for a Recommended Practice covering Specification of Tires for Heavy Duty Electric Vehicles.

### Driver Pocket Guide for Tires and Wheels

*Chairman: Peggy Fisher, Tire Stamp, (248) 373-0312*

This Task Force will develop a pocket guide to assist drivers in evaluating tire and wheel issues.

### Repolishing Aluminum Wheels

*Chairman: Charles Bartley, Alcoa Wheels, (814) 319-4051*

This Task Force will develop guidelines for repolishing aluminum wheels.

### Kill the Mallet

*Chairman: Norman Ball, Ball Tire Industry Consultants, (913) 558-8101*

This Task Force is currently developing strategies to eliminate the use of thumping sticks for determining tire inflation pressure.

### Effects of Regenerative Braking on Tires

*Chairman: Asa Sharp, International Marketing, Inc. (IMI), (330) 283-3227*

This Task Force will examine tire usage in conjunction with regenerative braking systems and will develop a guideline to describe any unique effects on tire wear and/or maintenance.

### Proper Tire Inflation Procedures Outside the Safety Cage

*Chairman: Pat Meisenholder, Michelin North America, Inc., (864) 458-6413*

This Task Force will develop a recommended practice for procedures for inflation of tires when away from the safety cage.

## S.3 — ENGINE

### RP Updates (S.3)

*Chairman: Paul Cigala, ExxonMobil Corp., (856) 404-1342*

This Task Force will review existing engine-related Recommended Practices and update them as needed.

### RP 338 Update (Extended Service Interval Coolants)

*Chairman: Ronald Schornstein, Acustrip Company, Inc., (973) 698-0173*

This Task Force will review RP 338 on extended service interval coolants and update as needed.

### RP 371 Update (LNG/CNG)

*Chairman: Dan Martin, Dual Green Consulting, (512) 705-3113*

This Task Force will update RP 371, recommended practices pertaining to implementing, specifying and maintaining engines using either liquefied or compressed natural gas as a primary fuel.

### RP 326 Update (Recycled Engine Coolant)

*Chairman: Greg Mixon, The Penray Companies, (224) 254-7347*

This Task Force will update RP 326, which offers guidelines for recycled engine coolant for heavy-duty diesels.

### RP 364 Update (Fleet Purchasing Specification for Organic Acid Technology Extended Life Coolant)

*Chairman: Peter Woyciesjjes, Prestone Products Corp., (203) 731-8105*

This Task Force will review and update RP 364, "Fleet Purchasing Specification for Organic Acid Technology Extended Life Coolant."

### LNG/CNG Thermal Events

*Chairmen: Dan Martin, Dual Green Consulting, (512) 705-3113;*

*Mark Louzon, Volvo Trucks, (301) 790-6764*

This Task Force will develop a recommended practice on thermal events associated with LNG/CNG fueled commercial vehicles.



## **Guidelines for Smoke Detection**

*Chairman: Mark Hawkins, Redline Detection, (714) 458-0461*

This Task Force will develop a recommended practice for using smoke detection equipment preventative maintenance and detection of conditions requiring repair in diesel engines.

## **Guidelines for Diesel Particulate Filter Cleaning**

*Chairmen: Wayne Juchno, NARSA, (724) 799-8415;*

*Bruce Balfour, Clean Diesel Specialists, Inc. (714) 276-2020*

This Task Force will develop a recommended practice for cleaning diesel particulate filters in Class 8 vehicles.

## **RP 365 Update (Coolant Maintenance Guidelines)**

*Chairman: Mark Hawkins, Redline Detection, (714) 458-0461*

This Task Force will update RP 365, provides guidelines for developing a program to identify various types of heavy-duty aqueous coolants and ensure proper coolant quality.

## **S.4—CAB & CONTROLS**

### **RP Updates (S.4)**

*Chairman: John Adami, NW Heavy Duty Inc., (425) 633-4309*

This Task Force is updating various S.4 Recommended Practices

### **Power Management Strategies for In-Cab (CPAP) Medical Devices**

*Chairman: Jimmy Fielding, Purkeys Fleet Electric, Inc., (479) 419-4800*

This Task Force will develop a recommended practice for power management strategies for in-cab medical devices such as continuous positive airway pressure machines used to treat sleep apnea.

### **RP 430 Update (Guidelines for Collision Warning)**

*Chairman: Buffy Wilkerson, WABCO, (248) 882-9385*

This Task Force will update TMC RP 430, which covers collision warning systems used on heavy-duty trucks.

### **RP 414B Update (Truck Air Conditioner Specification Sheet)**

*Chairman: Alex Moulthanovski, ACC, (574) 320-5586*

This Task Force will update the TMC Recommended Practice RP 414B, "Truck Air Conditioner Specification Sheet."

### **RP 401C Update (Location and Operation of Instruments and Controls in Motor Truck Cabs)**

*Chairman: Gerald Paoletti, WABCO, (248) 435-8712*

This Task Force will update the TMC Recommended Practice RP 401C, "Location and Operation of Instruments and Controls in Motor Truck Cabs."

### **RP 443 Update (In Cab Cleaning and Deodorizing Guidelines)**

*Chairman: Mark Winchell, Whiting Systems, Inc., (501) 951-0682*

This Task Force will review and revise RP 443, as appropriate with a focus on control of bed bugs.

### **Conversion of Rear View Mirrors to Cameras**

*Chairman: Stephen Fox, Stoneridge, Inc., (419) 884-4149*

This Task Force will develop a recommended practice regarding installation of cameras to replace rear view mirrors in truck-tractors.

### **In Cab Gas Detectors**

*Chairman: Kirk Altrichter, The Kenan Advantage Group, (330) 409-2122*

This Task Force will develop a recommended practice regarding equipment to detect carbon monoxide (CO) and smoke in the cab of a truck-tractor.

### **Odometer Synchronization**

*Chairman: Geoff Selby, D&D Instruments, (612) 378-1224 Ext. 31*

This Task Force will develop a new Recommended Practice regarding synchronization of the mileage readings of new/replacement odometers with various in-cab devices that record vehicle mileage.

## **RP 417/435 Update (Tractor-to-Trailer Air/Electric Lines)**

*Chairman: Bruce McKie, Tectran, (716) 780-1996*

This Task Force will update RP 417 regarding Pneumatic Tractor-Trailer Hookup Lines and RP 435, offers installation and inspection guidelines for coiled and straight pneumatic tractor-to-trailer hookup lines.

## **RP 406C Update (Windshield Wiper System Performance)**

*Chairman: Derrick Redding, Seeva Technologies, (734) 548-2604*

This Task Force will review and update RP 406C covers minimum performance requirements and test procedures for windshield wiper systems used on heavy-duty vehicles.

## **S.5—FLEET MAINTENANCE MANAGEMENT**

### **VMRS Codes Committee**

*Chairman: Paul Moszak, Motor Information Systems, (585) 256-0375 x 203*

The VMRS Codes Committee's purpose is to explain the benefits and to foster the use of the Vehicle Maintenance Reporting Standard (VMRS) system. The Task Force also encourages the exchange of information and user problems between VMRS system users and establishes new parts codes as requested.

### **RP Updates (S.5)**

*Chairman: Dan Weider, Dossier Systems, (609) 747-8800 x 44*

This Task Force will update any RPs as necessary.

### **Developing Key Performance Indicators**

*Chairman: Lew Flowers, Flowers Fleet Services, (405) 623-7572*

This Task Force will develop a recommended practice on identifying key performance indicators for measuring fleet maintenance operations.

### **Cybersecurity Issues**

*Chairman: Mark Zachos, DG Technologies, (248) 488-2080*

This Task Force will explore preventive cybersecurity methods; develop guidelines for fleets to create their own cybersecurity program; standardize over-the-air ECM programming through specific protocols that allow fail safe options and secure messaging; work with other associations to strengthen related standards by fleet user influence; examine the development of a reporting and responding alert program for industry users; and examine the possibility of developing a cyber-intrusion challenge track as part of the TMC SuperTech competition.

### **Internet of Things**

*Chairman: Amanda Schuier, Quality Transport Company, (815)-235-6149*

This Task Force will investigate issues pertaining to the emerging "internet of things," including inter-networking of physical devices, vehicles, buildings, and other items that are embedded with electronics, software, sensors, actuators, and network connectivity that enable these objects to collect and exchange data.

### **Right to Repair**

*Chairman: Lew Flowers, Flowers Fleet Services, (405) 623-7572*

This Task Force will investigate issues pertaining to accessing service and parts information for the Fleets and Service providers. Its objective is to create a Recommended Practice or Information Report that will guide users in procuring service and parts information specified in the National Commercial Vehicle Service Information Memorandum of Understanding.

### **RP 512A Update (Technician Staffing)**

*Chairman: Amanda Schuier, Quality Transport Company, (815) -235-6149*

This Task Force will update the formula to calculate the number of technicians re-quired to adequately staff a heavy-vehicle maintenance shop.

*"It's exciting to see TMC bringing in young people who have the ability to grow the organization and build the future of the industry." —Travis Kane, fleet supervisor, PepsiCo Inc.*

## S.6—CHASSIS & BRAKE SYSTEMS

### **RP Updates (S.6)**

*Chairman: Jack Vander Giessen, Meritor, Inc., (248) 761-3881*

This Task Force will update RPs under the S.6 Chassis & Brake Systems Study Group as needed.

### **Rear Suspension Inspection Procedure**

*Chairman: John Knutson, Hendrickson Int'l, (630) 910-2688*

This Task Force will develop a recommended practice for inspecting rear suspensions on heavy-duty commercial vehicles.

### **RP 648 Update (Troubleshooting Ride Complaints)**

*Chairman: James Holman, Dana Holding Corporation, (419) 350-5730*

This Task Force is updating RP 648, which offers guidelines on troubleshooting ride complaints.

### **Proper Diagnosis of S-cam Out-of-Service Criteria**

*Chairman: Glenn Cram, Meritor, Inc., (314) 651-4657*

This Task Force is developing guidelines for properly diagnosing out-of-service conditions for pneumatic S-cam brakes used on heavy-duty vehicles.

### **Wheel End Thermal Events (Joint S.6/S.7)**

*Chairmen: Hank Schneider, Sealco, (815) 338-8991;*

*Lee Long, Southeastern Freight Lines, (803) 939-3602*

This Task Force is conducting research to establish guidelines for investigation and correction of wheel end thermal events.

### **RP 608B Update (Disc and Drum Brake Integration Issues)**

*Chairman: Greg Sturdy, Gunitite, (815) 490-6416*

This Task Force will develop a Recommended Practice for the specification process needed for the selection and integration of disc brakes into existing fleets of vehicles equipped with drum brakes.

### **RP 638A Update (Heavy Duty Clutch Maintenance)**

*Chairman: John Cordes, Eaton, (260) 573-8606*

This Task Force is updating information for the proper maintenance of heavy duty clutches, including troubleshooting, installation and removal guidelines.

### **RP 642B Update (Total Vehicle Alignment)**

*Chairman: Kaleb Silver, Hunter Engineering Co., (314) 716-0367*

This Task Force is updating information regarding total alignment procedures.

### **RP 605 Update (Brake Shoe Reconditioning)**

*Chairman: Matt Williams, Meritor, Inc., (248) 435-1096*

This Task Force is updating guidelines for reconditioning brake shoes.

### **RP 652 Update (Service and Inspection of Air Disc Brakes)**

*Chairmen: Randall Petresh, Haldex Brake Products Corp. (816) 801-2335;*

*Matt Karich, Hendrickson Trailer, (330) 489-0122.*

This Task Force will update recommendations for the inspection and maintenance of air disc brakes.

### **RP 602/626 Update (Towing Procedures)**

*Chairman: R. Nissen, SAF Holland USA Inc., (616) 403-3079*

This Task Force will update RPs 602 and 626 facilitate recovery of vehicles from their immediate location of disablement, and for long term towing of disabled and wrecked vehicles.

### **RP 614A Update (Air Brake Tubing and Fittings)**

*Chairman: Jeff Kruse, Camozzi Pneumatics, (214) 727-3505*

This Task Force will update RP 614A for fleet maintenance of air brake connections utilizing fractional-inch, non-metallic tubing.

## S.7—TRAILERS, BODIES & MATERIAL HANDLING

### **RP Updates (S.7)**

*Chairman: Hank Schneider, Sealco Comm. Veh. Products, (815) 338-8991*

This Task Force is updating RPs under the S.7 Study Group as needed.

### **RP 755 Update Alternative Liftgate and Material Handling Charging Methods**

*Chairmen: Larry Disque, Leyman Liftgate Company, (336) 210-2604;*

*Larry Rambeaux, Purkeys Fleet Electric, Inc., (479) 419-4800*

This Task Force will update supplementary charging methods for batteries used on Class 6-8 combination vehicles equipped with power liftgates and/or material handling equipment.

### **RP 708C Update (Trailer Axle Alignment)**

*Chairman: Dan Cordier, Hutchens Industries, Inc., (407) 862-5012*

This Task Force is updating RP 708C covering trailer axle alignment.

### **Cryogenic Cooling Systems**

*Chairman: Peter Jacobsen, Boreas Nitrogen Cooling Systems, (248) 629-9308*

This Task Force will develop a recommended practice covering general information and safety attributes of cryogenic cooling systems for the refrigeration of trailers in transportation.

### **RP 746 Update (Drawbar Length)**

*Chairman: Chris Lee, Great Dane Trailers, (912) 644-2264*

This Task Force will update RP 746, which provides specifications for drawbars used on commercial vehicles.

### **Van Trailer Washing Procedures and Testing**

*Chairman: Michael Gordon, Rushing Enterprises, Inc., (406) 304-6036*

This Task Force will develop a recommended practice for washing van trailers and testing the efficacy of wash practices.

### **Heavy-Haul Trailer Issues**

*Chairmen: Kevin Tomlinson, South Shore Transportation, (419)357-2805;*

*Scott Bartlein, Barry Trucking, (414) 397-0955*

This Task Force will explore maintenance and specification issues of particular importance to fleets using trailers in heavy-haul operations.

*"I never experienced anything like TMC SuperTech. The meetings were interesting too and I saw two sides of the industry coming together to develop best practices to move the industry forward. In the rescue industry, customers came to us to create tools so there was just one-way communication. In TMC, I see a two-way dialogue. It's a unique approach."— Craig Tobin, V.P. sales & marketing LITE-CHECK Fleet Solutions.*





## S.11 – SUSTAINABILITY & ENVIRONMENTAL TECHNOLOGIES

### Alternative Energy Implementation Elements

Chairman: Jarit Cornelius, Sharp Transport, (800) 295-7610

This Task Force is developing information for fleets to use in their business justification documentation when considering adding alternative energy assets.

### Smartway Activities

Chairmen: Doug Johnson, Drivewyze, (877) 393-3939

Sam Waltzer, EPA, (202) 343-9175

This Task Force will present an ongoing series of informational presentations regarding EPA SmartWay's Greenhouse Gas Emissions Model (GEM) for medium- and heavy-duty vehicle compliance.

### RP 1118 Update (Cost Modeling for Aerodynamic Devices)

Chairmen: Amy Winfield, Suburban Seating and Safety, (973) 778-9227 ;

Doug Memering, Cummins, Inc., (812) 377-2415

This Task Force will develop a calculative tool to evaluate the cost and value of aerodynamic device investments for use by fleet managers and other industry professionals.

### RP Updates (S.11)

Chairman: Bob Wessels, Retired Silver Spark Plug, (731) 463-4350

This Task Force will update Recommended Practices within S.11 as needed.

### 55 vs 65+ Technical Report Update

Chairman: Doug Memering, Cummins, Inc., (812) 377-2415

This Task Force will update TMC's information report entitled "55 vs. 65+," covering the effect of higher speeds on fuel economy.

### RP 1115 Update (Fuel Economy Benefit Claim)

Chairman: Sam Waltzer, EPA, (202) 343-9175

This Task Force will update RP 1115 dealing qualifying questions for products that claim a fuel economy benefit.

### Future Energy Conservation and Alternative Energy Implementation Elements (Joint S.11/FT)

Chairmen: Doug Memering, Cummins, Inc., (812) 377-2415

This Task Force will develop position papers that will challenge industry to implement change in practices and performance as it relates to energy conservation.

### Terminal Tractor Powertrain Options

Chairman: Patrick Seeberg, Meritor, Inc., (248) 435-1382

This Task Force will develop a recommended practice on alternatively fueled spec'ing options for terminal tractor powertrains.

### RP 1105 Update (Idle Limiting Systems)

Chairman: Brad Wilson, Titan Transfer, Inc., (931) 488-0308

This Task Force will update RP 1105 dealing idle limiting systems for heavy-duty commercial vehicles.

### RP 1112 Update (Lightweight Components Effect on Fuel Economy)

Chairman: Celeste Herpel, Airodyne Industries, (248) 548-3336

This Task Force will review the current relevance of RP 1112 Lightweight Components Effect on Fuel Economy and the need for revisions, if necessary.

## S.12 – ON-BOARD VEHICLE ELECTRONICS

### RP 1210C Update (Windows API)

Chairman: Ken DeGrant, Diesel Laptops, (888) 983-1975

This Task Force will update RP 1210C, Windows Application Program Interface.

### RP 1210 OEM Application Validation Testing

Chairman: Lee Long, Southeastern Freight Lines, (803) 794-0047

This Task Force will develop a recommended practice to help vendors of vehicle datalink adapters (VDAs) conduct validation testing of their devices to original equipment manufacturer (OEM) vehicles/equipment.

### RP Updates (S.12)

Chairman: Ken DeGrant, Diesel Laptops, (888) 983-1975

This Task Force is updating S.12 Recommended Practices as needed.

### Electronic Logging Devices

Chairman: Michael Ahart, Omnitracs, LLC, (469) 801-2510

This Task Force is developing recommended practices for emerging electronic on-board recorder devices.

### Connected Vehicle

Chairman: Michael Ahart, Omnitracs, LLC, (469) 801-2510

This Task Force is developing a technical policy advisory based on the notice of proposed rulemaking on connected vehicle technologies issued by the National Highway Traffic Safety Administration (NHTSA). The task force will attempt to review technical implementation concerns associated with connected vehicle technologies as well as security, driver interaction issues.

### RP 1226 Messaging Standardization

Chairman: Chuck Villa, Volvo Trucks, charles.villa@volvo.com

This Task Force is developing a recommended practice that defines messages and standards for RP 1226, which covers telematics and on-board diagnostic accessory connectors.

### RP 1210 Compliance

Chairman: John Bate, Volvo Trucks, (336) 393-2000

This Task Force will develop recommendations for ensuring industry compliance among manufacturers and suppliers with TMC RP 1210, Windows Application Program Interface.

### RP 1227 Update Mobile Device Communication API

Chairman: Chris York, Cummins, (812) 377-5722

This Task Force will establish a recommended practice for an application program interface (API) between the physical datalink (i.e., CAN/J1939), a vehicle datalink adapter (VDA) and mobile device software applications for onboard electronic control unit communications.

## S.14 – LIGHT- AND MEDIUM-DUTY & SPECIALTY TRUCKS

### RP Updates

Chairman: Paul Wion, Charter Cable, (585) 362-3716

This Task Force will update Recommended Practices within S.14 as needed.

### Work Truck Platform Hybridization

Chairman: Paul Wion, Charter Cable, (585) 362-3716

This Task Force will explore application of hybrid powertrains to work-performing platforms/systems in Class 2-6 and vocational vehicles.

### RP 1431 Update (Fuels and Motive Energy Label)

Chairman: Paul Wion, Charter Cable, (585) 362-3716

This Task Force will update RP 1431 which covers design guidelines for fuels and motive energy advisory annotations and warning labels.

### RP 1514 Update (Hydraulic System Failure Analysis)

Chairman: Paul Wion, Charter Cable, (585) 362-3716

This Task Force will update RP 1514 which covers hydraulic system failure analysis on light- and medium-duty trucks.

### RP 1412 Update (Walk-in Van Electrical System Routing/Load Requirements)

Chairman: Lou Stumpp, Navistar, Inc., (317) 892-3054

This Task Force will update RP 1412 covering walk-in van electrical system routing/load requirements for light- and medium-duty vehicles.

## **RP 1411 Update (Light- & Med.-Duty Auto Transmission Fluid Guidelines)**

*Chairman: Paul Wion, Charter Cable, (585) 362-3716*

This Task Force will update RP 1411 covering automatic transmission fluid guidelines for Class 2-6 and vocational vehicles.

## **Inspection of CMV Axle and Transmission Fluid Levels**

*Chairman: Lou Stumpp, Navistar, Inc., (317) 430-3577*

This Task Force will develop Recommended Practice to correctly inspect fluid levels in axles and transmissions of Commercial Motor Vehicles.

## **S.16—SERVICE PROVIDER**

### **RP Updates**

*Chairman: Peter Savage, Clarke Power Services, Inc., (513) 719-2313*

This Task Force will update S.16 Recommended Practices as needed.

### **Implementing TMC RPs in Fleet and Service Provider Operations**

*Chairmen: Jill Gingrich, Wheeltime Network, (313) 475-3135;*

*Brad Olsen, FedEx Freight, (870) 704-5247*

This Task Force will develop guidelines for implementing/utilizing TMC recommended practice in fleet and service provider operations.

### **Safety Guidelines for Mobile Maintenance**

*Chairman: Jerry Bodkins, RoadSquad OnSite, (440) 808-3239*

This Task Force will develop safety recommendations for vehicle technicians performing mobile maintenance tasks.

### **Developing and Leveraging Next Generation Leaders**

*Chairman: Robert Jameson, Clarke Power Services, Inc, (317) 519-3154*

This Task Force will develop recommendations for programs that develop and foster next generation leadership in service provider operations.

### **Refinishing to Maximize Adhesion**

*Chairman: Chris Sterwerf, Fairfield Auto & Truck Svc., (513) 874-5857*

This Task Force will develop recommendations for Heavy Duty Collision Repairs (HDCR) to improved paint and coatings adhesion during the refinishing operation.

### **Heavy-Duty Collision Repair Roadmap**

*Chairman: Joey Fassett, Al's Automotive, (207) 232-8167*

This Task Force will develop a roadmap/flowchart for the steps needed to take a truck or trailer involved in a collision and make it road ready and safe for service. The flowchart will consider safety, cost and equipment utilization, and identify areas for future Task Force development.

### **Frame Correction**

*Chairman: Bill Hinchcliff, Truck Frame and Axle Association, (585) 703-4295*

This Task Force will develop guidelines and practices for fleets and collision repair operations to return damage frames to proper specifications in order for the vehicle to function safely.

### **Proper Vehicle Lifting Procedures and Equipment**

*Chairman: Radu Pop, Stertil-Koni, (470) 717-3127*

This Task Force will develop recommended practices to help shop managers choose the correct types of lifting equipment for their type of maintenance operations, and general safety, productivity and ergonomic considerations.

## **S.17 — CORROSION CONTROL**

### **Cab and Controls Corrosion Control**

*Chairman: Tim Brune, Automotive International, Inc., (513) 489-7883*

This Task Force will develop guidelines for dealing with corrosion as it relates to cab and control systems.

### **Corrosion of Non-Ferrous Materials on Chassis and Suspension**

*Chairman: Brian Herrington, Atro Engineered Systems, Inc., (216) 970-4066*

This Task Force will investigate the impact of corrosion on rubber on chassis and suspension components.

### **Corrosion Manual Update**

*Chairman: Dennis Winn, Accuride Corp, (660) 651-7468*

This Task Force will update TMC's *Corrosion: Complaint, Cause and Correction Manual*.

## **S.18 – AUTOMATED & ELECTRIC VEHICLES**

### **Electrified Vehicles**

*Chairman: Kevin Otto, Retired Silver Spark Plug, (812) 447-9311*

This Task Force is exploring the need for recommended practices, information reports and/or position papers on medium- and heavy-duty electric trucks.

### **Platooning**

*Chairman: Richard Bishop, Richard Bishop Consulting, (443) 695-3717*

This Task Force is exploring the need for recommended practices and developing a position paper on autonomous truck technologies.

### **Automated Vehicles**

*Chairman: Ananda Pandey, ZF TRW, (765) 429-1770*

This Task Force is exploring the need for recommended practices, information reports and/or position papers on medium- and heavy-duty automated trucks.

*“TMC is going in the right direction with tackling equipment maintenance issues. TMC and I have similar goals: to make our equipment more reliable and I plan on being part of making that happen,”*

*— Daniel Mustafa,  
asst. manager  
tech. development,  
TravelCenters of  
America.*





## PROFESSIONAL TECHNICIAN DEVELOPMENT COMMITTEE

### Technician/Student Skills Competition

*Chairman: Randy Patterson, Bridgestone Comm. Solutions, (601) 209-1946*

This Task Force is developing procedures for implementing a national technician and student skills contest under the auspices of TMC.

### Future Technician Scholarships

*Chairman: Robert Bazzel, ALCOA Wheels, (216) 633-5357*

This Task Force is examining means of establishing technician scholarship programs.

### Fostering State Trucking Association Competitions

*Chairman: Bonne Karim, Retired Silver Spark Plug, (405) 641-5241*

This Task Force is examining means of establishing state trucking association competitions for technician excellence that participate in TMC SuperTech.

## EDUCATOR COMMITTEE

### Educator Involvement

*Chairman: George Arrants, ASE, (281) 850-1676*

This Task Force will develop recommendations for increasing educator involvement in ATA's Technology & Maintenance Council.

### Curriculum Development

*Chairman: Erin Brennan, Cengage Learning, (518) 348-2490*

This Task Force will develop recommendations for improvement of technician school curriculum programs.

### PMI Manual Updates

*Chairman: Sean Bennett, Cengage Learning, (705) 932-3109*

This Task Force will update TMC's suite of preventive maintenance inspection (PMI) manuals in coordination with other council study groups.

### NATMI Curriculum Advisory

*Chairman: Robert Braswell, TMC, (703) 838-1776*

This Task Force will develop recommendations and materials for the curriculum of the North American Transportation Management Institute's (NATMI) Certified Director/Supervisor of Maintenance programs.

### Credentials for Truck Program Instructors

*Chairman: Christie Toland, Gentry School District, (479) 736-2234*

This Task Force will develop recommendations for documenting the qualifications of instructors in technician school programs.

### Grant Writing for Medium/Heavy Truck Programs

*Chairman: Christie Toland, Gentry School District, (479) 736-2234*

This Task Force will develop guidelines to assist technician training program operators identify and develop proposals to qualify and obtain educational grants for their programs.

## FUTURE TRUCK COMMITTEE

### Future Electrical/Electronic Systems

*Chairman: Al Lesesky, Vehicle Enhancement Systems, (440) 241-3598*

This Task Force keeps abreast of the latest in heavy-duty electrical systems and explores new and emerging electrical/electronic system technologies. The Task Force then makes these new technologies known to TMC members and provides information on benefits and possible problems and solutions.

### Future Tire Durability & Reliability

*Chairman: Anthony Reese, Michelin, North America, (404) 626-0163*

This Task Force will attempt to discover causes and solutions to problems that limit tire durability and reliability in order to reduce tire operating costs. All causes of tire failures—including operation hazards, maintenance problems, manufacturing defects and retread and repair errors—will be addressed.

### Future Cab and Driver Interface

*Chairman: John Adami, NW Heavy Duty, Inc., (425) 633-4309*

This Task Force keeps abreast of the latest issues and information affecting the tractor and the driver. At present it is dealing with driver interface issues.

### Future Trailer Productivity

*Chairman: Chris Lee, Great Dane, (912) 644-2250*

The Future Trailer Task Force keeps TMC members abreast of the latest in trailer technology, including aerodynamics, and addresses feasibility of new trailer technologies.

### Sensor-Enhanced Maintenance

*Chairman: Wally Stegall, The Morey Corp., (630) 842-0489*

This Task Force will explore application of sensor-enhanced maintenance technologies to commercial vehicles.

### Future Energy Conservation (Joint S.11/FT)

*Chairman: Doug Memering, Cummins, Inc., (812) 377-2415*

This Task Force will develop position papers that will challenge industry to implement change in practices and performance as it relates to energy conservation.

### Future Chassis and Brake Systems

*Chairman: Eric Bengel, Walmart Transportation, (479) 277-9855*

The purpose of this task force is to develop position papers and information reports that will challenge industry to implement changes in practices and performance as it relates to chassis and brake systems.

### Future Virtual/Augmented Training

*Chairman: Andrew Summers, Phillips Industries, (562) 846-5864*

This Task Force will explore the application of virtual/augmented training simulation software to commercial vehicle maintenance.

### Future Alternate Propulsion System

*Chairman: Lou Stumpp, Navistar, Inc., (317) 892-3054*

This Task Force will explore the future alternate options for vehicle propulsion in commercial vehicles.

*"Sitting through one meeting quickly made me realize how this is a tightly knit industry...much like a family. Having a chance to participate in developing RPs is very exciting especially since I utilize the RPs myself. TMC is also about connecting with like-minded people and developing relationship that will hopefully last a lifetime. I'm open to helping in other areas... and looking for where I can be most useful."*

*— Gary Miller,  
fleet service  
manager,  
Volvo*





# FUTURE TMC MEETINGS

**2020 ANNUAL MEETING &  
TRANSPORTATION TECHNOLOGY EXHIBITION  
FEBRUARY 24-27, 2020  
GEORGIA WORLD CONGRESS CENTER  
ATLANTA, GA**

**2020 FALL MEETING & NATIONAL TECHNICIAN  
SKILLS COMPETITIONS  
SEPTEMBER 20-22 (COMPETITIONS)  
SEPTEMBER 22-24 (FALL MEETING)  
RALEIGH CONVENTION CENTER  
RALEIGH, N.C.**

# TMC

**TURNING EXPERIENCE INTO PRACTICE**

**TECHNOLOGY & MAINTENANCE COUNCIL  
AMERICAN TRUCKING ASSOCIATIONS, INC.  
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