VMMC

Vehicle Maintenance/Management Conference

March 26 – 28, 2013

Shoreline Community College
Professional Automotive
Training Center

Shoreline, Washington

Thanks

On behalf of the Vehicle Maintenance Management Conference Committee, we gratefully acknowledge and appreciate the efforts of our chair:

Gene Jakubczak, City of Spokane

The following committee members have also volunteered their time and efforts to bring together a group of fine, qualified speakers.

- **David Adler,** WA State Dept. of Ecology
  Mike Leslie, Truck Lite Co.
  Jerry Baarson, CARQUEST Technical Institute
  John Lightner, Cummins Northwest, LLC
  Jason Bailey, The Boeing Company Seattle Automotive
  Mel Lofquist, Cummins Northwest, Inc.
  Phil Barto, Fleet Engineering Services
  Jon Losey, King County Metro
- **Bryan Bazard,** WA State Fleet Operations
  David May, Snap-On Industrial
  David Bianchi, B & G Machine, Inc.
  Ron Melcher, Grant County PUD
  Scott Bittler, TEXEX Utilities
  Nolan Merkley, Merkley's Mobile Maintenance
  Dan Brand, King County Metro
  Elizabeth O'Neil Nelson, Polaris Lab.LLC
- **John Breland,** Freedom Truck Centers, Inc
  Jerry Olson, Idaho Power Company
  Larry Cameron, The Boeing Company
  Dale Overton, Accuride Corporation
- **Les Candee,** Alaska Marine Lines, Inc.
  Ken Pagel, Operating Engineers Regional Training Program Joint Apprenticeship & Training Committee (JATC)
- **Bob Carlson,** City of Everett
  Ron Printz, GTS Interior Supply
  Rich Cetnarowski, Tire Distribution Systems
  Dean Rene, Boeing
  Don DePiero, City of Portland
  Ed Schaplow, Allview Services, Inc.
- **Bill DeRousse,** City of Everett [Ret.]
- **George Schillinger,** Parker Hannifin / Racor Div.

Cyndie Eddy, City of Lynnwood
Wayne Schulz, Valley Freightliner, Inc.
Ron Edwards, Federal Express Corporation
Alex Senf, Altec Industries, Inc
Dan Flanagan, Automotive Service Excellence [Ret.]
Todd Shepler, City of Bellevue
Ralph Goodwin, Diversified Inspections / ITL
Ray Shjerven, Bates Technical College
○ **Jim Hall,** R.H. Sheppard Company, Inc [Ret.]
Jerry Smith, Parts & People / Northwest Edition
○ **Greg Hansen,** WA State Dept. of Transportation
Gary Splattstoesser, Benton PUD
Art Herrnberger, ArvinMeritor
Dirk Sullivan, Roadranger Marketing
Jay Johnson, Cummins Filtration (a Division of Cummins Engines, Inc.)
Kim Svidran, WA State Fleet Operations
Hugh Jonson, Diesel Engine Emission Control, Inc. (DEEC)
○ **Kerry Swayne,** WA State Dept. of Ecology
○ **Ron Kahler,** University of Washington
Ben Taves, South Seattle Community College
Russ Kaleese, City of Cottage Grove
Dan Walters, Parker Hannifin / Racor Div.
Bob Kimble, Michelin Tire Co.
Dave Walters, ALCOA Wheel Products
○ **Pat Weiler,** TEREX Utilities

○ = *Steering Committee Members*

Continuing Education Units

Continuing Education Credits (CEUs) are available for $10 each. Attendees may earn up to two (2) CEU credits. Please indicate on the registration form if you wish to receive CEUs. Attendee must register and pay prior to the conference in order to receive credits. Once the attendee arrives at the conference they will receive a form that needs to be filled out and turned in to the registration desk in order to receive credit.

To receive CEUs, pay the fee with your registration, obtain a CEU enrollment form from the conference desk upon arrival, complete it before the conference starts, and attend at least 80% of the conference. CEUs are nationally recognized units of achievement that may be used as evidence of professional development and for job advancement. Contact WSU Conference Management at (800) 942-4978 or (509) 335-3530 for an official copy of your CEU transcript.

03.26 Tuesday

7:00 am	Registration	
8:00 am	**Period 1** Opening Remarks & Keynote	
9:45 am	Tech Challenge	2104
10:15 am	**Period 2**	
2.2A	Insite Class (Part I)	2106
2.4	Tires & Wheels: Tires 1ST OFFERING	2110
2.5	Tires & Wheels: Wheels 1ST OFFERING	2114
2.6	No Code Diagnosis	2105
2.7	Specialty Vehicle Design: Super Dumps	2107
2.8	Engine Filtration	2111
2.9	Alternative Fuel “Infrastructure”: What Does That Mean?	2115
2.10	ASE Automotive Test Prep	2150
11:45 am	Tech Challenge	2104
1:30 pm	**Period 3**	
2.2B	Insite Class (Part II)	2106
3.3	Propane Auto Gas	2108
3.4	Tires & Wheels: Tires 2ND OFFERING	2110
3.5	Tires & Wheels: Wheels 2ND OFFERING	2114
3.6A	Hands-on Hydraulics 1ST OFFERING	2105
3.7	Use of RFPs to Get What You Want	2107
3.8A	Current Probe Diagnosis	2111
3.10	ASE School Bus Test Prep	2150
3:00 pm	Tech Challenge	2104
3:30 pm	**Period 4**	
2.2C	Insite Class (Part III)	2106
4.3	Lighting System Maintenance	2108
4.5	Digger Derrick Inspection	2114
3.6B	Hands-on Hydraulics 1ST OFFERING	2105
4.7	Developing a Shop Rate	2107
3.8B	Current Probe Diagnosis	2111
4.10	Fluid Inventory Control Systems	2150

Tuesday
March 26

Period 1: Keynote

8:00 – 9:30 am

Don't Just Bet on an Alternative Fuel, Know How to Choose Wisely...& Win!

Darren Engle, Blue Star Gas

Choosing an alternative fuel can be a tricky business with sometimes surprising consequences. Remember when Ethanol seemed to be the best answer? Alternative fuel choice has so many independent variables, how can you choose wisely?

We automatically think about cost, environmental advantages, and energy security, but how do you consider the benefits of infrastructure expense, payload, range, supply chain, fill time and many other factors?

Don't gamble on finding the best answer for your fleet. Come and learn which alternative fuel best fits your fleets needs.

Moderator: Gene Jakubczak, City of Spokane

Break

9:45 – 10:15 am

Tech Challenge

The VMMC Tech Challenge consists of a set of four tests of approximately ten questions each for a total of 40 questions. The test questions are ASE-style multiple choice test questions. Prizes will be awarded to the top over-all finishers.

Moderator: Jon Losey, King County Metro

Period 2

10:15 – 11:45 am

2.2A Insite Class (Part 1 of 3)

John Hernandez, Cummins Northwest LLC

Insite (Service & Diagnostic Tool) is used to program, diagnose and troubleshoot all Cummins electronically controlled engines, Work order images, feature and parameter adjustment, data logging, calibration transfers are all included in the class. Students are encouraged to bring their own laptop computers to use in class. A training engine will also be available to hook up to.

Moderator: John Lightner, Cummins Northwest LLC

2.4 Tires & Wheels: Tires (1st Offering)

Bob Kimble, Michelin Tire Company
& Cecil Boyd, Bandag

Selecting Tires That Meet Your Objectives. This session will cover the process fleets undertake when prioritizing criteria for new tire and retread selection. Whether it's fuel economy, longevity, or traction that take precedence in your operation, we will take a hands on approach to analyzing tire manufacture and design to meet your goals. We will close the loop by identifying and addressing wear conditions and operational issues that impact your choice of tires once in service.

Smart Way Tire Tread Design. This design is gaining popularity in California. Is it appropriate for your fleet? See the design in a hands on presentation of the product and why it is gaining in popularity.

Moderator: Rich Cetnarowski, Tire Distribution Systems

2.5 Tires & Wheels: Wheels (1st Offering)

Gerald Dunn, Tire Distributiion Systems,
J. David Walters, ALCOA Wheel & Forged Products,
Jay Gorman, Accuride Corp., & Brandon Uzarek,
Accuride Wheel End Solutions

See the proper method and techniques used for attachment of a tire/wheel assembly to an axle. Insure that your fleets procedures are correct so as to prevent any wheel off situations.

Wheel Off Situations. What is your fleet doing to insure that they never happen in your fleet? See components from an actual wheel off situation and learn the root causes of such situations.

Moderator: Les Candee, Alaska Marine Lines, Inc.

2.6 No Code Diagnosis

Ed Schaplow, Allveiw Services

Today's second-generation On-Board Diagnostics II (OBD II) can be extremely sophisticated because the OBD II Powertrain control modules (PCMs) in modern vehicles have far more computing capacity than did the older, pre-1996 OBD I vehicles. Nevertheless, we occasionally have to deal with a no-code performance complaint on a modern OBD II vehicle. In this session learn how to proceed diagnosing these complaints.

Moderator: Kerry Swayne, WA State Dept. of Ecology

2.7 Specialty Vehicle Design Case Study: Dump Trucks Then & Now

Gene Jakubczak, City of Spokane, John Breland, Freedom Truck Centers, Inc, & Steve Rutherford, OSW Equipment & Repair, Inc

Dump truck design parameters have dramatically changed over the years. Current configurations allow up to 80,000 lb. GVW. Attend this session to explore alternative configurations and determine which one best meets the needs of your application.

Moderator: Gene Jakubczak, City of Spokane
& John Breland, Freedom Truck Centers, Inc

2.8 Engine Filtration

Joe Jenkins, Parker Hannifin Racor Division

The latest technology in engine filtration.

Moderator: David Adler, WA State Dept. of Ecology

2.9 Alternative Fuel "Infrastructure": What Does That Mean?

Darren Engle, Blue Star Gas

Isn't "Infrastructure" just a pump, a dispenser and a source of supply? Not really. Your choice of an alternative fuel needs to be closely matched with the fuel(s) that fit your fleet, but that is only the beginning. What about cost? Maintenance? What fire safety and electrical codes will you come to know before you take your first delivery?

How do you leverage the benefit of having on-site fueling? What about integration of your legacy fuel management software? What, besides vehicles, can you power with alternative fuels and how can they save you and your fleet the kind of money that makes your manager/owner smile? Did you know that there is a whole range of alternative fueled equipment including generators and landscaping equipment that can save even more money while "greening" your operation?

Mr. Darren Engle—National Chairman of the PERC Research and Technology Development committee—will address fueling options for fleets adopting Propane AutoGas. He will present the Alliance AutoGas integrated program for setting up your own fueling station, provisioning of the fuel, and the integration of dispenser data into preexisting fuel and fleet management systems. This session will cover the questions and answers to these and other important questions. We plan to allow time for Q & A to address the most important aspects of your alternative fuel infrastructure —implementation.

Moderator: Kim Svidran, WA State Fleet Operations

2.10 ASE Automotive Technician Test Prep

Walt Commans, Automotive Service Excellence

In this session, we will look at the background of ASE, how the tests are put together, and the separate tests in the Automotive series as well as test taking tips.

Walt Commans has over 40 years experience in the Automotive aftermarket, and has been holding

the ASE test taking workshop in the western states for the last eight years—working with Fleet, School Bus, Automotive and Collision Techs on how to prepare for the ASE certification tests. This session will focus on how to read the different types questions so you *know* what is being asked. We will also look at the new online computer tests, and what to expect at the test center.

ASE is a not-for-profit organization providing independent professional certification for technicians, service consultants, parts specialists and other automotive service professionals in the OE and aftermarket industry segments.

Moderator: TBD

Lunch

11:45 – 1:30 pm

Period 3

1:30 – 3:00 pm

2.2B Insite Class (Part 2 of 3)

John Hernandez, Cummins Northwest LLC

Continuation of 2.2A.

Moderator: John Lightner, Cummins Northwest LLC

3.3 Propane Auto Gas, Your Fuel of the Future Is Already Here

Jeff Stewart, Blue Star Gas

In this panel discussion, you will hear directly from fleet managers, equipment providers and conversion technicians about their experience in converting their fleets to propane Autogas. Several Autogas powered vehicles will be on display from your inspection.

Moderator: Mike Leslie, Truck Lite Co.

3.4 Tires & Wheels: Tires (2nd Offering)

Bob Kimble, Michelin Tire Company
& Cecil Boyd, Bandag

Selecting Tires That Meet Your Objectives. This session will cover the process fleets undertake when prioritizing criteria for new tire and retread selection. Whether it's fuel economy, longevity, or traction that take precedence in your operation, we will take a hands on approach to analyzing tire manufacture and design to meet your goals. We will close the loop by identifying and addressing wear conditions and operational issues that impact your choice of tires once in service.

Smart Way Tire Tread Design. This design is gaining popularity in California. Is it approriate for your fleet? See the design in a hands on presentation of the product and why it is gaining in popularity.

Moderator: Rich Cetnarowski, Tire Distribution Systems

3.5 Tires & Wheels: Wheels (2nd Offering)

Gerald Dunn, Tire Distributiion Systems, J. David Walters, ALCOA Wheel & Forged Products, & Jay Gorman, Accuride Corporation

See the proper method and techniques used for attachment of a tire/wheel assembly to an axle. Insure that your fleets procedures are correct so as to prevent any wheel off situations.

Wheel Off Situations. What is your fleet doing to insure that they never happen in your fleet? See components from an actual wheel off situation and learn the root causes of such situations.

Moderator: Les Candee, Alaska Marine Lines Inc

3.6A Hands on Hydraulics (1st Offering, Part 1 of 2)

Clark Anderson, FORCE America

An on-going conference favorite, Clark Anderson of Force America will provide training on basic hydraulics including theory, components of functionality and troubleshooting. Hydraulics must be viewed as a

system rather than a collection of components. There will be an opportunity to examine several components for hands-on discovery and failure analysis.

Moderator: John Breland, Freedom Truck Centers, Inc.

3.7 How to Get What You Need by Using a Request for Proposal (RFP)

Bill DeRousse, City of Everett [Ret.]

Are you looking to purchase a Fleet Management software system or any other non-traditional product? We will review the process of using a Request for Proposal (RFP) and why it brings structure to your procurement decision. You will see why a RFP reduces the risk of receiving a product that does not perform as expected, since you are required to detail out what you want the product or service to do. We will discuss a RFP's performance objectives and how to write a RFP. We will look at why you would want to use a RFP instead of a Request for Quote/Bid (RFQ), and learn what an Operational Request (OR) is and how it is related to a RFP. We will discuss each step as it relates to the RFP process.

Moderator: Ken Pagel, Operating Engineers Regional Training Program Joint Apprenticeship & Training Committee (JATC)

3.8A Current Probe Diagnostics

Jerry Baarson, CARQUEST Technical Institute

The use of a low amp current probe and a digital storage oscilloscope has become one of the most valuable tools in a diagnostic technician's toolbox. This course covers fuel pump, fuel injector and primary circuit analysis. Learn to analyze new systems, analyze primary on/off oscillations, ignition module information, apply scope setups to your advantage, gain confidence and learn not to over analyze the wave form.

Moderator: Bob Carlson, City of Everett

3.10 ASE School Bus Technician Test Prep

Walt Commans, Automotive Service Excellence

In this session, we will look at the background of ASE, how the tests are put together, and the separate tests in the School Bus series as well as test taking tips.

Moderator: David Adler, WA State Dept. of Ecology

Break

3:00 – 3:30 pm

Tech Challenge

Moderator: Jon Losey, King County Metro
& Pat Weiler, TEREX Utilities

Period 4

3:30 – 5:00 pm

2.2C Insite Class (Part 3 of 3)

John Hernandez, Cummins Northwest LLC

Continuation of 2.2A, B.

Moderator: John Lightner, Cummins Northwest LLC

4.3 Lighting System & Harness Maintenance

Mike Leslie, Truck-Lite Co. Inc

Learn how to troubleshoot, diagnose and repair wiring harness issues and failures using new technology.

Moderator: Kerry Swayne, WA State Dept. of Ecology

4.5 Digger Derrick Inspection & Operator Certification Requirements

Jim Olson, Terex Utilities
& Rob Scherbartn, Overton Safety

Become familiar with expanded ANSI A10.31 digger derrick standards and the OSHA requirements for inspections, Operator Certification, and maintenance.

Moderator: Pat Weiler, TEREX Utilities

3.6B Hands on Hydraulics (1st Offering, Part 2 of 2)

Clark Anderson, FORCE America

Continuation of 3.6A (Part 1).

Moderator: John Breland, Freedom Truck Centers, Inc.

4.7 Developing Your Hourly Shop Rate: Is Your Rate Competitive?

Bill DeRousse, Retired from City of Everett

What costs associated with running your fleet department should be part of your shop rate? Are you running a business? How does your equipment cost per mile/hour affect your rates? Does older equipment increase your rates as much as the capital cost for new equipment? Your rate must be calculated the same as your local Ford/Chevy dealer within your business area as they are your primary competition. How do I handle a bid to privatize my fleet operation?

Moderator: Don DePiero, City of Portland

3.8B Current Probe Diagnostics

Jerry Baarson, CARQUEST Technical Institute

Continuation of 3.8A

Moderator: Bob Carlson, City of Everett

4.10 Where Did Our Lubricants Go?? Fluid Inventory Control Systems

Glenn Holmgren, Balcrank Corporation & Sandy Babin, Dyna-Flow, LLC (Balcrank Representative in the PNW)

In the current world of lubrication, synthetic fluids continue to be introduced at very high costs to the end user. With extended intervals between oil changes and inventory control considerations, the fluids are many and the challenges managing and accurately monitoring these fluids are difficult. Let us help you gain a better understanding of how to manage, secure and control your fluid inventory with a Fluid Management System.

Moderator: Gene Jakubczak, City of Spokane

03.27 Wednesday

8:00 am	**Period 5**	
5.1A	Codes to Completion (Part I)	2104
5.2A	Cummins ISL-G Engine (Part I)	2106
5.3	Battery Recovery: The Total Impact	2108
5.5	Steering Angle Sensors	2114
5.6A	Hands-on Hydraulics (Part I) 2ND OFFERING	2105
5.8A	New Vehicle Technologies (Part I)	2111
5.10	ASE Truck Test Prep	2150
5.11A	Best Practices for Fleet Operations (Part I)	2162
9:30 am	Tech Challenge	2104
10:00 am	**Period 6**	
5.1B	Codes to Completion (Part II)	2104
5.2B	Cummins ISL-G Engine (Part II)	2106
6.4	Metallurgy: Failure Analysis	2110
6.5	Alignments: How To Read the Numbers	2114
5.6B	Hands-on Hydraulics (Part II) 2ND OFFERING	2105
5.8B	New Vehicle Technologies (Part II)	2111
6.10	Cooling Systems 101	2150
5.11B	Best Practices for Fleet Operations (Part II)	2162
11:30 am	Tech Challenge	2104
	Technician's Roundtable	2108
1:00 pm	**Period 7**	
7.1	California Diesel Truck Regulations	2104
5.2C	Cummins ISL-G Engine (Part III)	2106
7.4	Welding Machine Selection	2110
7.6A	Hands-on Hydraulics (Part I) 3RD OFFERING	2105
7.8A	Diagnostics: Waveform Analysis (Part I)	2111
7.9A	Adv. Level Comeback Prevention (Part I)	2115
7.10A	Fluid Analysis	2150
5.11C	Best Practices for Fleet Operations (Part III)	2162
2:30 pm	Tech Challenge	2104
3:00 pm	**Period 8**	
8.1	General Diesel Exhaust Retrofit	2104
5.2D	Cummins ISL-G Engine (Part IV)	2106
7.4	Welding Demonstration	2110
7.6B	Hands-on Hydraulics (Part II) 3RD OFFERING	2105
7.8B	Diagnostics: Waveform Analysis (Part II)	2111
7.9B	Adv. Level Comeback Prevention (Part II)	2115
5.11D	Best Practices for Fleet Operations (Part IV)	2162

Wednesday
March 27

Period 5

8:00 – 9:30 am

5.1A Codes to Completion (Part 1 of 2)

David May, Snap On Industrial

Discover Diagnostic Strategies to help solve common (and not so common) problems, increase productivity, and prevent comebacks. This three-hour session includes diagnostic Case Studies that demonstrate how to approach vehicle diagnostics. Case Studies range from simple problems using a scanner to complex vehicle problems requiring multi-trace lab scopes to diagnose.

Moderator: Ron Kahler, Univerisity of Washington

5.2A The New Cummins ISL-G Natural Gas Engine (Part 1 of 4)

John Hernandez, Cummins Northwest LLC

The course teaches a technician the design and theory of operation of the new ISL-G stoichiometric natural gas engine. Emphasis is placed on the CM2180A electronic control system, compressed natural gas (CNG), liquid natural gas (LNG), and natural gas fuels. Also covered is troubleshooting skills, service and maintenance procedures, safety procedures, service tools, Insite communications and exhaust after-treatment.

Moderator: John Lightner, Cummins Northwest LLC

5.3 Battery Recovery: The Total Impact

Mark Abelson, PulseTech Products Corporation

What do you do with your used batteries? Green your fleet. Learn how to save money and save the environment at the same time by recovering 100% of your discarded batteries.

Moderator: Kerry Swayne, WA State Dept. of Ecology

5.5 Steering Angle Sensor: Description, Diagnosis & Liabilities

Mark Olson, Future Forensics

Over 25 million vehicles require the Steering Angle Sensor reset during service. All new vehicles will be manufactured with Electronic Stability Control. Many will require an SAS reset. Today adaptive control systems in motor vehicles contribute significantly to increasing driving safety.

Resetting the Steering angle sensor is required on some vehicles after a wheel alignment. The Steering angle sensor is part of the following systems on many vehicles: traction control, lane departure warning, lane keeping assist, blind spot detection, rollover protection, electronic stability control, trailer sway control, self-park and many other systems. Many vehicles require the steering angle sensor to be reset after wheel alignment or any other service that deals with the steering system or the steering angle sensor so these systems function properly.

This seminar will explain how the systems work, what systems the steering angle sensor affects and how to reset the system and some of the liabilities associated with not performing the service when it is required.

Moderator: Jim Hall, R.H. Sheppard Company, Inc. [Ret.]

5.6A Hands on Hydraulics, 2nd Offering (Part 1 of 2)

Clark Anderson, FORCE America

An on-going conference favorite, Clark Anderson of Force America will provide training on basic hydraulics including theory, components of functionality and troubleshooting. Hydraulics must be viewed as a system rather than a collection of components. There will be an opportunity to examine several components for hands-on discovery and failure analysis.

Moderator: Nolan Merkley, Merkley's Mobile Maintenance

5.8A New Vehicle Technologies (Part 1 of 2)

Jerry Baarson, CARQUEST Technical Institute

This three-hour course is designed to take an in-depth look at how the automotive industry is preparing for the federally mandated changes in fuel economy and carbon dioxide emissions. This course intends to show how each manufacturer will tackle the future needs of the federal mandates whether it be new engine families or improved body designs to reduce weight there are a variety of ways that the new mandates can be met. Also covered are some new design and technological advances, which either are or will soon be available to the motoring public. Learn:

- New CO_2 requirements
- Reducing GHG (Green House Gasses)
- California ARB Report
- New technology approaches by Ford, GM, Kia, Mazda, VW/Audi, and Chrysler/Fiat to reduce GHG including engine design, transmission design, body designs, engine control systems, AC systems and refrigerant technology, etc.
- Octane Basics: The right fuel for the right engines
- Hydrogen fuel
- Diesel exhaust fluid
- Intelligent Cars: Cars that talk to each other.

Moderator: Kim Svidran, WA State Fleet Operations

5.10 ASE Truck Technician Test Prep

Walt Commans, Automotive Service Excellence

In this session, we will look at the background of ASE, how the tests are put together, and the separate tests in the Truck series as well as test taking tips.

Moderator: David Adler, WA State Dept. of Ecology

5.11A Best Practices for Fleet Operations (Part 1 of 4)

Kelly Walker, Kelly Walker Associates

This is an invaluable seminar that focuses on the best practices to dramatically improve your fleet operations. Kelly Walker is an industry-recognized presenter and expert in applying world-class financial and operational strategies to fleet, shop, parts, and fuel functions. Kelly will be discussing the latest trends in the fleet industry. Kelly has consistently received top reviews for his courses.

Moderator: Bryan Bazard, WA State Fleet Operations

Break

9:30 – 10:00 am

Tech Challenge

Moderator: Jon Losey, King County Metro

Period 6

10:00 – 11:30 am

5.1B Codes to Completion (Part 2 of 2)

David May, Snap On Industrial

Continuation of 5.1A.

Moderator: Ron Kahler, Univerisity of Washington

5.2B The New Cummins ISL-G Natural Gas Engine (Part 2 of 4)

John Hernandez, Cummins Northwest LLC

Continuation of 5.1A.

Moderator: John Lightner, Cummins Northwest LLC

6.4 Metallurgy: Failure Analysis

Randy Kent, Kent Engineering

Mechanical Failures, Why and How to Cure Them! Understanding what happened and why is the

key to any repair. Bring a photo of a failure that you've had and get the wisdom of a metallurgical engineers experience. Hear real world case studies of actual metal failure incidents presented.

Moderator: Les Candee, Alaska Marine Lines Inc

6.5 Alignments: How to Read the Numbers to Make Correct Alignment Decisions

Mark Olson, Future Forensics

In this session you will learn how to read an alignment printout and what each number means as it relates to tire wear, pulling and performance. Also, how to use steering axis inclination, included angle, set back and wheel base to accurately determine what is bent the first time without guessing.

Moderator: Russ Kaleese, City of Cottage Grove

5.6B Hands on Hydraulics, 2nd Offering (Part 2 of 2)

Clark Anderson, FORCE America

Continuation of 5.6A.

Moderator: Nolan Merkley, Merkley's Mobile Maintenance

5.8B New Vehicle Technologies (Part 2 of 2)

Jerry Baarson, CARQUEST Technical Institute

Contunation of 5.8A.

Moderator: Kim Svidran, WA State Fleet Operations

6.10 Cooling System 101

Jay F. Johnson, Dober of Glenwood

Are you doing the right things with your cooling systems? Ask the expert, learn the lastest things you should be seeing on your cooling system fluid analysis along with how to know when a piece of equipment is headed for an overheating situation.

Moderator: Jay Johnson, Dober of Glenwood

5.11B Best Practices for Fleet Operations (Part 2 of 4)

Kelly Walker, Kelly Walker Associates

Continuation of 5.11A.

Moderator: Bryan Bazard, WA State Fleet Operations

Lunch

11:30 – 1:00 pm

Technician Roundtable

Ed Schaplow, Allveiw Services Inc

The technician roundtable is for professional automotive and fleet technicians to openly discuss industry and technological changes to industry. Open to all technicians young and old. Come and express your ideas and opinions on how we can better our profession.

Moderator: Bob Carlson, City of Everett

Period 7

1:00 – 2:30 pm

7.1 California Diesel Truck Regulations

Sean Edgar, Clean Fleets

Do you have trucks traveling to California? This informative session will focus on providing rule compliance information in layman's terms while giving practical advice on how to report and comply. You can avoid being a statistic, as CARB can and will levy fines in their enforcement of these new rules. Sean Edgar has over a decade of experience in this subject matter.

Moderator: Dave Adler, WA State Dept. of Ecology

5.2C The New Cummins ISL-G Natural Gas Engine (Part 3 of 4)

John Hernandez, Cummins Northwest LLC

Coninuation of 5.1A, B.

Moderator: John Lightner, Cummins Northwest LLC

7.4 Welding Machine Selection

Mike Buell, Central Welding Supply

This session will provide information on various types and categories of welding power sources. Welding processes will be reviewed, advantages and disadvantages of various types of machines, intended applications, and product type selection will be covered.

7.6A Hands on Hydraulics, 3rd Offering (Part 1 of 2)

Clark Anderson, FORCE America

An on-going conference favorite, Clark Anderson of Force America will provide training on basic hydraulics including theory, components of functionality and troubleshooting. Hydraulics must be viewed as a system rather than a collection of components. There will be an opportunity to examine several components for hands-on discovery and failure analysis.

Moderator: Don PePiero, City of Portland

7.8A Diagnostic Strategies Using Waveform Analysis (Part 1 of 2)

Jerry Baarson, CARQUEST Technical Institute

Learn how to use waveforms to perform advanced diagnostics on today's vehicles.

Moderator: Russ Kaleese, City of Cottage Grove, OR

7.9A Advanced Level Comeback Prevention (Part 1 of 2)

Martin Petkovits, ACDelco

This three-hour seminar will focus on key service items related to various vehicle systems to prevent early failures of components. The seminar will provide proper service techniques to improve the technician's skills when replacing various on-vehicle components. The seminar will also cover some of the latest bulletins, service tips and diagnostics when servicing any of the following systems:

- Power steering pumps
- Generators and starters
- Fuel pumps, water pumps and heater cores
- A/C compressors
- EGR valves.

Moderator: Bob Carlson, City of Everett

7.10 Fluid Analysis

Lane Crandall, Oil Anaylsis Lab

Every fluid that your fleet uses has the to potential to be analyzed by a laboratory. Review what the relationship should be between your fleet and "your" lab. What should your lab be doing for your fleet? Is the presentation of a lot of data all that your lab does? What do you have to be providing to your lab? How does this partnership effect the cost of your fleet?

Moderator: Les Candee, Alaska Marine Lines, Inc.

5.11C Best Practices for Fleet Operations (Part 3 of 4)

Kelly Walker, Kelly Walker Associates

Continuation of 5.11A, B.

Moderator: Bryan Bazard, WA State Fleet Operations

Break

2:30 – 3:00 pm

Tech Challenge

Moderator: Jon Losey, King County Metro

Period 8

3:00 – 5:00 pm

8.1 General Diesel Exhaust Retrofit & Maintenance (Part 1 of 2)

John Lightner, Cummins Northwest Inc

Over the years there have been emissions retrofits installed on vehicles and equipment throughout the country. John will introduce you to the different levels of exhaust retrofits and the differences of CCV (Closed Crankcase Ventilation). He will discuss the differences of Level 1, Level 2, Level 3 and how to maintain them.

General Diesel Exhaust Retrofit & Maintenance (Part 2 of 2)

Hugh Jonson & Robb Robel, DEEC Inc

Hugh and Rob will be discussing the Oxy-Hydro system installation, care and feeding. They will demonstrate their way to clean the exhaust by creating a complete burning engine with zero emissions.

Moderator: Dave Adler, WA State Dept. of Ecology

5.2D The New Cummins ISL-G Natural Gas Engine (Part 4 of 4)

John Hernandez, Cummins Northwest LLC

Coninuation of 5.1A, B & C.

Moderator: John Lightner, Cummins Northwest LLC

8.4 Welding Demonstration

Dave Ciolek, The Lincoln Electric, Co.

Various welding processes will be demonstrated using different power supplies. Shielded Metal Arc (stick), Gas Tungsten Arc (TIG), and Gas Metal Arc (MIG) welding processes will demonstrated.

Moderator: Les Candee, Alaska Marine Lines Inc

7.6B Hands on Hydraulics, 3rd Offering (Part 2 of 2)

Clark Anderson, FORCE America

Continuation of 7.6A.

Moderator: Don PePiero, City of Portland

7.8B Diagnostic Strategies Using Waveform Analysis (Part 2 of 2)

Jerry Baarson, CARQUEST Technical Institute

Continuation of 7.8A.

Moderator: Russ Kaleese, City of Cottage Grove, OR

7.9B Advanced Level Comeback Prevention (Part 2 of 2)

Martin Petkovits, ACDelco

Continuation of 7.9A.

Moderator: Kerry Swayne, WA State Dept. of Ecology

5.11D Best Practices for Fleet Operations (Part 4 of 4)

Kelly Walker, Kelly Walker Associates

Continuation of 5.11A, B & C.

Moderator: Bryan Bazard, WA State Fleet Operations

03.28 Thursday

8:00 am	**Period 9**	
9.1	Generator Maintenance	2104
9.2	LED Light Technology for Utility Fleets	2106
9.3A	New Ford Diesel Systems Training (Part I)	2108
9.5	How A Fleet Management Company Can	2105
9.6A	Air Brake Certification (Part I)	2111
9.9A	Advanced Level Engine Performance & Drivability (Part I)	2150
9.11	Fasteners	2162
9:30 am	Tech Challenge	2104
10:00 am	**Period 10**	
10.1	General Diesel Exhaust Retrofit & Maintenance	2104
10.2	Overview for Eaton Hybrid System	2106
9.3B	New Ford Diesel Systems Training (Part II)	2110
10.4	Introduction to Management	2114
9.6B	Air Brake Certification (Part II)	2105
9.9B	Adv. Level Engine Performance & Drivability (Part II)	2111
10.10	Management Roundtable	2162

Thursday
March 28

Period 9

8:00 – 9:30 am

9.1 Generator Maintenance

Pat Holler, Planned Maintenance of Power Generation

There is much to consider when properly performing maintenance on a stand-by generator for your business. The following items will be discussed and all questions will be answered:

- Safety
- The NFPA 110 requirements
- Generator preventative maintenance
- Automatic transfer switches

Moderator: John Lightner, Cummins Northwest LLC

9.2 LED Light Technology, Products, Training & Troubleshooting for Utility Fleets & Beyond

Mike Hill & Bob Shively, Grote

LED White Light technology & Lamps which are rated for tens of thousands of hours of service life and are virtually impervious to the types of shock and vibration that would disable conventional lighting equipment. Also covered are electrical accessories, training and troubleshooting for Utility fleets and beyond.

Learn from Grote factory experts how to address your Lighting, Wiring needs and coverage, from lift gate assemblies for extra power supply, to electrical accessories, LED Lights with coverage from trailers, custom trailers, Utility vehicles & arterials.

Moderator: Pat Weiler, TEREX Utilities

9.3A New Ford Diesel Systems Training (Part 1 of 2)

Dustin Crowell, Blue Diamond & Jocelyn Dunning, Ford Motor Company

This three-hour Ford training session will include:

- High Pressure Oil Systems
- High Pressure Fuel Systems
- Fuel Injector Failures
- EGR Systems
- Injection Systems
- DPF Regeneration

Moderator: Todd Shepler, City of Bellevue

9.5 How A Fleet Management Company Can Complement Your In-House Fleet Operation

Cheryl Graham, ARI

This will be a discussion of case studies involving the use of a management company to improve fleet operations.

Moderator: Gene Jakubczak, City of Spokane

9.6A Air Brake Certification (Part 1 of 2)

Ken Thompson & Don Smith, V.A.T.A. (Vehicle-Apparatus-Training–Associates)

This three-hour training session is comprised of a combination of classroom and hands-on instruction with the Bates mock up truck. A complete DOT pre-trip inspection will be taught with a demonstrator truck. Students will receive a certificate of completion.

Moderator: Ray Shjerven, Bates Technical College

9.9A Advanced Level Engine Performance & Drivability (Part 1 of 2)

Martin Petkovits, AC Delco

This three-hour technician seminar will focus on engine performance and drivability while looking at the key ingredients needed for precise engine performance. The seminar will focus on the principles of good air induction, computer control, fuel and ignition that lead to good vehicle drivability.

Each system is covered with the latest information and how it affects engine performance.

Unique systems including:

- Variable valve timing
- Displacement on demand (active fuel management)
- Modularized fuel systems
- Compression sense ignition explained
- Case studies will be used to summarize key diagnostic strategies
- Critical information regarding Lube Oil Requirements effecting durability and drivability for engines equipped with Lube Oil Actuated Base Engine Components

The content of this seminar will help technicians improve their engine performance and drivability diagnostic skills.

Moderator: Nolan Merkley, Merkley's Mobile Maintenance

9.11 Fasteners

Jim Paige, Empire Industrial Supply

If it's broken, what's the right way to fix it? OR, Are you aware of the right fastener to make the repair at least as good as new if not better?" Test your ability to identify fasteners. Participate in hands on identification and learn the proper nomenclatures of all manner of fasteners.

Moderator: Les Candee, Alaska Marine Lines, Inc.

Break

9:30 – 10:00 am

Tech Challenge

Moderator: Jon Losey, King County Metro & Pat Weiler, TEREX Utilties

Period 10

10:00 – 11:30 am

10.1 General Diesel Exhaust Retrofit & Maintenance

John Lightner, Cummins Northwest Inc & Hugh Jonson, DEEC Inc

Two presenters will present an outline diesel emissions retrofit options.

Moderator: David Adler, WA State Dept. of Ecology

10.2 Overview for Medium & Heavy Duty Eaton Hybrid Systems

Timothy Tobin & Wayne Schultz, Valley Freightliner, Inc.

An overview and updated information will be presented on the Eaton Hybrid System for medium and heavy duty trucks. There have been a number of changes made since this system was first introduced 10 years ago. Hybrid drive systems will play important role as the industry finds ways to improve fuel economy and address 2014 Greenhouse Gas Reduction.

Moderator: Wayne Schulz, Valley Freightliner, Inc.

9.3B New FORD Diesel Systems Training (Part 2 of 2)

Dustin Crowell, Blue Diamond
& Jocelyn Dunning, Ford Motor Company

Continuation of 9.2A.

Moderator: Todd Shepler, City of Bellevue

10.4 Intoduction to Management: How to Survive & Succeed in Your First Year as a Manager

Phil Barto, Fleet Engineering LLC

The first year as a supervisor is difficult because it requires many new skills and abilities that have caused many new managers to wish they were back in their old position. In this session we will discuss some to consider if you are a manager or thinking about becoming a manager.

The remainder of the session will give you practical information on interacting and directing your crew members, dealing with difficult employees, and doing meaningful performance evaluations.

Moderator: Bryan Bazard, WA State Fleet Operations

9.6B Air Brake Certification (Part 2 of 2)

Ken Thompson & Don Smith, V.A.T.A. (Vehicle Apparatus Training Associates)

Continuation of 9.6A.

Moderator: Ray Shjerven, Bates Technical College

9.9B Advanced Level Engine Performance & Drivability (Part 2 of 2)

Martin Petkovits, AC Delco

Continuation of 9.9A.

Moderator: Nolan Merkley, Merkley's Mobile Maintenance

10.10 Management Roundtable

John Breland, Freedom Truck Centers, Inc. & Gene Jakubczak, City of Spokane

This is an informal, unstructured session that provides the opportunity for attendees to discuss topics of concern. Bring your questions and ideas for an excellent opportunity to network with your fellow fleet professionals.

Moderator: John Breland, Freedom Truck Centers, Inc. & Gene Jakubczak, City of Spokane

Lunch

11:30 – 1:00 pm

Tech Challenge Awards, Door Prizes & Closing Remarks

Moderator: Gene Jakubczak, City of Spokane

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Professional Automotive Training Center

Area A: Even No. Rooms (2104 – 2114)

Five rooms on the north side, first level of auto center.

- **2104,** Snap-On
- **2106,** Volvo
- **2108,** Hyunai
- **2110,** Chrysler
- **2114,** Hunter

Area B: Odd No. Rooms (2105 – 2115)

Four rooms on the south side, first level of auto center.

- **2105,** Toyota
- **2107,** Honda
- **2111,** Chrysler
- **2115,** GM

Area C: Upstairs

Upstairs classrooms in auto center.

- **2150,** Classroom on West End of Building
- **2162,** Classroom on East Side of Building

Area D: Showroom

Registration and Educational Materials.

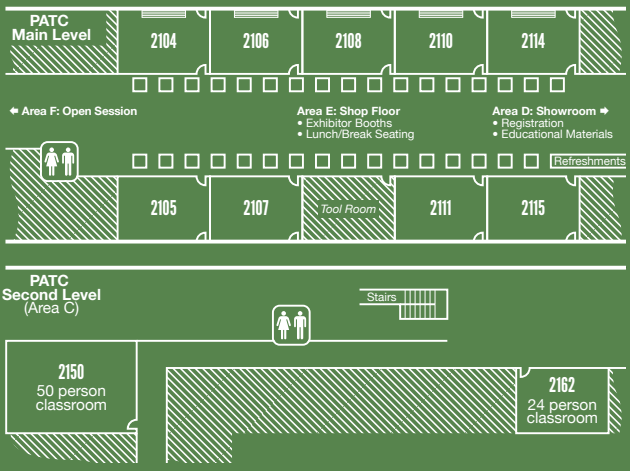
Area E: Shop Floor

Exhibitors, Lunch & Refreshment Area.

Area F: General Session

Outdoor Exhibits

Exhibitors will be in the area in front of PATC building right outside of Showroom (Area D).



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