



EMERGENCY RESPONSE



TECHNICAL COMMITTEE

Roger Lackore

&

Doug Miller

FDIC 2018



Subcommittee Leaders

Aerial/Quint

Jim Salmi
(E-One)



John Brady
(KME)



ARFF

Paul Powell
(Rosenbauer)



Sarah Peck
(Akron Brass)



Ambulance

Steve Rowland
(Demers)



Mike Franckowiak
(Akron Brass)



Body

Will Pilcher
(Fouts Bros)



John House
(Danko)



Electrical

John Doperalski
(Harrison)



Peter Luhrs
(SafeFleet)



Foam

Gregg Geske
(Waterous)
Mike Dupay
(Fire Research)



Pumps & Plumbing

Pete Lauffenburger
(Akron)
Mike Sulmone
(Trident)



Chassis

Tim Johnson
(KME)
Chris Crowel
(Cummins)





FDSOA Support



- ” 2019 Symposium Location . Orlando
 - ” January 13-15
- ” 2019 Speaker Planning
- ” 2018 Survey Results
- ” Buyers Guide Handouts



FDSOA Support

” FAMA Rep for FDSOA Transition



Grady North



Doug Kelley



FDSOA Support

| Topic | Presenter |
|---|------------------------|
| Multiplexing | IDEX, SafeFleet |
| Electrical Components Power Consumption Calculation | SafeFleet, KME |
| Specing Apparatus to Prevent Corrosion | International, Spartan |
| Engine Emissions Troubleshooting | Cummins |
| Powertrain Specing | Cummins, Allison |
| Clean Cab | Spartan, KME |
| Lighting Fixture Placement on Scene | HiViz, SafeFleet, IDEX |
| Aerial Inspections | UL? TBD |
| Pump Controls | ? |
| Keeping Firefighters off the top of Apparatus | Spartan, TFT |
| Air Bags and Occupant Protection | Spartan, IMMI |
| Brakes and Brake Adjustment | Meritor? |



FAMA Forum Schedule 2018

| | | | |
|--------|---|--------------|---------------|
| Jan-18 | Fire Service Statistics | Fire Service | Paul Darley |
| Feb-18 | Headlights | Lighting | Sam Massa |
| Mar-18 | History of FAMA Influence on Apparatus Safety | Safety | Grady North |
| Apr-18 | Common Engine Maintenance Mistakes | Engines | Chris Crowell |
| May-18 | SAE Ambulance Recommended Practices | Safety | Roger Lackore |
| Jun-18 | Hose Testing Safety | Safety | Gregg Geske |
| Jul-18 | V2V Communications in Fire Apparatus | Technology | Cory Haas |
| Aug-18 | Carcinogens and Apparatus Design Impact | Safety | Scott Beecher |
| Sep-18 | Foam Concentrate Evolution | Foam | Tom Reser |
| Oct-18 | FDSOA Promotion | FDSOA | Sam Massa |
| Nov-18 | Temperature Impact on Modern Electronics | Electronics | Sam Massa |
| Dec-18 | Corrosion and Fire Apparatus | Chassis | Zac Soderberg |



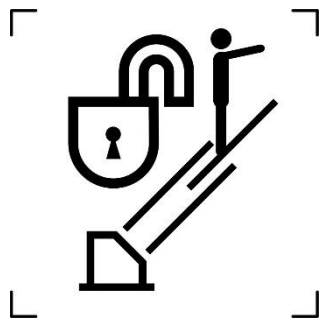
FAMA Forum Schedule 2019

| | | | |
|--------|--|-------------------------|-----------------------|
| Jan-19 | Fire Service Statistics | Fire Service | Paul Darley |
| Feb-19 | Water Tanks | Tanks | Chad Falls |
| Mar-19 | Foam and Water Additive Proportioning Systems | Foam | Mike Dupay |
| Apr-19 | Hose Restraints | Safety - Hose Restraint | Dave Durstine |
| May-19 | FAMA Fire Service Resources: a Well-Kept Secret | FAMA - Resource Library | Roger Lackore |
| Jun-19 | Brake Maintenance | Braking | Meritor? Navistar? |
| Jul-19 | Reducing Glare on Fire Scenes | Lighting | Sam Massa |
| Aug-19 | Pump Panel Labeling | Pumper | Bruce Lear |
| Sep-19 | Clean Cab -Survey of Apparatus Design Approaches | Safety | TBD |
| Oct-19 | FDSOA Promotion | FDSOA Promo | Sam Massa |
| Nov-19 | | | |
| Dec-19 | | | |

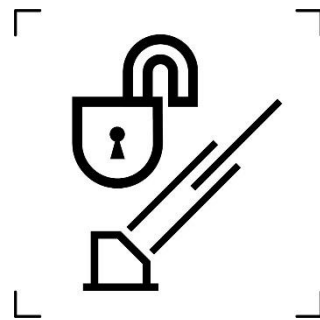


Graphical Symbols

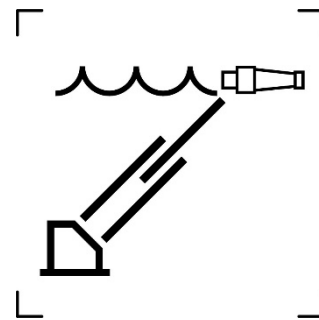
“ New Symbols for Approval



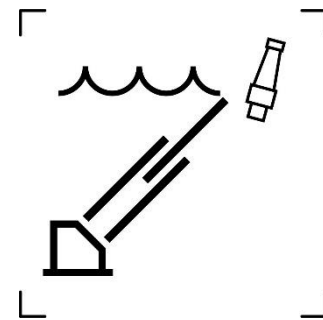
Tip Control
Enable



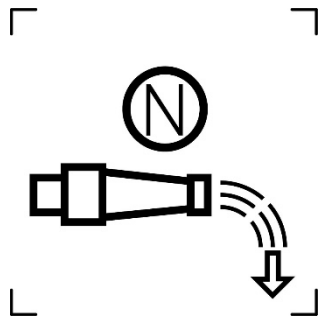
Aerial Device
Enable



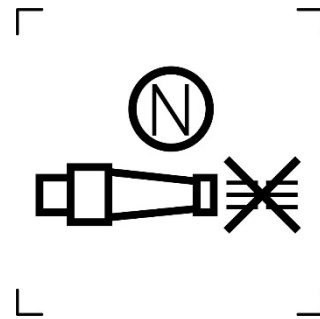
Waterway
Wet



Monitor
Above Ladder



Nozzle Flush



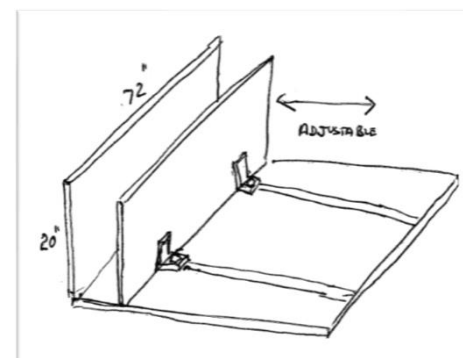
Nozzle
Closed



Hose Bed Capacity Test Standard TC065

” Initiative

- ” Create a test standard for determining the hose capacity of a hose bed
- ” FEMSA agreed to use the test method to provide data to apparatus manufacturers.



| Test Number | Test Date | Hose Diameter (in) | Brand Name | Part or Model Number | Material | Description | Service Pressure (psi) | Test Hose Assembly Length (ft) | Test Hose Assembly Weight (lbs) | Test Fixture Width (in) | Test Lay Height (in) | Total Volume of Test Assembly (in³) | Volume per Linear Foot (in³/ft) | Weight per Linear Foot of Hose (lb/ft) |
|-------------|-----------|--------------------|------------|----------------------|---------------------------------|---------------------|------------------------|--------------------------------|---------------------------------|-------------------------|----------------------|-------------------------------------|---------------------------------|--|
| Example | 8/23/2017 | 1.75 | Ndurance | | Polyester | Double Jacket | 400 | 200 | 120 | 8 | 16 | 9216 | 46.08 | 0.6 |
| Example | 8/23/2017 | 2 | | | Nitrile / PVC through-the-weave | Rubber Covered | 300 | 200 | 100 | 10 | 18 | 12960 | 64.8 | 0.5 |
| Example | 8/23/2017 | 2 | | | Polyester | EDPM Lined Dbl Jckt | 300 | 200 | 100 | 10 | 18 | 12960 | 64.8 | 0.5 |
| TC065-001 | | | | | | | | | | | | 0 | #DIV/0! | #DIV/0! |
| TC065-002 | | | | | | | | | | | | 0 | #DIV/0! | #DIV/0! |
| TC065-003 | | | | | | | | | | | | 0 | #DIV/0! | #DIV/0! |
| TC065-004 | | | | | | | | | | | | 0 | #DIV/0! | #DIV/0! |



NFPA 1901/1906

- " 2021 Revision Cycle
- " Public Input Closing Date Jun 27, 2018
- " Public Input meeting Oct 9-11, 2018
- " First Draft Report Feb 27, 2019
- " Public Input Closing Date May 8, 2019
- " Second Draft Report Jan 22, 2020



NIOSH Seating for 1901

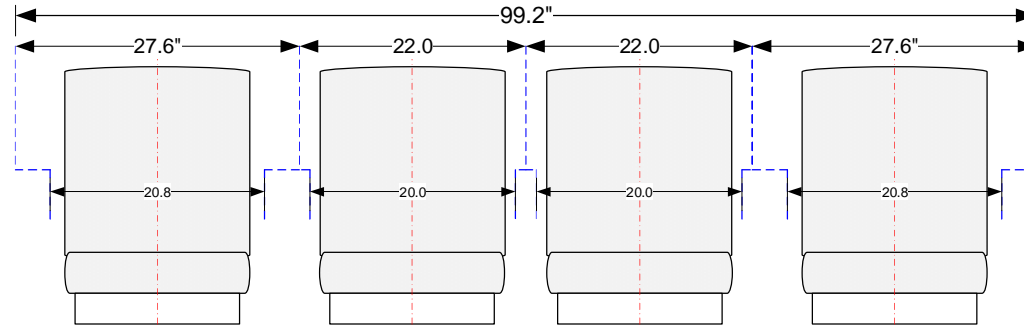
- ” Chassis Committee Created a Public Input
- ” Lackore and Crowel reviewed proposal with Gordon Routley and Mike Wilbur
- ” Comment and justification will be submitted as a public comment from FAMA.



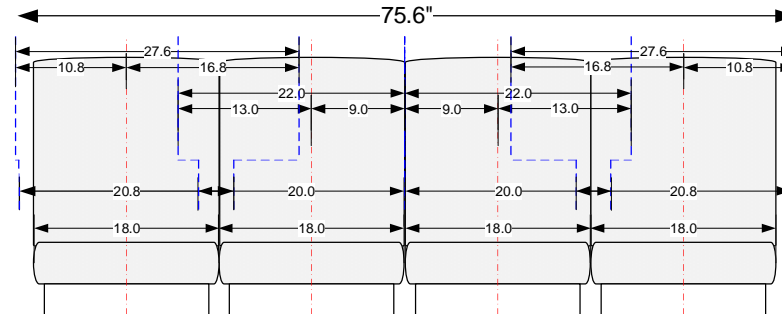


“ Our current proposal would allow for an unreasonable design.

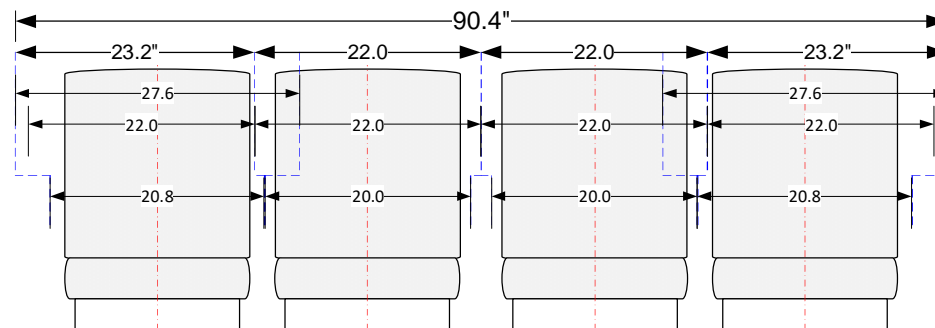
Four seats with proposed dimensions; no overlap and no offsets.



Four seats with overlapping clear widths and maximum (3") offsets. Complies with proposal as written.



Four seats with overlap of clear width permitted; minimum of 22" clear width provided for each seat at shoulder level. No offsets from centreline. Complies with revised proposal.





Space Min Width Added

14.1.8 Seat Arrangement.

14.1.8.1 Each Designated Primary Seating Position shall have a minimum clear width of 20.8 in. (529 mm) at the hip level and 27.6 in. (701 mm) at the shoulder level.

Width at hip level shall be measured at the seating H-Point.

Width at shoulder level shall be measured at the height of line 2 as defined in the seat belt length determination procedure in 14.1.3.2

Width shall be measured with the seat adjusted to the center of its horizontal and vertical travel adjustment.

Each Designated Secondary Seating Position shall have a minimum clear width of 20 in. (508 mm) at the hip level and 22 in. (559 mm) at the shoulder level.

The center of any clear width shall not be offset from the center of the seat cushion by more than 3.0 in. (76 mm)

The clear width of any primary seating position shall not overlap the clear width of any other primary seating position, but it may overlap the clear width of a secondary seating position.

Every seating position shall provide a minimum clear width of 22 in. (560 mm) at the shoulder level without overlap.



Definition Revised

14.1.8.2 Seat cushions shall be a minimum of 18 in. (460 mm) in width and 15 in. (380 mm) from the front of the cushion to the face of the seat back.

14.1.8.3 A back cushion that extends from the face of the seat vertically at least 18 in. (460 mm) and that is a minimum of 18 in. (460 mm) wide at the base shall be provided.

14.1.8.3.1 The back cushion shall be permitted to be split to accommodate a fully recessed SCBA and bracket.

14.1.8.3.2 Where the back cushion is split to accommodate a SCBA, a headrest shall be supplied.

Definitions

3.3.xxx **Designated Primary Seating Position.** Front driver and officer seats and any rear seating position designated by the purchaser to be a location expected to be occupied by fire fighters in PPE as the apparatus will be used in regular service.

3.3.xxx **Designated Secondary Seating Position.** Any rear seating position designated by the purchaser to be a location that is not expected to be occupied as the vehicle is used in regular service and is not intended to be occupied by personnel wearing full PPE.



NFPA 1500 *Standard on Fire Department Occupational Safety, Health, and Wellness Program*

- “ First Draft
 - “ Public Input Closing Date: January 4, 2018
 - “ Public Input meeting – Jan 15 - FDSOA
 - “ First Draft Report Posting Date: September 6, 2018
- “ Second Draft
 - “ Public Comment Closing Date: November 15, 2018
 - “ Second Draft Report Posting Date: August 1, 2019



NFPA 1500 *Standard on Fire Department Occupational Safety, Health, and Wellness Program*

“ Apparatus Related Topics

- “ SCBAs out of Cab
- “ Contaminated PPE and Equipment not Carried in Cab unless Bagged and Secured
- “ Aerial Fall Protection – Method for personnel climbing the ladder to be continuously tethered during the climb.
- “ Cab step heights limited to 12 inches if personnel must exit the cab with more than 30 lbs equipment
- “ Exhaust directed away from personnel



Aerial Ladder Climbing

6.1.11

Each person climbing the ladder on the aerial apparatus **shall use a ladder belt and tether** that meets the requirements of NFPA 1983.

6.1.11.1

Each aerial **apparatus shall carry correctly sized ladder belts** and tethers to accommodate all members authorized to climb the ladder or ride in the platform of the apparatus.

6.1.11.2

Persons working on a ladder shall be anchored to a structural feature of the ladder or platform when one of the following occurs:

1. The device is in motion.
2. They are not actively entering or exiting the platform.
3. They are not actively climbing or descending the ladder.



Clean Cab

6.1.12*

The fire department shall ensure that all contaminated PPE and contaminated fire-fighting equipment are decontaminated according to manufacturer's specifications on the scene upon the termination of the incident, or that all contaminated PPE and contaminated fire-fighting equipment are taken out of service and decontaminated according to manufacturer's specifications in a controlled environment.

6.1.12.1

The fire department shall ensure that contaminated PPE and contaminated fire-fighting equipment **will not be transported in the enclosed seating area of the fire apparatus** or patient compartment of the automotive ambulance unless sealed in a puncture-resistant container and secured in accordance with 6.1.6.

6.1.12.2

If the enclosed seating area of the fire apparatus, patient compartment of the automotive ambulance, or exterior compartments of the fire apparatus or automotive ambulance are exposed to contaminants during an incident, **those areas shall be decontaminated upon completion of the incident and prior to being placed back in service.**



ANNEX

A.6.1.12

Prolonged incidents such as wildland fire-fighting operations, widespread natural disasters, acts of terrorism, or other occurrences in which emergency operations are segmented into extended work periods might not be conducive to the decontamination of equipment or personnel when moving from one geographic location to another during the course of the work period. In such instances, the fire department should make every reasonable effort to decontaminate personnel and equipment at regular intervals or during rehabilitation periods. All personnel and PPE should be decontaminated at the end of every work period before being released from emergency operations.

In jurisdictions where mutual aid is not readily available, or where call volume is high, call concurrency could inhibit thorough decontamination upon termination of the initial incident. In such instances, the fire department shall ensure that all personnel, contaminated PPE, contaminated fire-fighting equipment, and any area of the fire apparatus or automotive ambulance that is exposed to contaminants are taken out of service following the completion of the concurrent incidents and decontaminated prior to being returned to service.



Firefighter Cancer Initiative

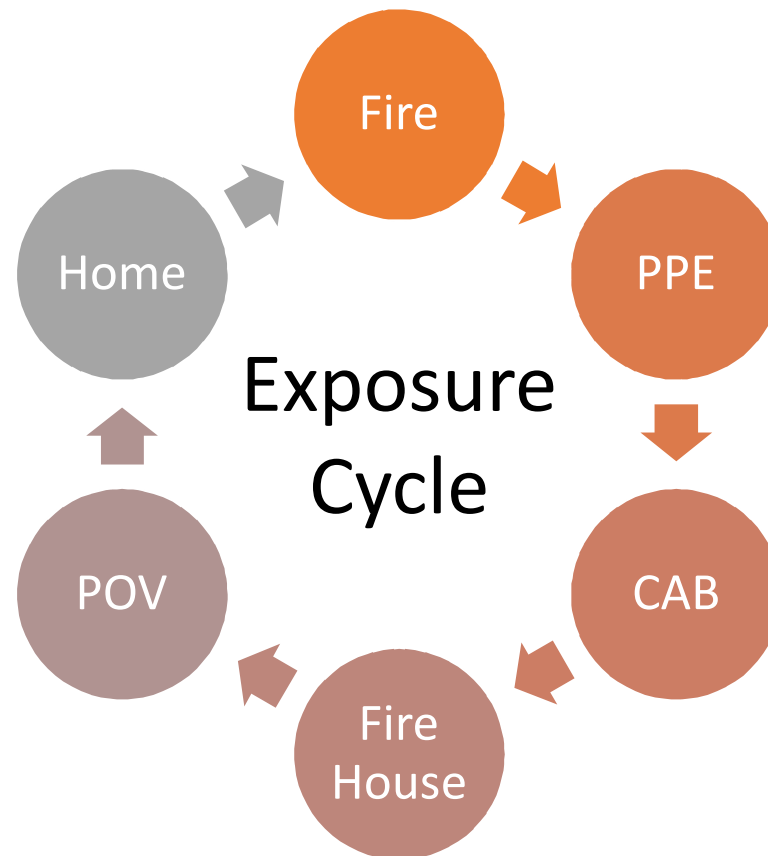


Firefighters face **cancer rates**
substantially greater than most
Americans

- Testicular cancer - 2.02 times greater
- Multiple myeloma - 1.53 times greater
- Non-Hodgkin's lymphoma - 1.51 times greater
- Skin cancer - 1.39 times greater
- Brain cancer - 1.31 times greater
- Malignant melanoma - 1.31 times greater
- Prostate cancer - 1.28 times greater
- Colon cancer - 1.21 times greater
- Leukemia - 1.14 times greater



Firefighter Cancer Initiative





Clean Cab *Buyers Guide*

” What can purchasers do to
spec apparatus that will
support clean cab SOPs

NO
FIRE GEAR
BEYOND THIS POINT





Buyers Guide Review



Buyer's Guide Progress

| | |
|-----------|----|
| Draft | 10 |
| Published | 17 |
| Remaining | 14 |



Body

Will Pilcher, Wayde Kirvida

| | | |
|-------|--|---|
| TC039 | Buyer's Guide - Tanks | Andrew Lingel - UPF |
| TC041 | Buyer's Guide - Hose Restraints | Grady North - E-One |
| TC042 | Buyer's Guide - Stepping Surfaces | Burt McCutcheon - Ferrara |
| TC043 | Buyer's Guide - Chevron Stripping and Graphics | Jerry Merges - VisionMark |
| TC053 | Buyer's Guide - Breathing Air Systems | Ed Smith - VT Hackney |
| TC054 | Buyer's Guide – Roll-Up Compartment Doors | Bruce Whitehouse - AMDOR |
| TC055 | Buyer's Guide - Reels | Denis Bleile – COXREELS Ken Fritz - Hannay |
| TC056 | Buyer's Guide - Ladder and Equipment Racks | Mike Adams - Ziamatic |
| TC058 | Buyer's Guide - Equipment Mounting - Body | Greg Young - Performance Advantage Co. |
| TC059 | Buyer's Guide - Body Access | Mike Adams - Ziamatic |

Sylvesternewbadgeofhonor.com



Chassis

Tim Johnson, Chris Crowell

| | | |
|-------|--|---------------------------|
| TC033 | Buyer's Guide – Aux. Eng. Braking Syst. | |
| TC034 | Buyer's Guide - Winches | Steve Stein, Steve Martin |
| TC036 | Buyer's Guide - Apparatus Seating | Bev Lowry - Bostrom |
| TC046 | Buyer's Guide - Engine Air Intake | ??? |
| TC047 | Buyer's Guide - Specifying Apparatus for Maintenance | Drew Sutphen - Sutphen |
| TC048 | Buyer's Guide - Suspensions - Front | ??? |
| TC049 | Buyer's Guide - Suspensions - Rear | Bob Albano - Hendrickson |
| TC051 | Buyer's Guide – Crew Compartment Storage | Mike Adams - Ziamatic |
| TC057 | Buyer's Guide - Occupant Protection | Dan Veselsky - IMMI |
| TC062 | Buyer's Guide - Tires | Woody Savage - Michelin |
| TC063 | Buyer's Guide - Wheels | Greg Polka - Real Wheels |
| TC064 | Buyer's Guide - HVAC | Mark Bartlett - Spartan |
| TC066 | Buyer's Guide – Engine Exhaust Removal | Scott Beecher - BEST |



Electrical

John Doperalski, Peter Luhrs

| | | |
|-------|---|------------------------------|
| TC035 | Buyer's Guide - Batteries, Alternators, and Chargers. | Pete Sremac - Niehoff |
| TC037 | Buyer's Guide – Scene Lighting | Sam Massa - Hi-Viz |
| TC038 | Buyer's Guide - Line Voltage Generators | John Doperalski - Harrison |
| TC040 | Buyer's Guide - Headlights | Sam Massa - Hi-Viz |
| TC044 | Buyer's Guide - Warning Lights | Matt Pitzer - Code 3 |
| TC045 | Buyer's Guide – Multiplex_Electrical Systems | Dave Durstine - Weldon |
| TC050 | Buyer's Guide – Fire Apparatus Sirens | Morgan Look - Federal Signal |
| TC060 | Buyer's Guide - Light Towers | Drew Newman - Will-Burt Co. |
| TC061 | Buyer's Guide - Camera Systems | Grady North - E-One |
| TC069 | Buyer's Guide - Vehicle to Vehicle Communications | Cory Haas – Hass Alert |



Foam

Gregg Geske, Mike Dupay

| | | |
|-------|---|---------------------------|
| TC030 | Buyer's Guide - Foam & Water Additive Proportioning Systems | Greg Geske, Michael Dupay |
| TC067 | Buyer's Guide - CAFS | Troy Carothers |



Pump

Pete Lauffenburger, Mike Sulmone

| | | |
|-------|---|------------------------|
| TC024 | Buyer's Guide - Pumps | Doug Miller |
| TC052 | Buyer's Guide - Electronic Pressure Governors | Dave Guynn – Hale |
| TC070 | Buyer's Guide - Pump Primers | Mike Sulmone - Trident |
| TC071 | Buyer's Guide - Deck Guns & Aerial Monitors | TBD |



Aerial

Jim Salmi, John Brady

| | | |
|-------|----------------------------------|--------------|
| TC031 | Buyer's Guide - Aerial Apparatus | Reed Wissler |
| TC068 | Aerial Rope Rescue Systems | TBD |



Breakout Sessions

Aerial/Quint

Jim Salmi
(E-One)



John Brady
(KME)



ARFF

Paul Powell
(Rosenbauer)



Sarah Peck
(Akron Brass)



Ambulance

Steve Rowland
(Demers)



Mike Franckowiak
(Akron Brass)



Body

Will Pilcher
(Fouts Bros)



OPEN

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