MAJOR EMERGENCY RESPONSE VEHICLE (MERV)

Is

In-service and Available

The Major Emergency Response Vehicle (MERV), will be staffed with a Minimum County Employee “Operator”, additional staffing will be determined by the Commissioner, or designee.

Emergency Response requests shall be made to the FRES Communication Center 24 hrs. at 631.852.4815.

Upon request for the MERV, the following information should be provided:

- Requesting agency and Point of Contact (POC).
- Who the OIC is.
- Location of the Command Post.
- Nature of the alarm and mission being requested to provide.
- Will they provide Medical Support Staffing and Equipment or are they requesting a task force response.
- Special routes or staging/reporting locations the MERV needs to take to access the incident or avoid while responding.
- Are you requesting the Mobile Command Post or other County resources to respond?


To view First Responder in Service Training and Agency Call Out Procedures

To arrange for agency training or questions about MERV please contact joel.vetter@suffolkcountyny.gov or 631.852.4856
Suffolk County
Fire, Rescue & Emergency Services
OPERATIONAL OVERVIEW
Medical Ambulance Bus (MAB)
Major Emergency Response Vehicle Operation (MERV)
Questions email joel.vetter@suffolkcountyny.gov

Introduction

• The course should focus heavily towards “hands on” instruction, demonstration, and evaluation to ensure that personnel have a mastery with the operation of all equipment. This “hands on” instructional component should focus heavily on operator and patient safety. As the MERV is often not a daily use piece of equipment, periodic refresher and review is essential to maintaining competency and safety.

Objectives

• Participants should complete the course with a “bumper to bumper” base of knowledge about the installed equipment.
• Personnel should understand the expectations for each defined role on the MAB / MERV.
• Personnel should be able to identify emergency practices for Fires, Medical Emergencies and hazardous conditions.

Specifications

2013 Thomas / Freightliner EFX, Commercial Chassis

- Length: 41’8”
- Width: 96”
- Height: 11’8”
- GRVW: 36,000lbs
- Engine: Cummins ISB 6.7 L, 260 hp
- Transmission: Allison, Automatic
- Generator: Cummins, 20 KW / 1GPH
- Fuel Tank: 100 Gallons (shared) / 8-10 MPG
- DEF Tank: 5 Gallons / 1500 HWY
- Oxygen System: 30 “D” Cylinders

The Vehicle

• TIRES
  Front Size: 275/70R22.5 Pressure: 125psi
  Rear Size: 255/70R22.5 Pressure: 120psi

• FLUIDS
  Transmission: Trans-Synd
  Engine oil: 15W40 CJ4
  Engine Coolant: Alliance 50/50 mix recommended
  Power steering: Dextron III
Access Doors

• The primary front access door has been retrofitted with an “RV” style door latch, replacing the original actuated bus door.
• When in transit, confirm that the door is securely shut and locked from the interior.
• The rear door can only be opened from inside the vehicle.
• The door should be locked whenever the vehicle is in motion, using both the lever latch and the bolt.

Up To 24 Stretched Patients

7 Neonate Islets – 12 Wheel Chairs

Roles and Responsibilities

• There are three primary roles for personnel operating the MERV. These include the Loadmaster, the Operator, and the Transport Medical Personnel. Each role has some defined responsibilities, during both normal operations and under emergency conditions.

Primary Roles for the Loadmaster

1. Captain Of the Ship
   • The Crew, Operator, and Bus are your responsibility
   • Decide the tasking associated with the mission
   • Delegate to maintain situational awareness
   • Communicate (Verbal and Radio)
   • Direct if an emergency arises
   • Liaison with others in the command structure

Load Master Rules...

Lighter to the top and Sickest to the rear

Crew of 3-4 Medical Attendants

Sliding Stretcher Assembly
2. Crew Safety Officer (With the Operator)
   - Maintain a safe, operational atmosphere

3. “Pre-Flight” Preparation of Cabin
   - Power Systems Readiness
   - Communications / Technology Systems
   - Radio
   - Data
   - Navigation
   - Medical Readiness
   - Equipment
   - Supplies
   - Crew Items

Primary Roles for the Loadmaster

4. Mission Documentation
   - ICS – 214 “Activity Maintenance Log”
   - Interface with Command Structure
   - Radio Communications during transit and at scene

5. Assist Operator with Safe Operations

6. Lead on Patient Safety
   - Staging
   - Movement
   - Loading
   - Care

Primary Roles for the Operator

1. Mans the Wheel
   - Safe operation of the vehicle from mission start to termination
   - Monitor all mechanical systems for proper working order
   - Operate all functions controlled in the Operator’s position

2. Crew Safety Officer (With the Loadmaster)
   - Maintain a safe, operational atmosphere

Primary Roles for the Operator

3. “Pre-Trip” Inspection of the Vehicle
   - Mechanical systems, including brakes, tires
   - Ensure all compartment doors secured
   - All shorelines disconnected from vehicle
   - Fuel at full capacity

4. Deployment of the Vehicle
   - In as level as the situation will permit
   - Avoiding potential hazards
   - Managing the leveling of the vehicle
   - Direct the assembly and attachment of the ramp

Primary Roles for the Transporting Medical Personnel (TMP)

1. Mission-Appropriate Inventory
   - Based on the mission, ensure that proper caches of equipment are loaded prior to departure
   - Configure interior of vehicle based on the mission
   - Check levels on oxygen system
   - Ensure proper readiness of portable medical equipment

2. Patient Preparation
   - Assist Loadmaster with triage of patients
   - Facilitate transfer of patients to MERV stretchers outside of vehicle
   - Reassess patients after loading onto vehicle

Primary Roles for the Operator

5. Oversee Patient Placement
   - Coordinate with Loadmaster on patient placement within the vehicle based on size and acuity
   - Oversee placement of patients in berths
   - Ensure that all stretchers are securely locked into place
TMP

3. Patient Care
- Monitor condition of assigned patients, providing care and comfort measures during transport
- Complete proper documentation of care provided

4. Vehicle Readiness
- Under direction of Operator, assist in returning vehicle to established level of readiness after the mission

On-Board Emergencies

Must now “STOP THE BUS”
- ANY type of Fire
- Environmental Event/Fumes (incl. alarms)
- Emergent Patient Care Issue (including crew)
- Loss of On-Board Power and/or Oxygen
- Vehicle Accident involving MAB
- Vehicle Breakdown – Tires, Belts, etc.

“We HAVE AN ON-BOARD EMERGENCY”
Pull Stretcher with Both Hands

Stretcher will lift out once slid in the “out” position

Hand Placement

Correct

Incorrect

Fluid Collection Trays

Fluid Tray Release Pins

Pull Pin
Fluid Tray Removal

Rolling Cot Release

Electrical System

Rolling Cots

Plenty of Room in the aisle for Patient Transfer

110/220V
- Rooftop AC/Heat Units
- Electrical Outlets (Interior & Exterior)
- Baseboard Heaters
- Oxygen Manifold
- Oxygen Pressure Alarms
- Interior Electrical Outlets
- Exterior Electrical Outlets

12V
- Interior Lighting
- Emergency Lighting
- Suction Pumps
- Flashlights
- 12V Outlets
Master Battery Shut Off Switch

SMART TRUCK
- In-Motion Tech Link
- Internet and 4G VOIP
- Intercom and Wireless head set x4
- 11 Wireless Vital Signs Monitors (WVSM)
- Assets Tracking
- Temp Reporting
- 2 Toughbook CF19

20KW Martin Generator

Slides Out for Maintenance

Generator Slide Pin

100 amp breaker
- Glow
- On / Off
- 100 amp breaker
Generator / Bus Fuel Door

Charger Shoreline / Air Inlet

Regeneration

BlueTec SCR technology

Exhaust leaves the engine with the pollutants NOx and Partikel Matter PM

DEF injected into the exhaust stream

BlueTec SCR technology

DEF Tank

BlueTec SCR technology

DEF Tank

BlueTec SCR technology

Partikel Matter (PM) is trapped in the Diesel Particulate Filter (DPF)

DEF injected into the exhaust stream
DEF solution hydrolyzes into ammonia gas (NH₃) which mixes with the exhaust.

BlueTec SCR technology

Regeneration

110 / 220 Breaker Panel
A/C only powered from generator

Shore Power Switch
“Safety Dividing Guard Installed”
Switch Positions

Fully labeled 12V Breaker Panel with resettable fuses

Chassis 12V Panel

Main Battery Bank
Winch Battery Bank
Air Outlet

Pigtail Cheater

Battery Level Indicator (x2)
Vehicle and Generator Batteries
Ground Lights x3 sides  Scene Lights x4

Sirens & Horns

Carbon Monoxide Alarm & Portable 4 gas metering

Fire Extinguishers (2)

110/220 Outlets

12V Outlets

Patient Loading Ramp

Ramp Deployed

Dump Valve
Ramp Stored Behind Rear Bumper

Ramp Receiver Assembly

Ramp Sections Slide Out

Ramp Locking Pins

Align Pins To Assemble Ramp
Attaching Ramp

Handrail Storage and Attachment

Folding Handrail

Flip Door

Proper Loading Procedure
Separate Hands On Session

On-Board Emergencies
Separate Hands On Session

Miscellaneous Equipment
Operation
Winch Operation

Rope Extended  Attached to Stretcher Frame

Wireless Remote

Rear/Side – View Cameras
Full color, IR w/ Sound

Awning

Driver’s Area

Additional

- ~240 Bottles of Water
- Immobilization for 20
- Smart Triage for 80
- Triage Tarps
- Rehab Air Management Tarps
- Electrical support
- Mobile Fit Testing
Other Uses

The MERV is a functional tool for more than just multiple patient transportation. Other examples of use could include:

- Patient triage on a multiple patient, low acuity event – such as a carbon monoxide exposure in an apartment building, hotel, or school
- Responder rehabilitation at incident scenes. Allows removal of personnel from the scene with good lighting and climate control (both warm and cool)
- Personnel staging point, such as during searches or law enforcement events. Provides quiet location for briefings, debriefings, or team planning
- Cooling station – at large outdoor events during hot seasons (can reduce transports significantly)

Call Out Procedures

- The Major Emergency Response Vehicle (MERV), will be staffed with a minimum of one FRES “Operator” and one County Employee to function as “Operator / Load Specialist”, additional staffing will be determined by the Commissioner, or his designee.

Pre-Planned Events/Drills

- All requests for pre-planned events/drills shall be forwarded to the ESD III in writing. Pre-planned events/drills shall be staffed with a minimum of 1 FRES staff member, and others as authorized by the Commissioner. Staffing for the MERV shall be determined by the MERV rotational list in the Supervisor’s Manual.

WRAP UP

The MERV is a dynamic tool for use in a variety of situations for an EMS agency to meet multiple needs. While it is another emergency vehicle in the fleet, it is one that requires specialized training for key personnel to ensure a safe, efficient operation. This presentation was designed as a keystone to that training. It requires personnel to regularly utilize the vehicle in order to remain proficient in all aspects of the vehicle. The first rule to using the MERV should always be SAFETY. Whether responding, loading, or providing care while moving, the safety of the personnel and patients is priority.
MAJOR EMERGENCY RESPONSE VEHICLE (MERV)  
AGENCY CALL OUT

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  - Will they provide Medical Support Staffing and Equipment or are they requesting a task force response.
- Special routes or staging/reporting locations the MERV needs to take to access the incident or avoid while responding.
- Are you requesting the Mobile Command Post or other County resources to respond?
<table>
<thead>
<tr>
<th>1. Incident Name:</th>
<th>2. Operational Period:</th>
<th>Date From:</th>
<th>Date To:</th>
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<th>7. Activity Log:</th>
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8. Prepared by: Name: ___________ Position/Title: ___________ Signature: ___________
ICS 214, Page 1 Date/Time: ___________
## ACTIVITY LOG (ICS 214)

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<tr>
<th>Date/Time</th>
<th>Notable Activities</th>
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8. Prepared by: Name: __________________ Position/Title: __________________ Signature: __________________

ICS 214, Page 2
**ICS 214**

**Activity Log**

**Purpose.** The Activity Log (ICS 214) records details of notable activities at any ICS level, including single resources, equipment, Task Forces, etc. These logs provide basic incident activity documentation, and a reference for any after-action report.

**Preparation.** An ICS 214 can be initiated and maintained by personnel in various ICS positions as it is needed or appropriate. Personnel should document how relevant incident activities are occurring and progressing, or any notable events or communications.

**Distribution.** Completed ICS 214s are submitted to supervisors, who forward them to the Documentation Unit. All completed original forms must be given to the Documentation Unit, which maintains a file of all ICS 214s. It is recommended that individuals retain a copy for their own records.

**Notes:**
- The ICS 214 can be printed as a two-sided form.
- Use additional copies as continuation sheets as needed, and indicate pagination as used.

<table>
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<tr>
<th>Block Number</th>
<th>Block Title</th>
<th>Instructions</th>
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<tr>
<td>1</td>
<td>Incident Name</td>
<td>Enter the name assigned to the incident.</td>
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</table>
| 2            | Operational Period | - Date and Time From
  - Date and Time To
  Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies. |
| 3            | Name | Enter the title of the organizational unit or resource designator (e.g., Facilities Unit, Safety Officer, Strike Team). |
| 4            | ICS Position | Enter the name and ICS position of the individual in charge of the Unit. |
| 5            | Home Agency (and Unit) | Enter the home agency of the individual completing the ICS 214. Enter a unit designator if utilized by the jurisdiction or discipline. |
| 6            | Resources Assigned | Enter the following information for resources assigned:
  - Name
    Use this section to enter the resource’s name. For all individuals, use at least the first initial and last name. Cell phone number for the individual can be added as an option.
  - ICS Position
    Use this section to enter the resource’s ICS position (e.g., Finance Section Chief).
  - Home Agency (and Unit)
    Use this section to enter the resource’s home agency and/or unit (e.g., Des Moines Public Works Department, Water Management Unit). |
| 7            | Activity Log | - Date/Time
  - Notable Activities
  Enter the time (24-hour clock) and briefly describe individual notable activities. Note the date as well if the operational period covers more than one day.
  Activities described may include notable occurrences or events such as task assignments, task completions, injuries, difficulties encountered, etc.
  This block can also be used to track personal work habits by adding columns such as “Action Required,” “Delegated To,” “Status,” etc. |
| 8            | Prepared by | Enter the name, ICS position/title, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock). |
It's the type of vehicle first responder's hope they will rarely have to activate, but having the new Medical Ambulance Bus or "Major Emergency Response Vehicle" (MERV) on hand for large scale emergencies is a tremendous benefit to the area.

The vehicle is designed to provide mass casualty incident response and transport, medical evacuations, on site triage, firefighter and EMS rehabilitation and medical support for long term emergency incidents. This resource is the first outside the City of New York within the state, and a collaborative effort by regional Urban Areas Security Initiative (UASI). "This bus will be a huge resource across the region when it comes to providing emergency services," said Commissioner Williams. "It can be activated during large scale fires, evacuations, bus, train or ferry accidents, and, weather related emergencies when there is a need to treat people at the scene or transport them to hospitals."

The 42 foot unit comes equipped with stretchers to accommodate 24 patients and medical personnel for transport, patient monitoring equipment, metered oxygen, electrical capacity to supply power for necessary medical equipment, rehab supplies, and all in a climate controlled area.

The cost for the unit was $380,000 and purchased through a federal grant provided by the Department of Homeland Security. "These funds have been put to great use," said County Executive Steven Bellone. "We are just a few weeks away from the start of Hurricane Season which provides a constant reminder that we have to remain vigilant when it comes to protecting our region."

The Medical Ambulance Bus is housed out of the County Department of Fire, Rescue and Emergency Service and will be available for activation starting June 1st or sooner. "This could not have been made possible without the hard work and efforts of numerous agencies," Robert Delagi Director EMS and Public Health Emergency Preparedness. "The service will be available not only throughout Suffolk County but the entire state, making this another prime example of shared services as a cost efficient strategy."
The first MAB was received by the Fire Department City of New York. Several other vehicles are expected to be placed within New York State in the coming months."