





AMTRAK – NEW YORK STATE DHSES / OFPC PASSENGER TRAIN EMERGENCY PROCEDURES COURSE Western New York

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HAVE THE "COURAGE TO BE SAFE......SO EVERYONE GOES HOME"





So, why are we here?

To help you handle the big one....something like this, *SAFELY*.....











Metro North Train Derailment Spuyten Duyvil, Bronx, New York December 1, 2013



What if this happened in Your County??

Metro North Derailment December 1, 2013

0719 Hours, Sunday, December 1, 2013

Limited Access

Initial response; 3 Engines, 2 Ladder Co's., Rescue, Squad Co, & Battalion Chief

Initial report "five cars derailed, two overturned, major train wreck, numerous victims.....we have multiple people trapped". – MAJOR EMERGENCY SIGNAL WAS TRANSMITTED

Approximately 120 passengers Approximately 70 injuries

4 Fatalities

Diesel Fuel Leak

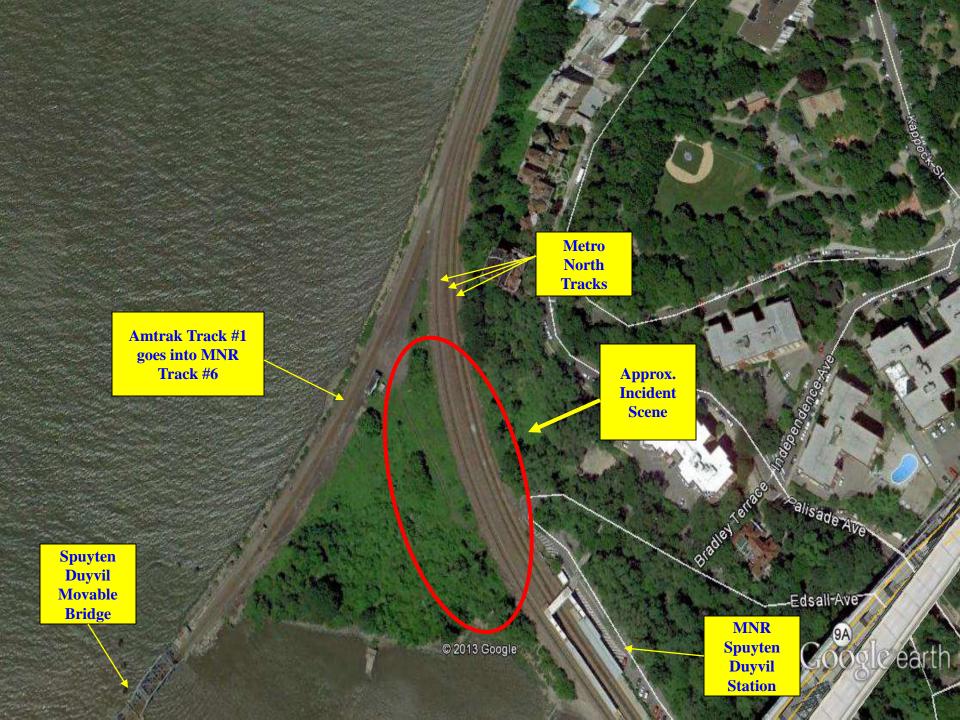


RESPONSE:

- 13 Engine Companies
- 11 Ladder Companies
- 3 Squad Companies
- 3 Rescue Companies
- 2 Fireboats
- 11 Battalion Chiefs
- 1 Deputy Chief
- 2 Assistant Chiefs
- Chief of Department
- Major E.M.S. Response

- NYPD Patrol, ESU, Detectives, Terrorism, Task Forces, Aviation, Harbor
- NYC OEM
- Medical Examiner
- FRA NTSB
- MEDIA!!!







































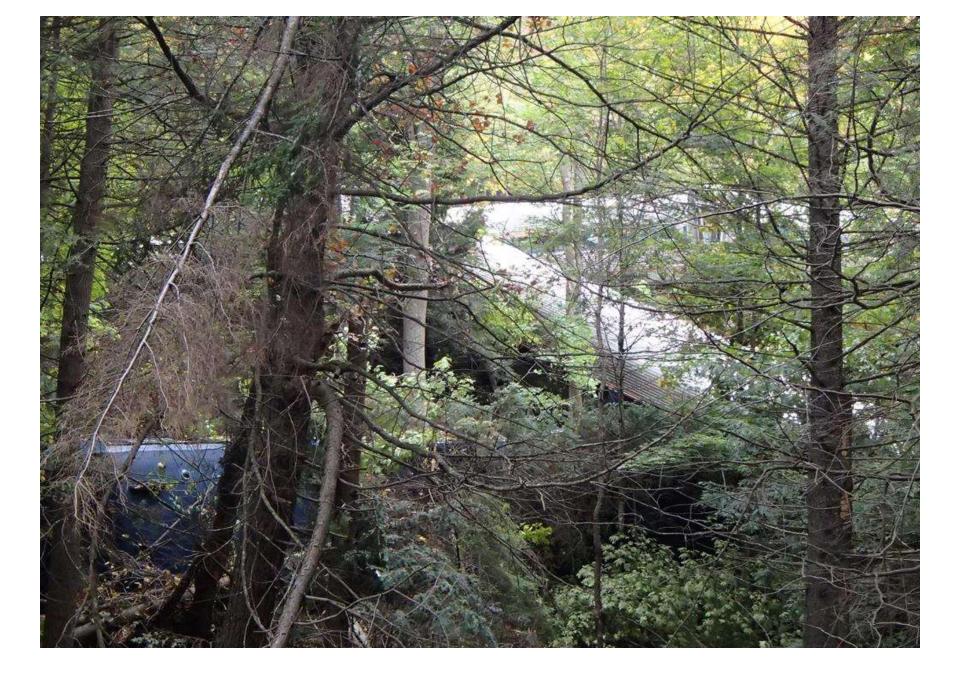




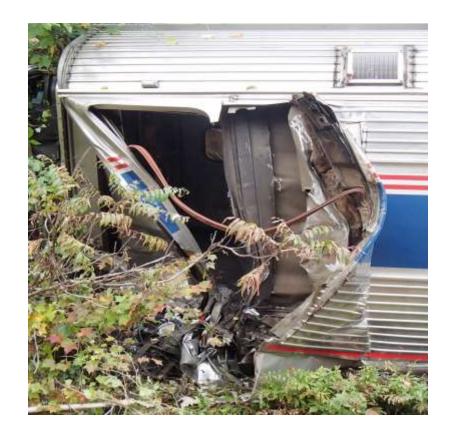


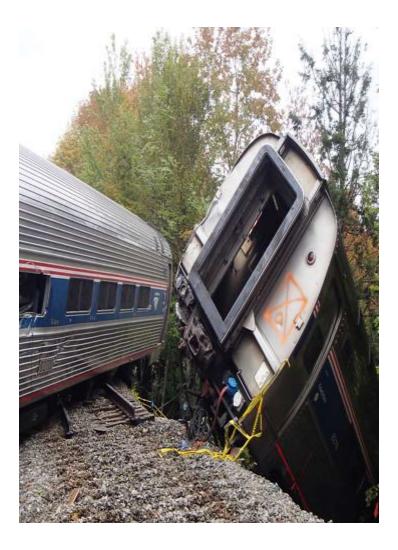
Train 55 Derailment Northfield, Vermont, October 2015





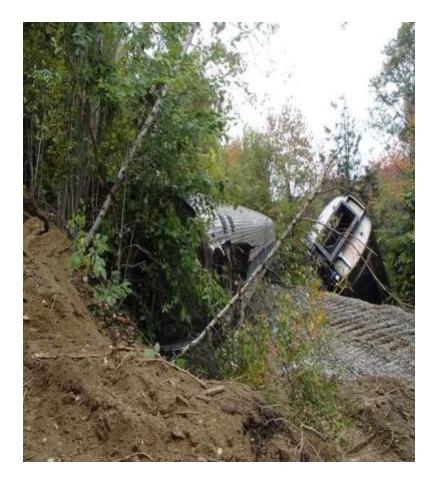










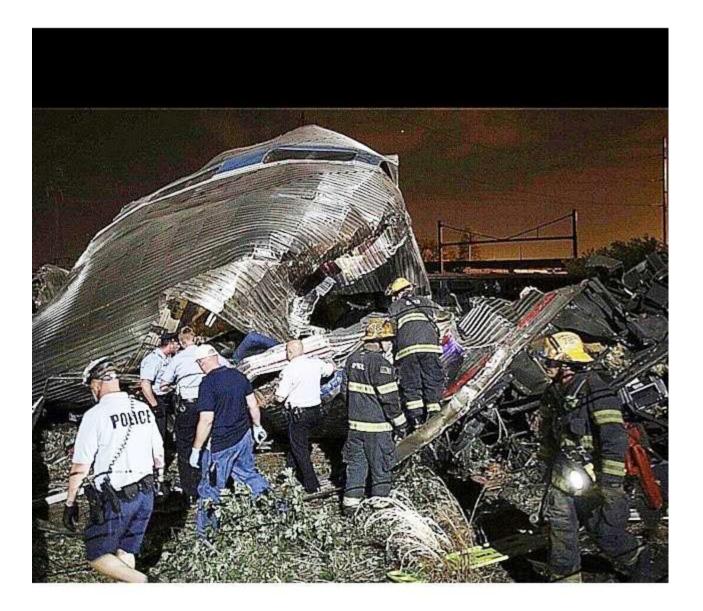


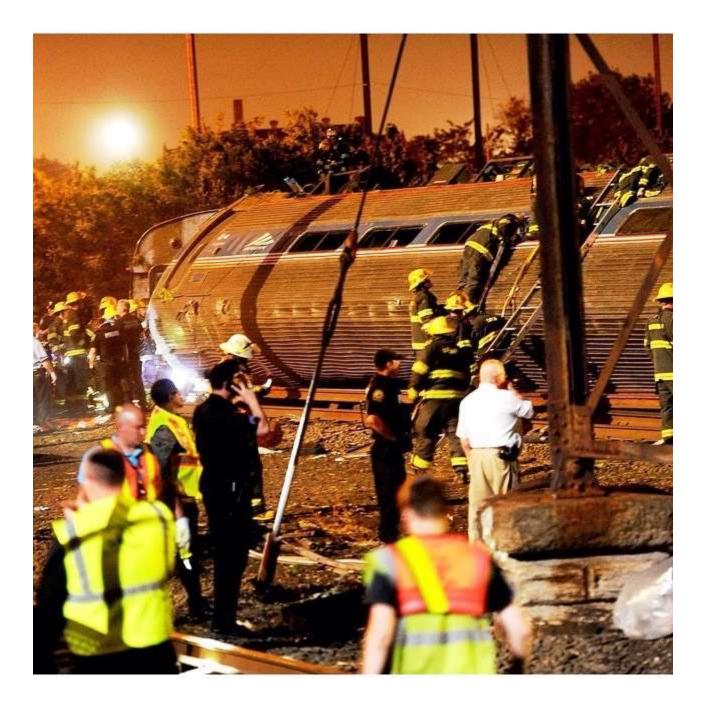


Amtrak Train 188 Derailment, May 12, 2015, Philadelphia, Pa.















So, what if this happened in your response area?

Access Size-up **Command Post Operations Section Chief Branches/Divisions/Groups** Good coordination between FD, EMS & PD's is a MUST! **Searches** Victim Removal Corridor Victim tracking Manpower/Staging Have PD establish/maintain a perimeter Media Training with the Railroads?????





THE INSTRUCTOR

- Amtrak Regional Emergency Manager
- 38 years in the fire service
- Former Fire Chief
- Current Assistant Fire Chief
- NYS Academy-Regional Fire
 Instructor
- Fire Instructor in Nassau & Orange Counties
- Retired Detective, NYPD
- 7 Years New York City Office of Emergency Management





Course Objectives

- Familiarize you with railroad operations
- Preparing/pre-planning for potential train incidents.
- Understand the factors that could affect your safe response to an incident.
- Recognize on-scene dangers for emergency personnel and your equipment while on or near railroad property.
- Understand the command, control & communications issues
- How to stop a train in an emergency situation.
- Identify different types of railroad equipment.



Amtrak's Operations on CSX Railroad

- 8 scheduled Amtrak Trains a day through your response area.
- 2 scheduled Amtrak Trains a day between Chicago and Buffalo
- Amtrak operates on the CSX railroad's through your response area.
- Amtrak Train Movement through your response area is controlled by CSX. Emergency Contact number = 1-800-232-0144.
- Amtrak Police = 1-800-331-0008
- Track speed varies, depending on the characteristics of the railroad. The maximum track speed is for Amtrak Trains is 79 MPH. Maximum track speed for freight trains is 60 MPH.



SAFETY AWARENESS

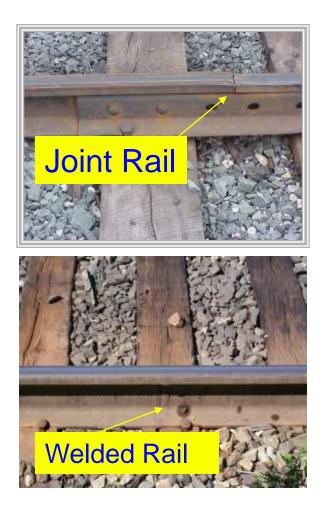
- Definition "Right of Way" = Railroad property.
- Rails Slippery, step over, not on top of them
- Bent rail (collision/derailment) can spring back and injure an emergency responder. Rail weighs 140 pounds or more per yard.
- Ballast and Ties challenging and hazardous to walk on
- Switches and Switch Heaters –Can be hazardous. (Gas or Electric)
- Close Clearance Areas wires and Cables
- Multiple Tracks
- Bridges





FROM THE GROUND UP-TRACK

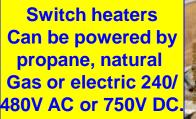
- Railroad tracks- Wood or concrete ties, steel rail, with fasteners, clips, spikes, plates, bars, bolts. Rests on sub grade, and ballast (crushed stone)
- Welded rail ¼ mile long welded together for smooth/quiet ride.





Power Switches

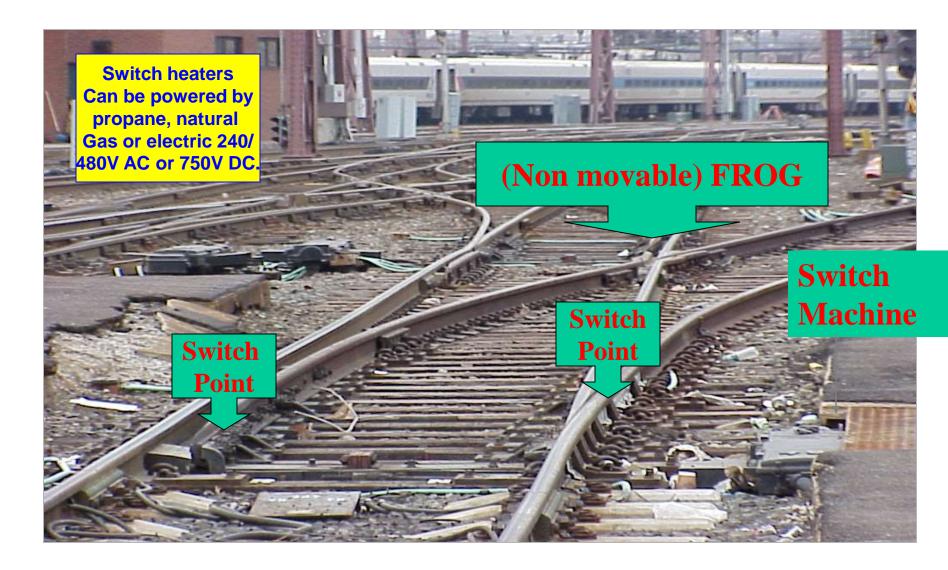
- Remotely Controlled
- May move at any time
- Must stay clear of movable parts
- Can become trapped
- Cross tracks above points, clear of frog (rail intersection)
- Electric, gas, kerosene switch heaters





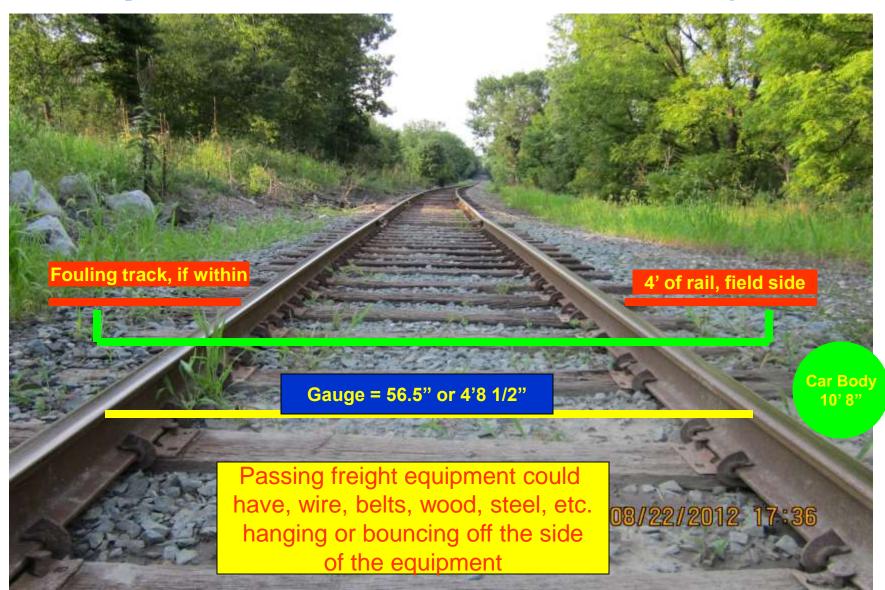


Power Switches



FOULING A TRACK

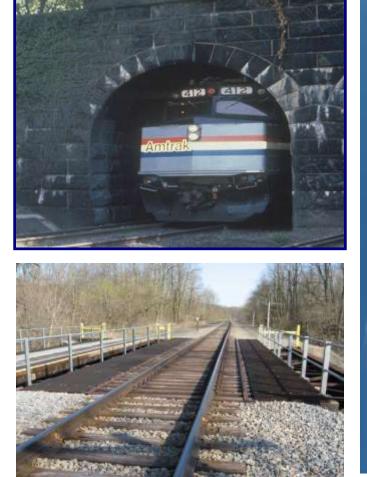
A person or item within 4' of the field side of the near running rail



RIGHT OF WAY HAZARDS TUNNELS & BRIDGES

Stay out of Tunnels & off bridges, if possible:

- Close Clearance
- Poor Ventilation
- Poor Radio Communication
- Over water
- Over / Under roads/highways
- Over tracks
- Open deck bridges
- Closed deck bridges





RIGHT OF WAY SAFETY









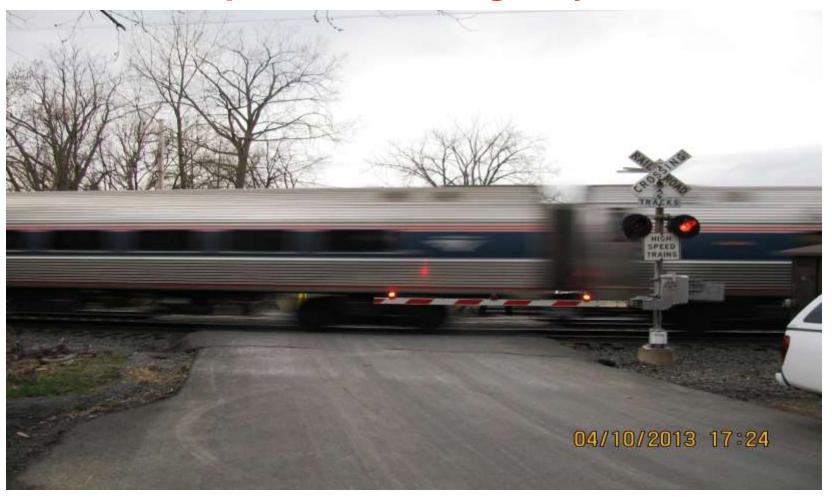
Crossing Gates

- Never drive around gates in down position
- Call Emergency vehicles with better access
- Be mindful trains can operate on adjacent tracks





This train is traveling at 90 MPH. It would take over 1 ½ miles for this train to stop if placed in emergency.



SITUATIONAL AWARENESS: Think about where you are spotting your apparatus!!!!





Grade Crossing Identification





SAFETY AWARENESS

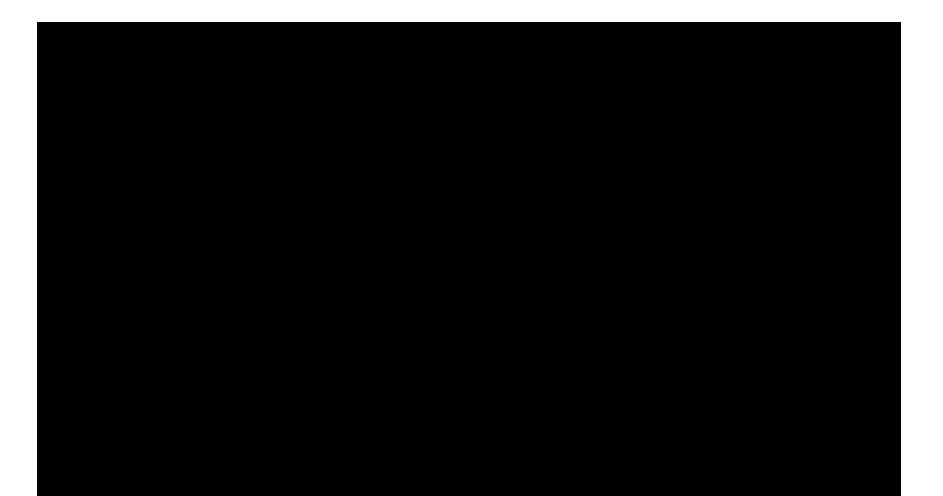
- TRAIN MOVEMENT:
 EXPECT TRAINS
- AT ANY TIME
- ON ANY TRACK
- IN EITHER DIRECTION

(TRAINS, TRACK EQUIPMENT, OR HIGH RAIL VEHICLES)





COMPLANENCY/DON'T GET DISTRACTED



MAKE SURE ALL TRAIN MOVEMENT IS STOPPED, PRIOR TO OPERATING ON, OR WITH 15 FEET OF THE TRACKS <u>WAIT FOR THE CONFIRMATION!!!!!!</u>

12/24/2006

AMTRAK

NEVER! NEVER! NEVER! *Place any equipment, or apparatus on the rails to attempt to stop a train.*



Stopping a Train in an Emergency Have your dispatcher notify the appropriate

railroad dispatcher.



Place a lighted flare between the rails, on ballast, out about 2 miles in both directions from the incident location.

Move a lighted flare or hand light back & forth horizontally, at knee to hip level, at the approaching train.

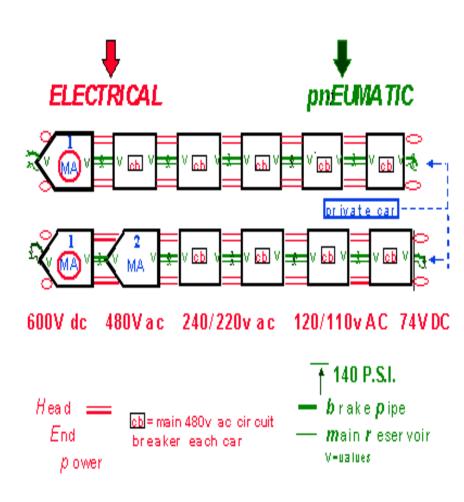
SAFETY AWARENESS

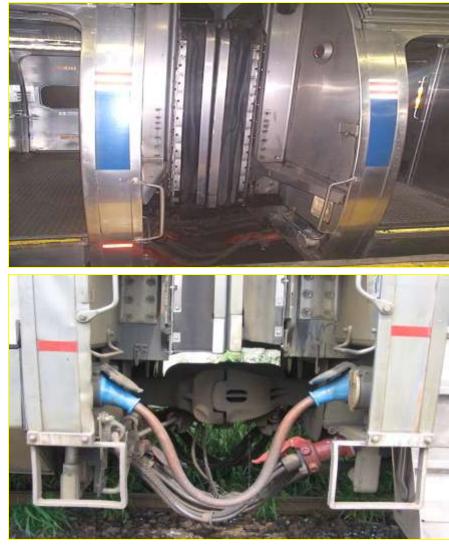
- DO NOT GO BETWEEN OR UNDER ANY PIECE OF TRAIN EQUIPMENT.
- DERAILMENTS/COLLISIONS; MAKE SURE TRAIN EQUIPMENT IS SECURE AND STABLE BEFORE OPERATING IN, ON, OR AROUND IT. <u>TREAT THE</u> <u>INCIDENT AS IF IT WERE A</u> <u>STRUCTURAL COLLAPSE</u> <u>INCIDENT!</u>
- KEEP ALL PERSONNEL AND EQUIPMENT AT LEAST <u>15 FEET</u> AWAY FROM ALL TRACKS UNTIL YOU HAVE CONFIRMATION THAT ALL TRAIN MOVEMENT HAS BEEN STOPPED.





SAFETY AWARENESS







Passenger Train Electrical Systems

- 600V Traction Motors
- 480V Alternator
- 110/120V Lighting, Doors & Wall Outlets
- 220/240V Heating, Air Conditioning & Stoves
- 74V DC Emergency power, NICAD battery system



SAFETY AWARENESS

- HEAD END POWER (HEP) – 480 volts of electricity that travels through cables on and in between cars and locomotives to provide power for lights, heating, A/C and other appliances
- BRAKE LINE PRESSURE – 110/140 PSI between locomotive and cars (car to car) through hoses and piping



PRIVATE CARS





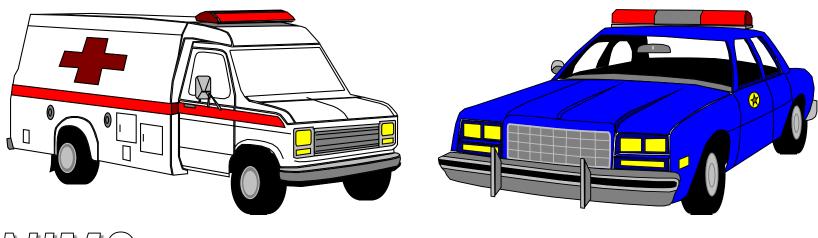




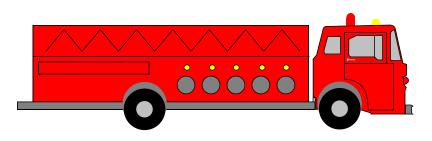


EMERGENCY RESPONSE OPERATIONS











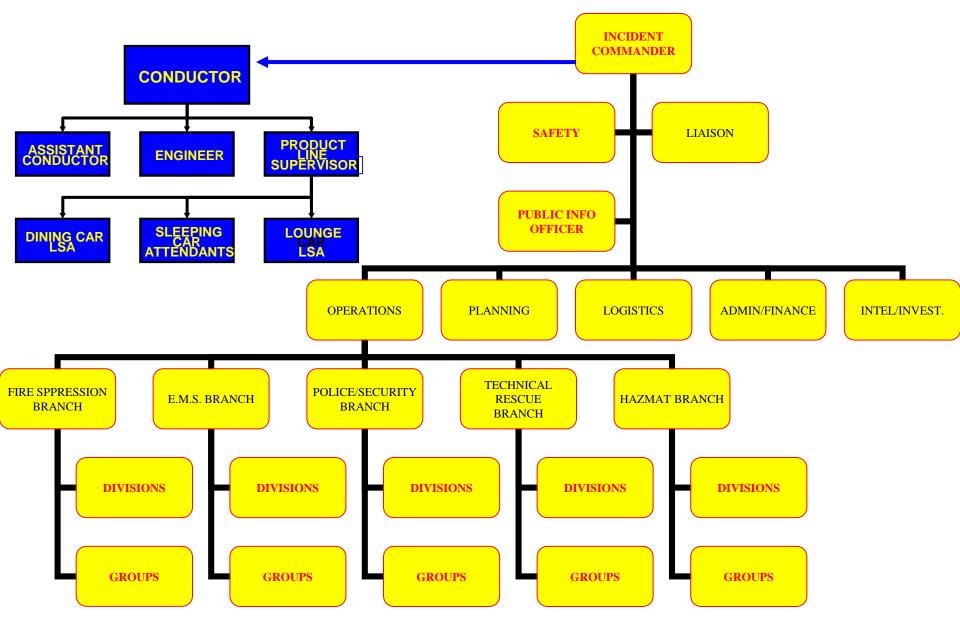
RAILROAD INCIDENTS RESPONSE AGENCIES

- FIRE DEPARTMENTS
- EMS
- LOCAL POLICE
- SHERIFF
- STATE POLICE
- CSX
- CSX Special Agents
- AMTRAK
- AMTRAK POLICE
- Office of Fire Prevention and Control

- FBI
- LOCAL AND STATE EMERGENCY MANAGEMENT
- DEC
- ATF
- NTSB
- FRA
- TSA
- The Media
- AND MORE



NATIONAL INCIDENT MANAGEMENT SYSTEM/ INCIDENT COMMAND SYSTEM





EMERGENCY RESPONSE OPERATIONS

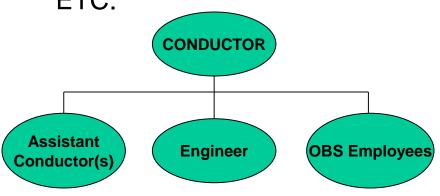
- Confer with the Train Crew:
- **CONDUCTOR** In command of the train

ASSISTANT CONDUCTOR

ENGINEER – In command of the locomotive and operates the train

ON BOARD SERVICE

ATTENDENTS – serve food, sleeping car attendants, ETC.







Terrorism – Criminal Acts





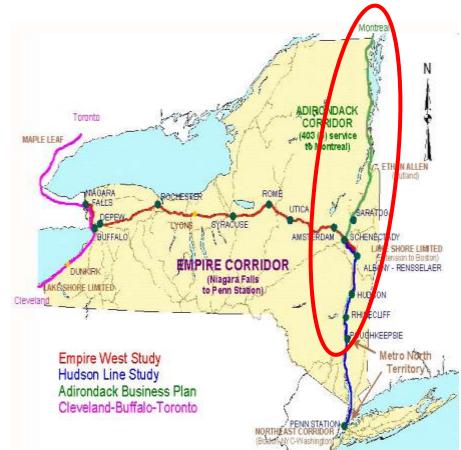






Plans to Derail N.Y. Passenger Train in Canada Plot

Two men were arrested by Canadian authorities this week on charges related to plotting to blow up a trestle on Amtrak's New York-Toronto "Maple Leaf" line as a passenger train passed over it. U.S. officials working in conjunction with Canadian counterparts explained that the derailment would have caused major destruction and loss of life. The two men, both in their 30s and residentsbut not citizens-of Canada, were arrested in Quebec and Ontario. Canadian authorities also indicated, without further explanation, that the men received "direction and guidance" from al Qaeda in *Iran*. Both men were under surveillance for a year, and the plot was said to be in planning stages, and not imminent.







Railroad Equipment that can be Mistaken for Suspicious Devices - SHUNTS











PERSONNEL ACCOUNTABILITY

- Know what companies/units are on the scene, including mutual aid companies/units.
- Know where your companies/units are operating at all times.
- Have someone track the companies/units operating at your incident, on some type of command board.

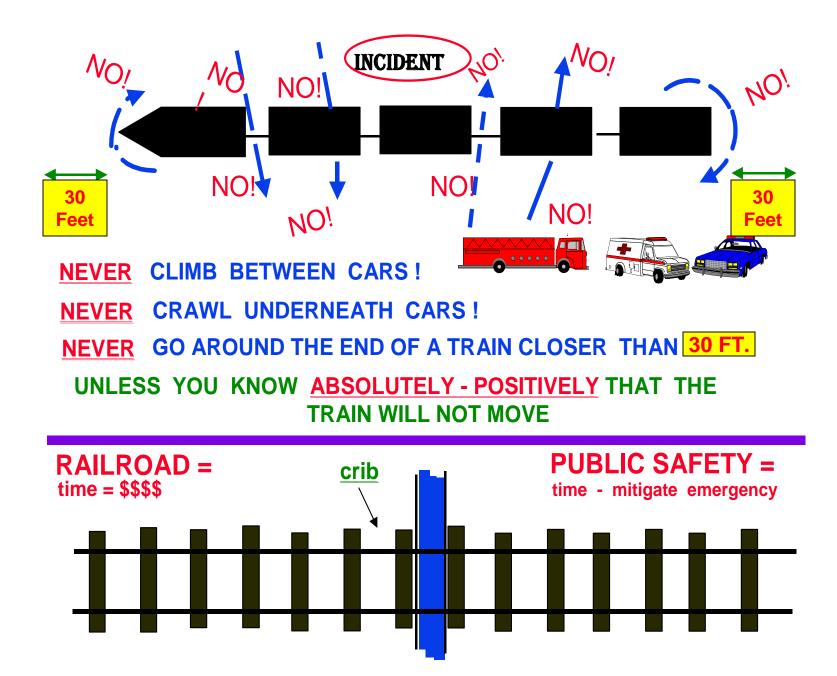




Stretching Hose Lines Across the RR Tracks

- Notify the host railroad and request that all train movement be stopped from ____to___ before stretching the lines across the tracks.
- Extended operations; ask the railroad to assist you with trenching to place the lines under the tracks.







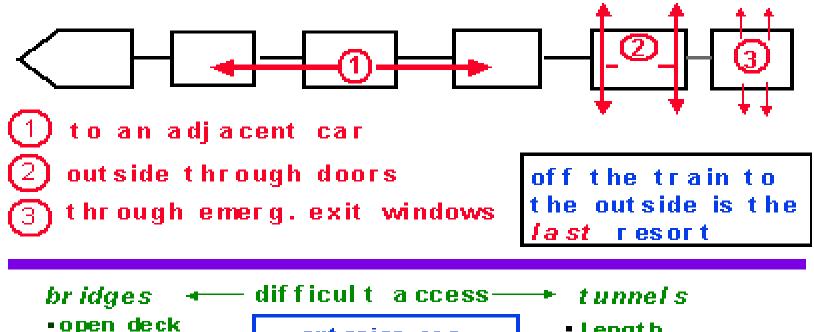
EMERGENCY RESPONSE OPERATIONS- APPLICATION OF HAND BRAKES



•Make Sure; ALL HAND BRAKES ARE APPLIED. DO NOT RELEASE ONCE APPLIED! Chock the wheels!



EMERGENCY RESPONSE OPERATIONS-EVACUATION OPTIONS



 closed_deck through train to end car if clear

exterior car windows are made of *lexan*

- I engt h
- widt h
- close clearance
- smoke, fumes

EVACUATION - PERSONS WITH SPECIAL NEEDS



EMERGENCY RESPONSE OPERATIONS

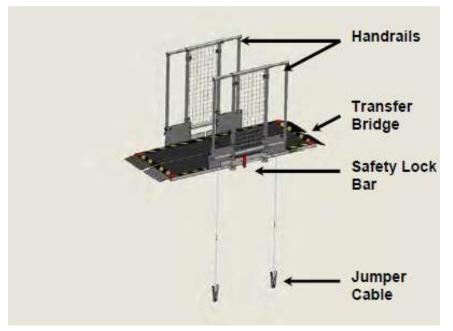
- IF A TRAIN IS INVOLVED AND IT IS NOT AT A PLATFORM, AND THE TRAIN IS STABLE, AND THERE IS NO IMMEDIATE DANGER TO THE PASSENGERS, CREW OR EMERGENCY RESPONDERS:
- 1. Move the passengers out of the car(s) involved

AND

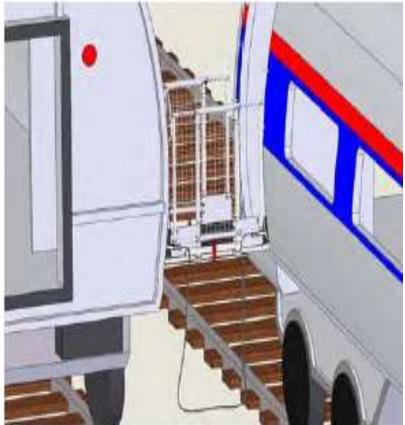
2. Keep the passengers on the train (in a controlled environment), until the train is brought to a platform or a rescue train is put in place.

G2 Transfer Bridge

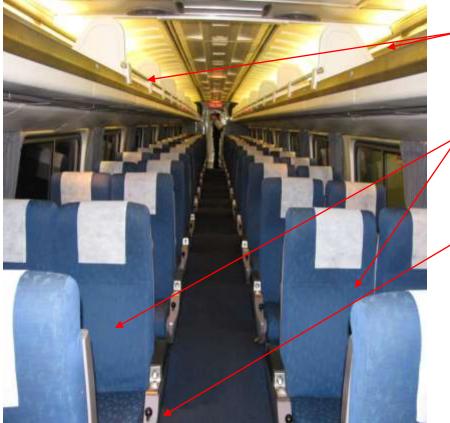
If the train is equipped with a G2 Transfer Bridge, the train crew can use it to transfer/evacuate passengers from one train to another.



Amtrak train crews are trained in the operation of the G2 Transfer Bridge



Searches

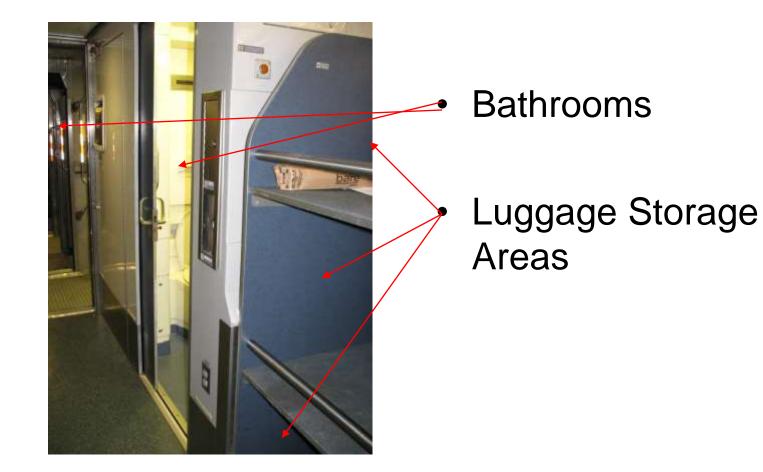


Luggage Racks

Seat Area

 Floor Area/Under Seats

Searches



What happens when a passenger train car burns????



WHENEVER POSSIBLE, KEEP HANDLINES AND EQUIPMENT ON THE FIELD SIDE OF THE TRACKS UNTIL TRAIN TRAFFIC IS CONFIRMED STOPPED AND ALL OF YOUR PERSONEL ARE PROTECTED

- I and a second second second



EMERGENCY RESPONSE OPERATIONS

- Pre-Plan with Amtrak, CSX Railroad and the other railroads in your response area and identify access points to the railroad.
- Size-up the situation upon arrival
- Establish a Command Post, notify CSX Railroad, 1-800-232-0144, of the CP location.
- Plan for the worst, start out and stage additional companies – Rail incidents; labor/manpower intensive operations





Preplan the Railroad in your Response Area(s)

- Topography
- Access points
- How big is the incident scene??



 Divide the incident into Divisions (I.C.S. – Span of Control)



EMERGENCY INFORMATION REQUIRED BY THE TRAIN DISPATCHER

- Name/Title of Incident Commander
- Emergency Agency Name
- Telephone call back number
- Type of Emergency/Incident
- Specific action you want the railroad to take
- Specific location of incident
- Wait for confirmation that what you requested has been complied with!





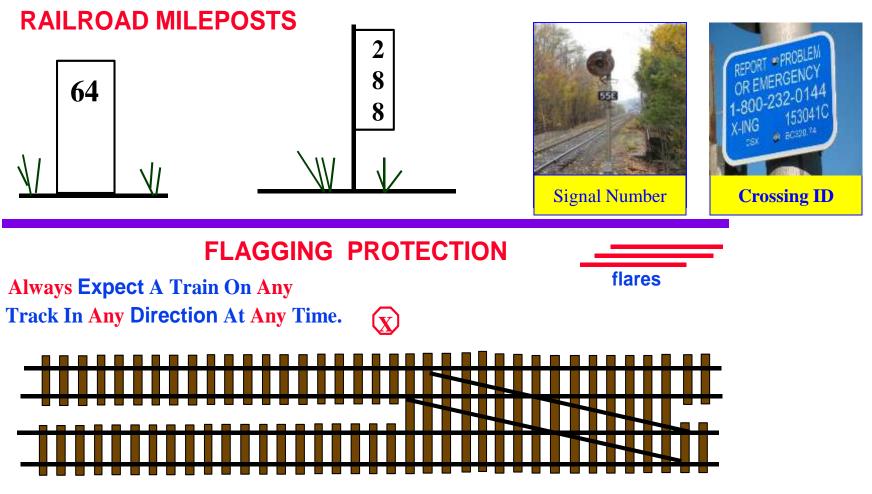
DETERMINING THE LOCATION OF THE INCIDENT

- Mile Post Markers
- Control Point ID
- Signal/Com. Hut ID markings
- Signal number
- DOT grade crossing ID number



DETERMINING THE LOCATION OF THE INCIDENT

RIGHT-OF-WAY SAFETY





EMERGENCY RESPONSE OPERATIONS

WHEN IT IS NECESSARY, HAVE YOUR DISPATCHER NOTIFY CSX OR OTHER RAILROADS, IF NECESSARY, OF CONDITIONS AND:

- "Request ALL TRAIN MOVEMENT STOPPED" on the affected tracks and in your SAFETY ZONE.
- Detail what track (s) you need train movement stopped on and between what locations (example; Between mileposts 56 and 58), and...... WAIT FOR THE CONFIRMATION!



Emergency Information

- Record the name of the railroad contact person
- Maintain communications and update the railroad of the Incident status
- If the RR representative must leave the Command Post for any reason, send a firefighter, equipped with a radio, with him or her, or get their cell phone number.







EMERGENCY RESPONSE OPERATIONS

- Derailments, Fires, Collisions; ALL CARS MUST BE CHECKED ASAP
- RECOMMENDATION; Treat the train similar to a Taxpayer/Strip Mall fire – Work out in both directions from where incident occurred.
- Train Fire Similar to a Structure Fire, Attack from unburned side......Searches!!!!!





SAFETY RECOMMENDATIONS

- Limit/control number of people on tracks. If you don't *need* to be there, DON'T BE THERE!
- Do not foul/obstruct tracks until authorized
- Place hoselines under tracks when possible
- DO NOT go underneath/between equipment unless Headend power (HEP- 480 v) is de-energized (generator shut down)





SAFETY RECOMMENDATIONS, cont'd

- Minor fires along ROW.....do we need to put our people on the tracks?????
- Risks VS Rewards!!!!!
- Do we need to stop train movement????





SAFETY RECOMMENDATIONS, cont'd

- Send flagmen out <u>2 to 2 1/2</u> miles in both directions to warn trains-give "stop signal" with hand, flag, light, flare, etc. THEY SHOULD BE STANDING AT LEAST 4' AWAY FROM THE TRACKS AND NOT IN THE GAGE OF THE TRACKS!
- Post watchman at scene to look for trains



SAFETY RECOMMENDATIONS, cont'd

- Use extreme caution at highway grade crossings
- Do not drive around gates that are down
- Use alternate route or request emergency
 units with better scene access
- REMEMBER-Trains can't stop-YOU can!
- Establish/maintain continuous communication with Amtrak.
- Always think SAFETY FIRST!



CROWD CONTROL

- If Train Crew is unavailable, crowd control is a must for everyone's safety
- If not necessary to evacuate, all passengers must be kept on board, seated, informed
- If you must leave a door (s) open, post a guard (s) to keep the passengers on the train and spectators off the train.
- If train crew unavailable, make announcements, control doors, chains, bars to control passengers
- Keeping passengers informed and up-to-date keeps them calm!





Reminder For Police Personnel

- Trains are not "vehicles" as in motor vehicle law.
- Only the Engineer can move the train. The only time an engineer can leave his/her train is when in danger or relieved of duty by a qualified railroad employee.
- Employees will cooperate as much as possible, and will be available for interview at the first opportunity when passengers and equipment are safe.





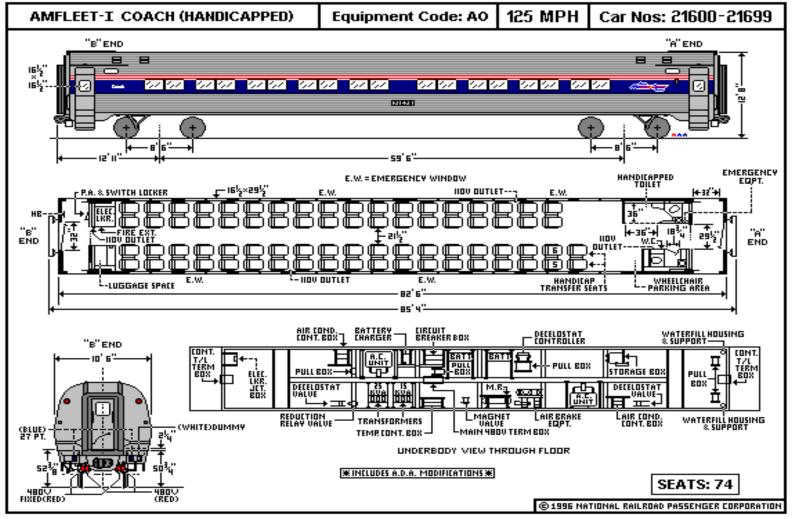
ON-BOARD EMERGENCY EQUIPMENT



- 10 pound dry chemical A-B-C fire extinguisher
- Sledge hammer
- First Aid kit
- Light Sticks
- Pry Bar

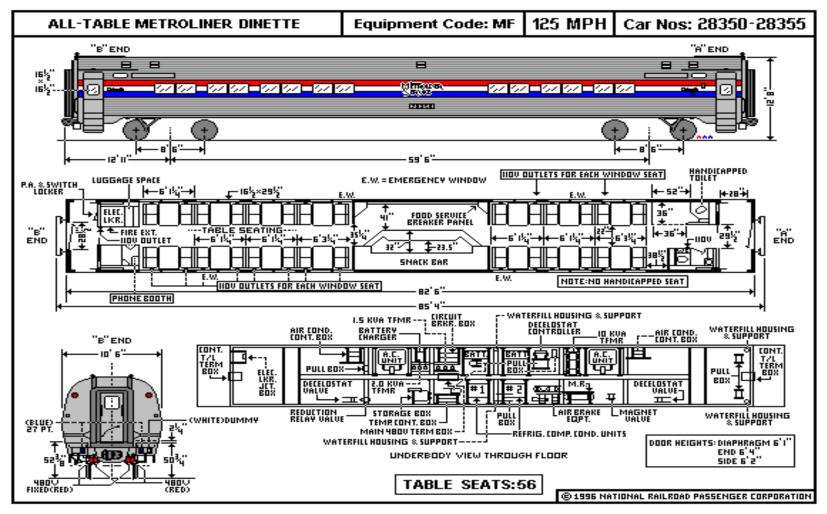


AMFLEET COACH



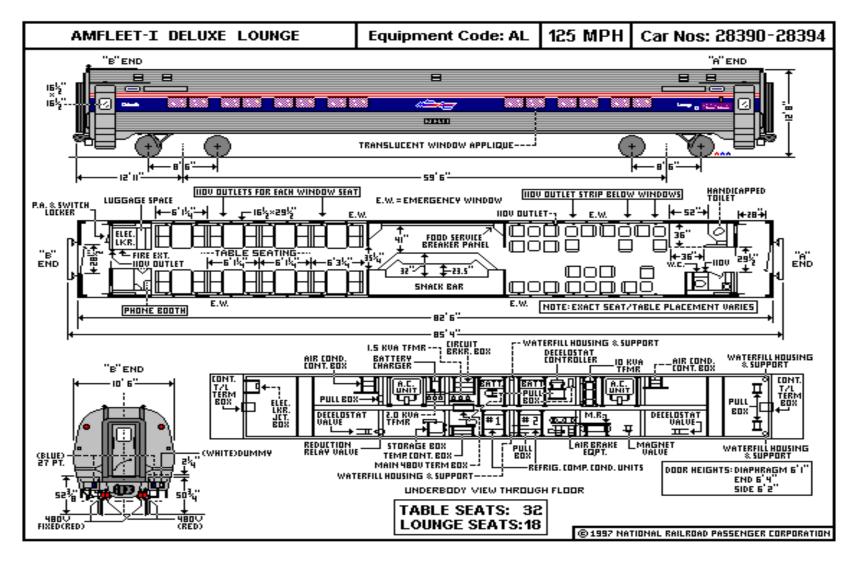


METROLINER DINETTE



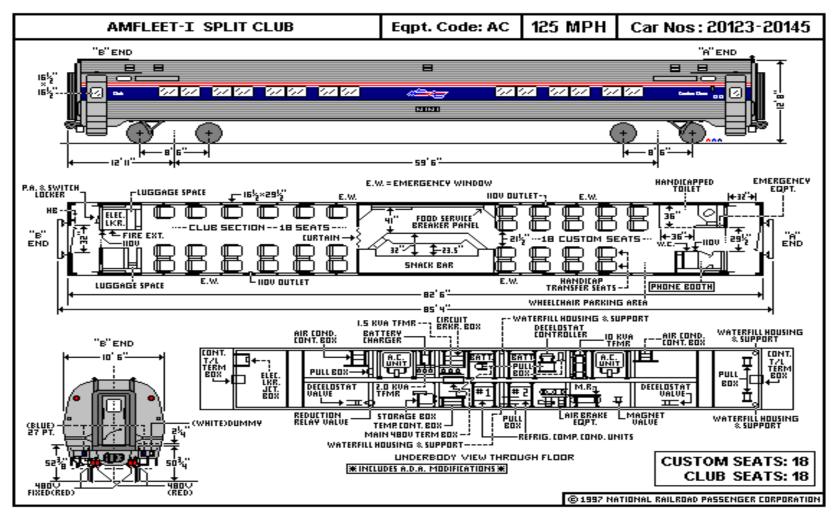


AMLEET DELUX LOUNGE



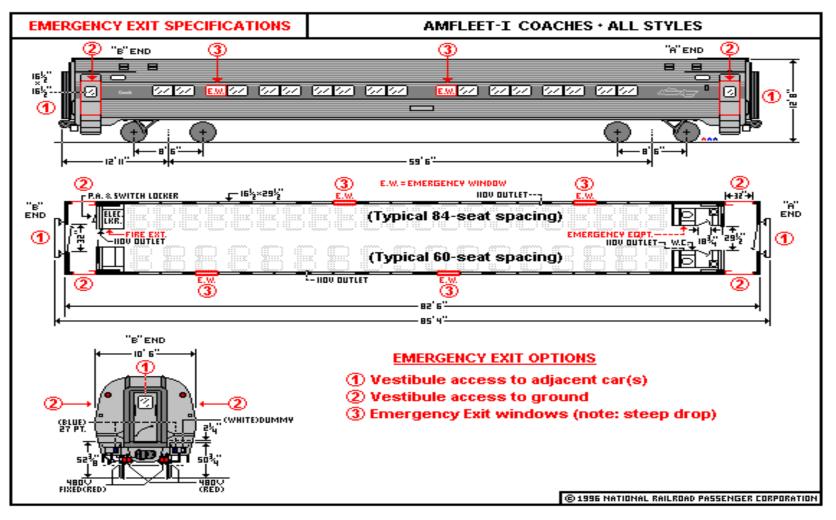


AMFLEET SPLIT CLUB



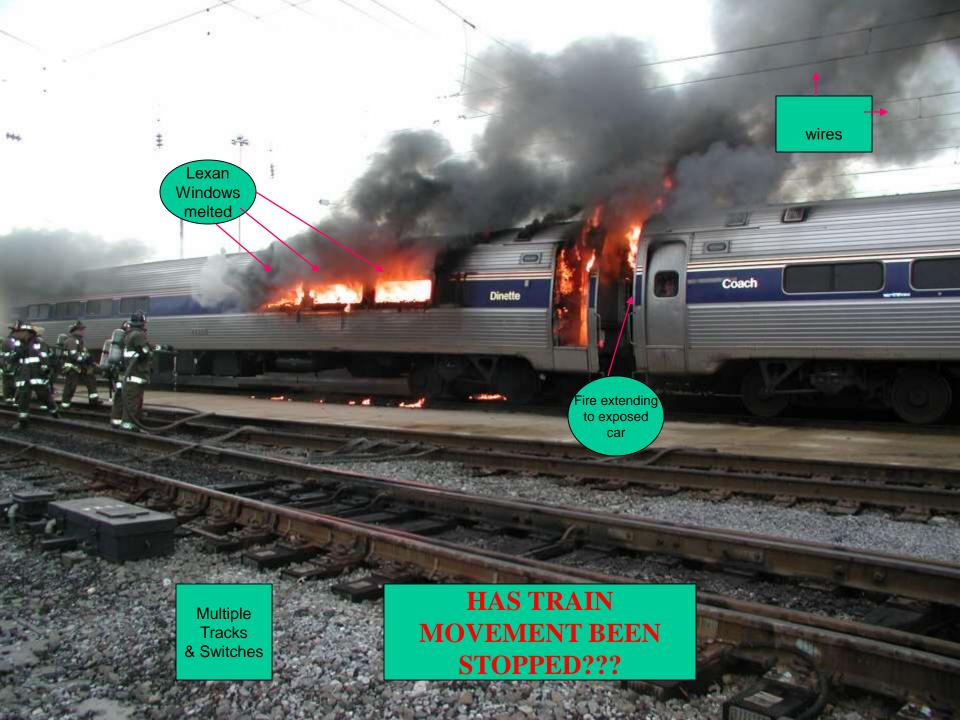


EMERGENCY EXITS – AMFLEET SERIES





stream of an ABC multi-purpose dry chemical extinguisher to extinguish a fire in this area.



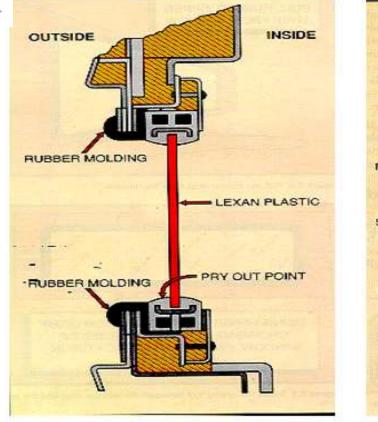


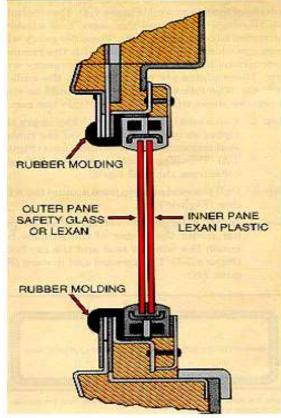
AMFLEET WINDOWS

Lexan® windows, do not attempt to cut/saw, will bind equipment AMTRAK 82023

All coach cars have emergency access windows



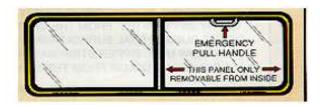




Passenger Car Emergency Windows. All passenger cars are equipped with emergency window exits. Each car will have at least four of these window exits. To remove these windows from inside the car, use the following procedure:

Step 1: Pull the red emergency handle in and remove the rubber molding.

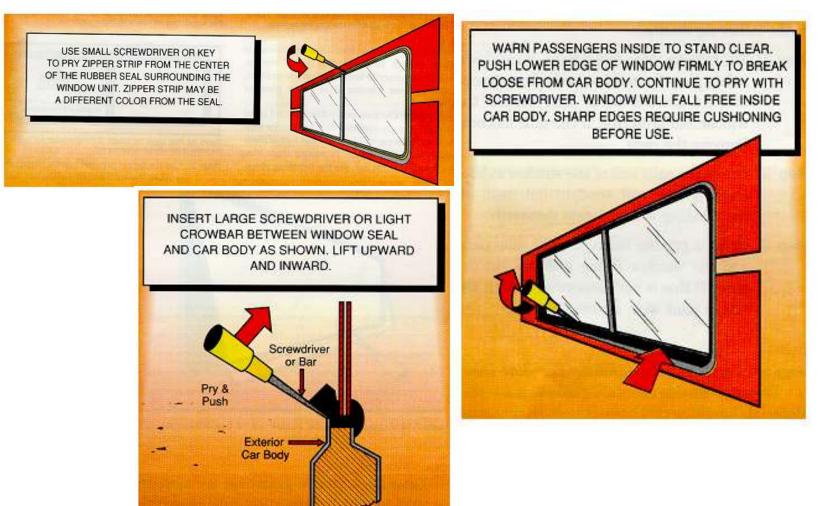
Step 2:Use the newly exposed metal handle to pull the window toward the inside of the car. Note that only one-half the window is designed to come out.



INSIDE THE CAR



REMOVAL OF WINDOWS FROM EXTERIOR









AMFLEET SERIES-DOORS











AMFLEET STEPS



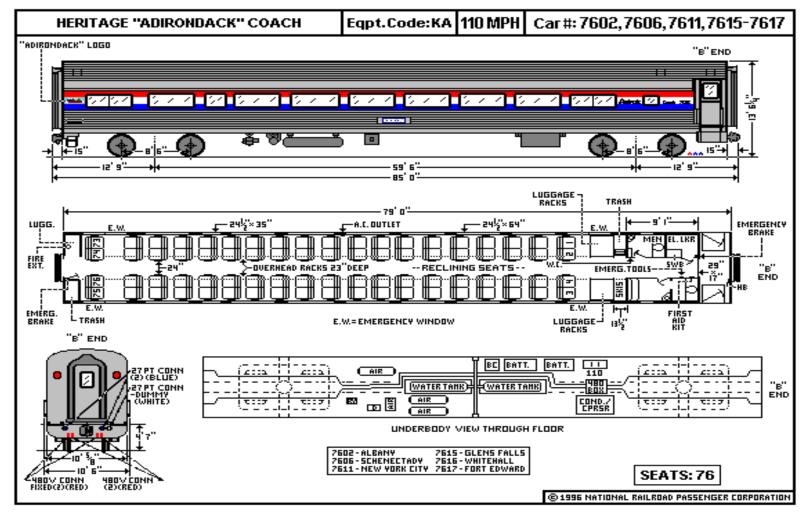


AMFLEET- Emergency Brake



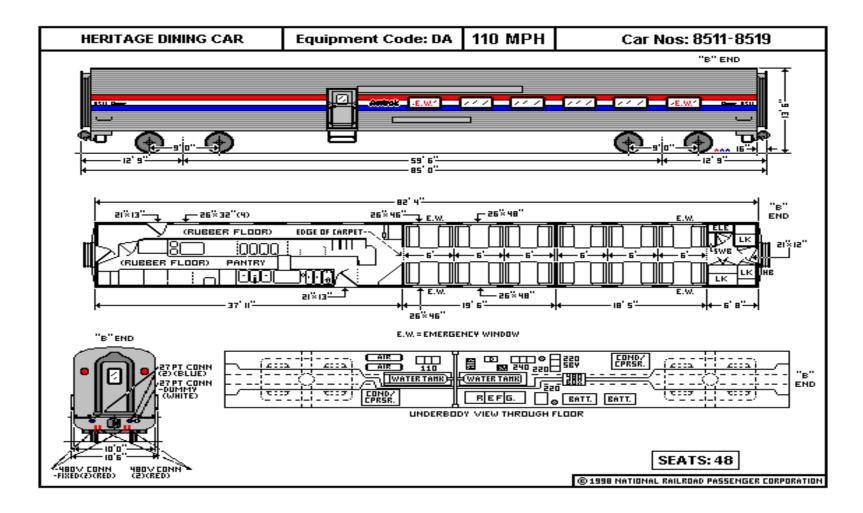


HERITAGE COACH



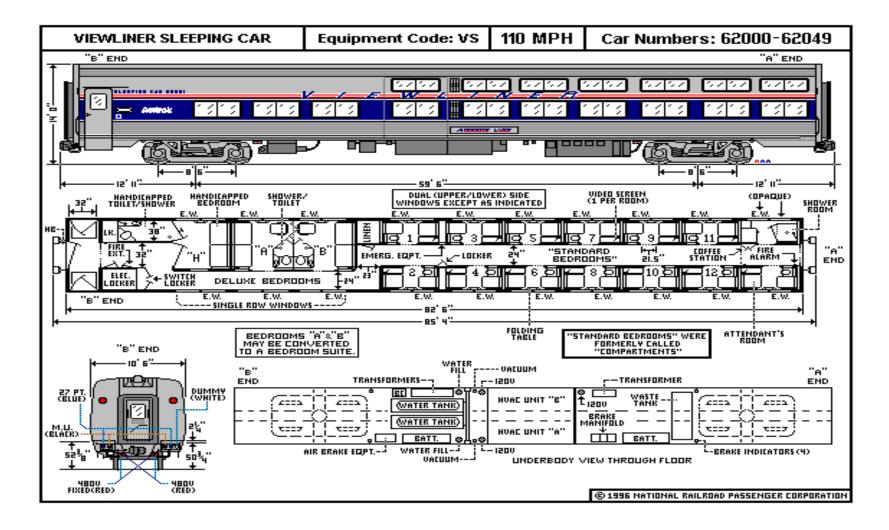


HERITAGE DINING CAR



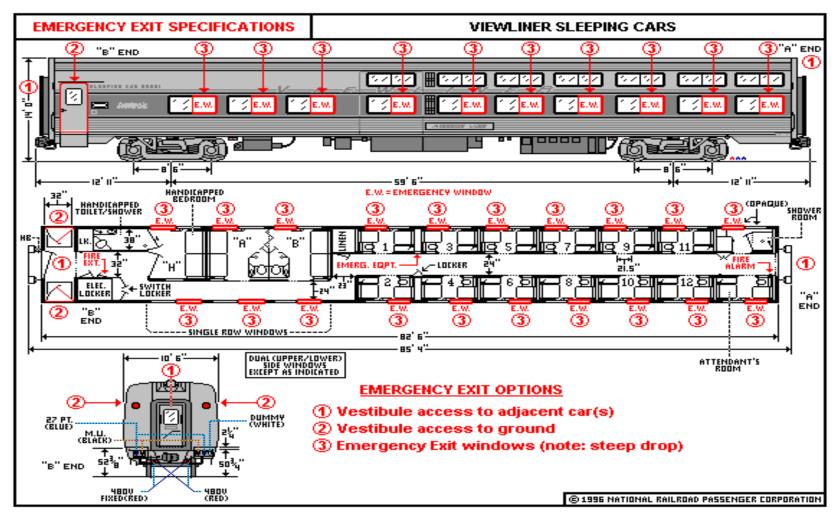


VIEWLINER SLEEPER



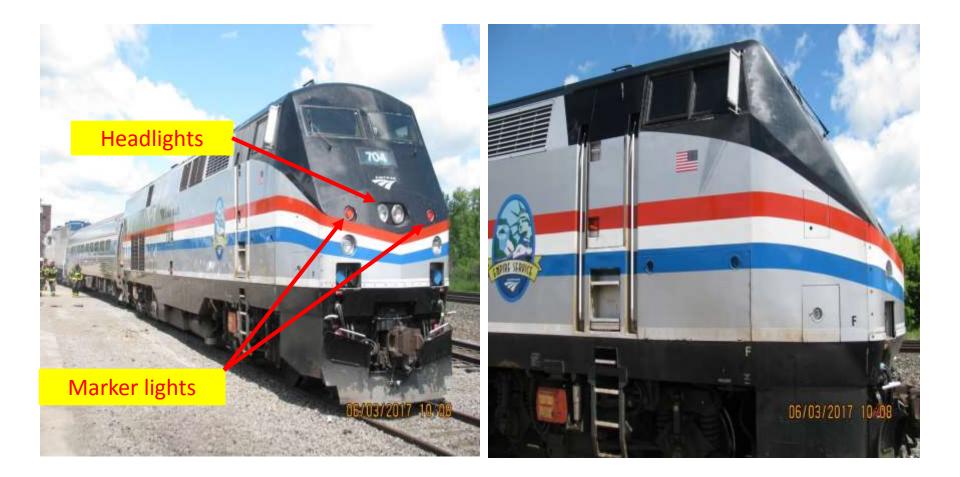


EMERGENCY EXITS – VIEWLINER SLEEPER





Dual Mode Locomotive





Dual Mode Locomotive-3rd Rail Contact Shoe





P-42 Diesel Locomotive







Diesel Locomotive Fire

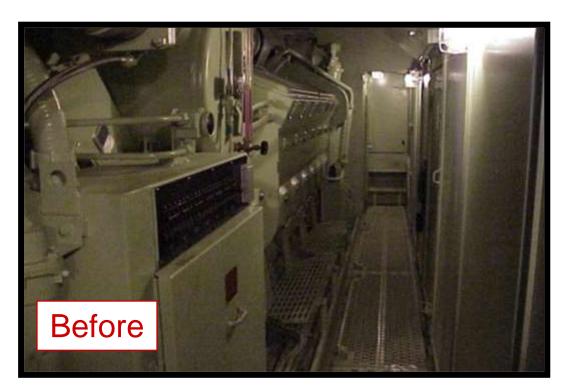


Do We Know What Is Burning



Fire Hazards

- Fuel Fire; blanket engine room floor with class "B" Foam.
- Firefighter can fall through roof.











Recommended Guidelines for Fire Suppression Operations Involving Engine Compartment Fires on P-32 and P-42 Locomotives





Over the past few years there have been a number of fires involving P-42 and P-32 Genesis Locomotives across the country.

This training/safety bulletin was put together to assist fire service personnel prepare for their responses to a fire involving one of these locomotives. This document provides basic recommended guidelines for dealing with fires within the engine compartment of a P-42 or P-32 locomotive.

This bulletin is not a substitute for a structured railroad emergency response training program. It is recommended that all fire service personnel in New York State, with the potential of being involved a passenger train emergency, participate in the New York State Passenger Train Emergency Response Procedures Course. For more information about this training in New York State, contact the following:

• Amtrak: Chief Gary Hearn, Fire Safety – Emergency Management, 212-630-7163

It is recommended that all fire service personnel in New York State with the potential of being involved in an incident involving a *freight* train, participate in the Rail Safety for Emergency Responders Course. For more information about this training, visit www.oli.org. This program is administered through Operation Lifesaver and all inquiries can be directed to the New York State Executive Director via email at NYSOPLIFESAVER@aol.com.

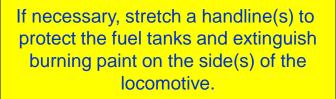
- Confer with the train crew (Conductor & Engineer).
- Create a safety zone and request that train movement be stopped on the tracks that impact incident operations, or are impacted by the incident. WAIT FOR THE CONFIRMATION THAT TRAIN MOVEMENT IS STOPPED BEFORE OPERATING WITHIN 15' OF THE TRACKS, OR STRETCHING HOSELINES ACROSS THE TRACKS.
- Make sure the Engine was shut down. If the crew is not present, use one of the emergency fuel shut off's on either side of the locomotive.
- These locomotives can carry between 1800 and 2400 gallons of diesel fuel

Recommended Fire Suppression Operations

Stretch a foam line (Class B Foam) to the rear door.

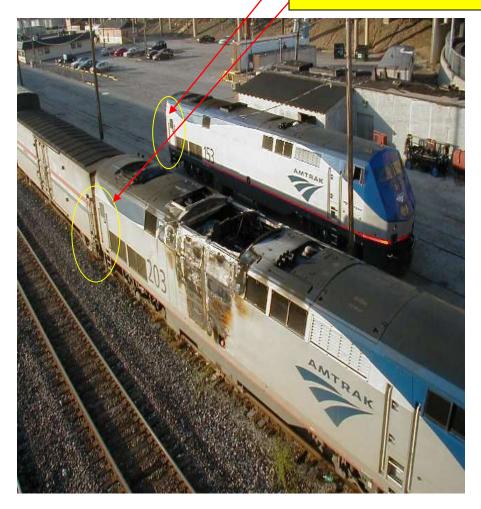


Recommended Fire Suppression Operations





If this door is locked, have the train crew unlock the door. If there is no one on the scene with a key (in a yard, for example), place a ladder against the locomotive, remove the gasket from around the window, remove the window, reach in and open the door.





Don your face piece, enter the rear door, and stay low

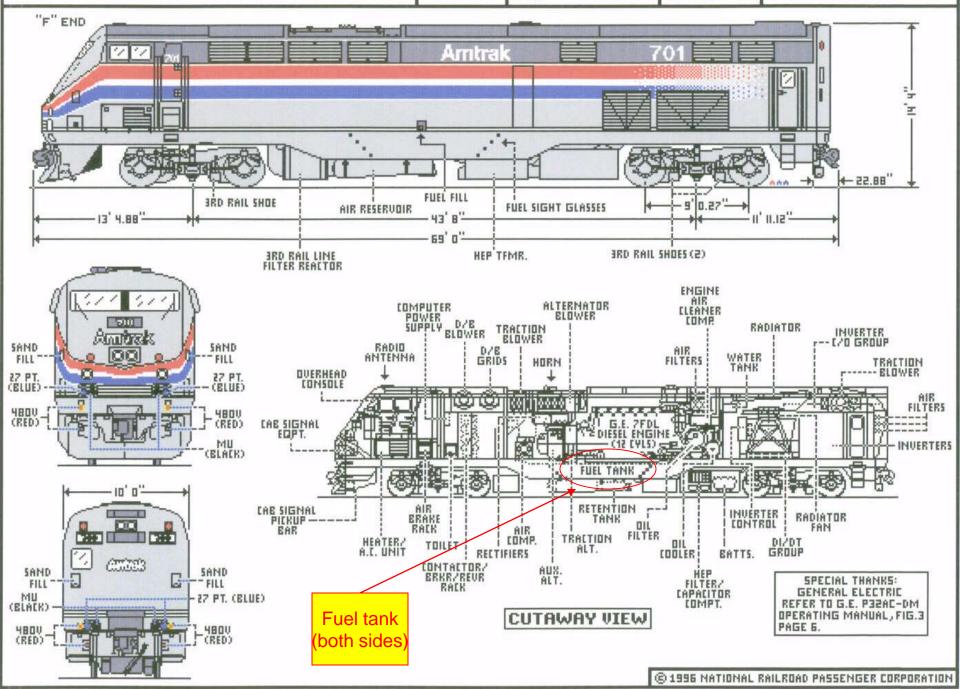


Operate the foam line from this door into the engine compartment.

NOTE – There is more equipment in this area on a dual mode P-32 locomotive, making it a "tighter" area to operate in.



P32AC-DM DIESEL/DC THIRD RAIL LOCOMOTIVE 3200 HP Eqpt. Code: DM 110 MPH Unit Nos: 700-717

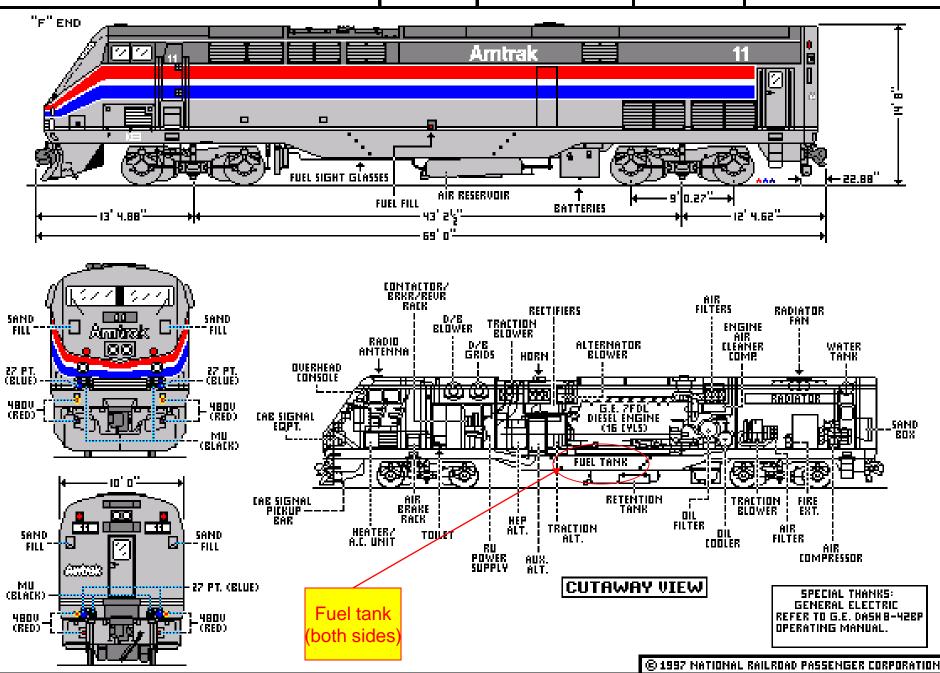


P-42 DIESEL LOCOMOTIVE

4250 HP | Eqpt. Code: BD |

Unit Nos: 1-140

110 MPH

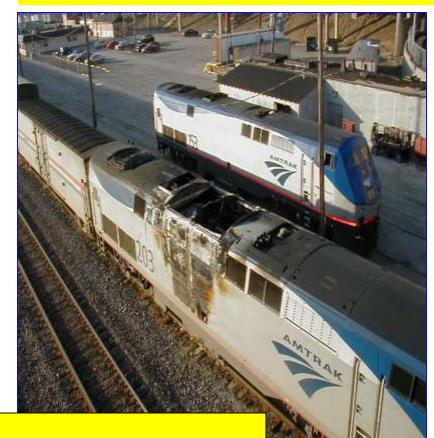




P-32 & P-42 Locomotive-Emergency Fuel Shutoffs



DANGER!!!!!! STAY OFF THE ROOFS OF ALL TRAIN EQUIPMENT



Please, do not send your personnel to the roof of <u>any</u> piece of train equipment. In structural fire terms, think of it as a light weight truss constructed roof, with heavy fire conditions below the trusses.





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12/24/2006

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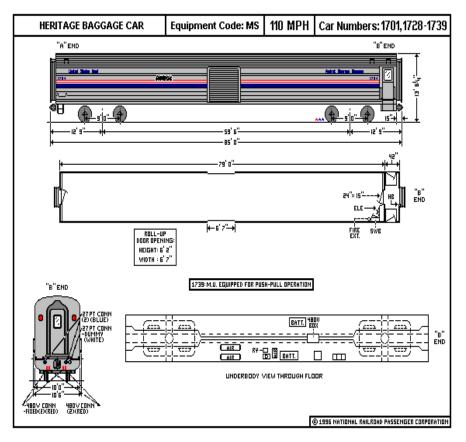
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BAGGAGE CARS

Gun Locker





Metro North Railroad Derailment/Collision May 17, 2013











So, what do you do when you pull up on something like this????













- For additional information on railroad operations or railroad emergency procedures contact:
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- Office: 212-630-7163
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- E-Mail: hearng@amtrak.com

