



**National Fire Fighter Near-Miss Reporting System  
Reports Related to Seatbelts**

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***Have you signed the International First Responder Seatbelt Pledge?***

***[Click Here](#) or submit the attached sheet at the end of this document***

10-944

### **Event Description**

One of our ambulances was responding to a medical emergency with three firefighters when a collision occurred. Two firefighters were in the cab and one firefighter in the patient compartment. The collision occurred on a suburban four-lane road with a center turn lane. The posted speed limit was 45 MPH. The ambulance was traveling in the inside westbound lane at approximately 45 MPH. A vehicle in the eastbound lane slowed to yield to the oncoming ambulance. A pickup also in the eastbound lane failed to notice the slowing vehicle and swerved into the westbound lane to avoid rear-ending the vehicle in front of him. Because of his swerve, he impacted the ambulance on the driver side. The force of the impact tossed the ambulance onto its passenger side. Damage was extensive to the driver and passenger sides of the ambulance. The driver and passenger radioed dispatch and asked for an ambulance to be dispatched to their original call. All three firefighters exited the ambulance, assessed the person who struck them, and asked for additional units to be sent to their accident scene. They assisted in the treatment of the accident victim. They were then transported by command staff to a local hospital for minor injuries.

### **Lessons Learned**

Our department is a proud participant in the National Firefighter Seatbelt Pledge Campaign with 100% compliance. The firefighters staffing this ambulance walked away and were able to render care to other victims involved in this accident because they were wearing their seatbelts. Although it is in our SOP that all individuals riding on apparatus shall be wearing seatbelts, signing the seatbelt pledge created positive safety awareness in all of our firefighters. Without the use of seatbelts, this rollover accident could have resulted in a disastrous ending with all firefighters sustaining a more serious injury. Our firefighters were able to go home to their families.

There is another important lesson learned. All loose equipment in a vehicle should be properly secured. The firefighters in the cab of the vehicle were safe from flying objects. It was a different story for our firefighter in the patient compartment. Everything placed on the counter was tossed about the interior. Additionally, the cardiac monitor was on the cot and not properly secured. If tossed forward, it could have struck the firefighter. Fortunately, this was not the case. Keeping all large, hard pieces of equipment secured is very important in preventing injury to firefighters and patients in the patient compartment.

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**10-494**

**Event Description**

Note: Brackets denote reviewer de-identification.

Our department responded to a fire alarm sounding very early in the morning on [date omitted]. A duty chief as well as a quint from one station and a quad from our other station responded. The quad was a 3-year old [truck manufacturer omitted]. While approaching a curve at approximately 40-45 mph, the apparatus operator drove off the edge of the road and sheared two 36" utility poles, rolled onto the side and came to a stop against a third utility pole. It narrowly missed an electric utility substation located at the roadside. The collision managed to cut power to a large area which actually aided in rescue of the apparatus occupants in a timely manner. The apparatus had three occupants all belted in when the incident occurred. The officer on the rig managed to locate a handheld radio and called in the roll-over and resources were immediately dispatched to the scene. One crew-member riding in the rear-facing jump seat was transported by air ambulance due to complaints of a lot of pain. Internal injuries could not be ruled out at the scene. However, he was released from the trauma center with only minor injuries. It is suspected he might have suffered an [injury] when the vehicle landed on its side that resolved itself during transport. The apparatus operator and captain were able to exit the apparatus on their own and were transported with non-life threatening injuries to a local hospital, evaluated and released.

The apparatus was disentangled from power lines by the power company and heavy duty wreckers pulled it out of the ditch. Then, equipment that could be salvaged was removed for storage/relocation on a reserve engine. The apparatus has since been returned to the manufacturer for evaluation and was declared a total loss.

An investigation was performed by a committee formed from outside the department and concluded that the cause of the accident was operator error. The panel also had several recommendations for improvement of department policies related to the incident and aftermath. The accident was also investigated by local law enforcement with similar conclusions as to the cause.

**Lessons Learned**

We have read about and studied similar events happening to other departments over and over again in our training. As a result, our department strictly enforces a clear-cut policy requiring the mandatory use of seatbelts. The most important fact about this event is that the use of seatbelts by all three crew members resulted in each of them arriving home from the hospital long before the apparatus was removed from the ditch. The least expensive piece of equipment on fire apparatus is the seatbelt and it proved to be the most valuable.

**10-332**

**Event Description**

Our engine was heading north on a rural road responding to a car fire. While attempting to get through traffic at the on ramp, a car stopped right in front of the engine. The engineer had to brake hard and fast, causing a firefighter's seat to slam-up into the dash. The FF was still putting on gear and had unlocked the SCBA as soon as he got in, but never put on a seatbelt. There were no injuries, but the incident could have been very dangerous.

**Lessons Learned**

Lack of training or lack of supervision will cause this to happen again. Technology can assist with this with different SCBA holders, but we still need to get back to the basic as no emergency is more important than taking our safety into consideration first.

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**09-925**

**Event Description**

Our back-up ambulance was returning a patient from a local hospital. Two firefighter/EMTs were called-in to do this routine transport. When the driver called the dispatch center on the radio to report that they had begun transport, the 911 dispatcher did not immediately answer. The driver leaned over to visually check the radio settings when the ambulance came to an "abrupt" stop. The ambulance had veered off the roadway onto the sidewalk and struck a telephone pole. Neither emergency lights nor siren were in use as this was a non-emergency transport. The firefighter in the back of the ambulance was sitting unrestrained on the squad bench checking the patient's heart rate, which is required periodically by state ambulance regulations. With the seatbelt on, the firefighter cannot reach the patient. From the designated "technician seat" the EMT cannot even see the patient, unless they are lying flat on the stretcher. Upon impact, the firefighter was thrown into the stairwell of the side door and suffered injuries. The firefighter was immobilized and transported back into the emergency room where he was treated. The patient was also returned to the emergency room for evaluation.

**Lessons Learned**

Ambulances should be designed to allow firefighters who are caring for the patient to be restrained. The interior of the ambulance should be designed to minimize injuries to unrestrained personnel who will be thrown in a collision.

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**09-707**

**Event Description**

We were responding non-code to a BLS aid call. The driver was traveling through a residential development at approximately 30 miles per hour.

I was seated on the bench in the patient compartment of the aid car, and was prepping the gear for arrival to the call. I was not wearing my seatbelt. Suddenly we came to an immediate stop and I was thrown forward into a storage compartment. There was a large piece of debris in the middle of the road.

Luckily I caught myself, and was uninjured. Had we been traveling at a higher rate of speed on a busier road, the outcome may have been much worse. It was a valuable learning lesson.

**Lessons Learned**

Wear your seat belt, period! Even if it is a "non code" response through a residential neighborhood. Even if you have to wait to set the gear up for quick removal on arrival. No matter what!

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**09-619**

**Event Description**

Brackets [] denote reviewer de-identification

At approximately 1300 hours, engine [1] was responding to the report of chest pains in a medical building. They were out checking hydrants at the time of the call. The passenger of engine [1], a rookie, failed to buckle their seatbelt. The engine driver made a sharp left turn. The passenger thought they were turning right and fell out of the engine. He was missed by a moving vehicle only to have minor cuts and abrasions.

**Lessons Learned**

Always wear your seatbelt.

Use effective communication between driver and passenger.

Fix door that was reported broken.

Be a good role model for probationary firefighters.

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**09-582**

**Event Description**

We were alerted for an alarm, mounted the apparatus, and started the response. At this time I was standing up inside the cab getting dressed. We were struck on the passenger side by a full size vehicle. I was thrown from the passenger side to the driver's side.

**Lessons Learned**

All personnel should have turnout gear on before mounting the apparatus.

All personnel should be wearing a seatbelt.

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**09-479**

**Event Description**

An engine company staffed with 5 personnel was dispatched to a BLS medical emergency. The engine left the station operating with lights and sirens activated. The engine made a left hand turn out of the station onto a paved public road and proceeded north for approximately 100 feet until it reached an intersection controlled by a traffic signal. The traffic signal indicated a green light for the responding engine. As the engine made a left hand turn into the intersection and accelerated out of the turn, the pump operator lost control of the engine. As a result of this, the engine left the road and struck a ground pad transformer. The engine continued moving and crashed into a telephone pole, shearing it in half and ripping the officer's door off. The engine then proceeded approximately 300 additional feet up the middle of a paved public road before coming to a stop in the middle of the road.

After coming to a stop, one of the firefighters exited the rear of the engine and found the pump operator with an altered level of consciousness and the officer trapped. The firefighter notified the Communications Center of the incident and requested additional resources to assist.

It is important to note that all five members of the apparatus were seated and using seatbelts at the time of the collision. After extrication, the pump operator and officer were transported to a Level I trauma center for evaluation. Both were treated and released within 24 hours of the incident. The officer has not returned to duty and is not expected to return to duty for an extended period of time. The pump operator has returned to work.

The three firefighters in the crew compartment of the engine sustained injuries and were transported to a local community hospital for evaluation. All were treated, released and have since returned to duty. The engine sustained severe damage and was destroyed in the collision. The original call for service had to be handled by other units from the department.

I believe that this incident could occur again in our department. Anyone reading this report should view it as an opportunity to save their life and the lives of the crew members by demanding compliance with all safety rules including the mandatory use of seatbelts.

### **Lessons Learned**

First and most important seatbelts save lives. A policy of demanding that personnel wear their seatbelt is as useless as words on a page if it is not enforced. Relentless demand for compliance with this policy is why firefighters wear their seatbelts. There is no doubt that the officer would have been ejected from the rig and likely killed if he had not been wearing his seatbelt.

The department already has a continual process in place to evaluate the use of lights and sirens to calls. For over three years, the department has followed a stringent set of guidelines for emergency responses involving lights and sirens. Until recently, the department did not apply this policy to medical calls. A limited number of low priority calls are now being dispatched no lights and no sirens. We will continue to evaluate this program and increase the number of low priority responses when the benefit of doing so outweighs the risk associated with a high priority response.

Our department responds to over 70,000 calls for service annually. The law of averages indicates that we will continue to experience apparatus crashes. We should do everything in our power to reduce the opportunity for a collision where possible. The department was recently awarded an AFG grant to purchase an apparatus driving simulator (similar to a flight simulator) that will allow driver operators to learn the skills necessary to safely operate large vehicles under a variety of conditions. It is expected that all driver operators will be required to re-certify annually in the simulator once the program is in place.

The role of human error in this case cannot be avoided. The pump operator failed to understand the fundamental physical features of the apparatus while driving. Although nationally certified as a fire apparatus driver operator under NFPA standards, certification alone is not enough to ensure competency. Periodic testing, training, and on-going evaluation are crucial to any program.

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**08-312**

### **Event Description**

The crew of 4 was seated and restrained when they left the fire station enroute code-3 to a “working fire” when the Engineer “slowed the apparatus to approximately 10-15 M.P.H. to make a controlled right hand turn. It was at this moment when the #4 door unexpectedly swung open during the right turn. Immediately prior to the right turn, FF #4 made a decision to unfasten his seatbelt and exit his seat. FF #4 states: “After securing my SCBA shoulder straps I decided to put on the rest of my equipment in a

kneeling position because I felt it would be faster and easier to get ready this way.” FF #4 is unknowingly leaning backwards towards the open door due to the momentum of the right turn. FF #3 yells to the Engineer over the headset intercom that “the door was open and to STOP!” FF #3 grabbed FF#4 and assisted him to the center of the floor of the moving apparatus. The Engineer stopped the vehicle, the door was shut, and the Engine Company continued their response without further incident.

The apparatus involved in this incident was a 2005 (8 passenger) enclosed cab pumper. The FF #4 position seatbelt was the original factory equipment and noted to be in working order. The open door alarm was also observed to be in full working order with the ignition/batteries ON and the parking brake disengaged. It was discovered however, that the alarm volume had been turned down to its lowest setting and would be difficult to hear even under ideal conditions (vehicle stationary, engine not running, no outside traffic, road noise or sirens). Factors normally present during emergency response (headsets, radio traffic, etc.) would make it virtually impossible to hear the audible open door alarm.

Upon investigation, the FF #4 door appeared to be in full working order without any malfunctions noted before the incident. Statements given by FF #4 and the Engineer indicate the door appeared to be closed when leaving the fire station. Both indicated the retractable stairs were in the stowed position with no audible alarms sounding.

Closer examination of the #4 door revealed a 2-position latching mechanism that marries a door latch to a Nader pin. In the primary position, the latch barely catches the Nader pin and only latches securely in the secondary position. While the door is only partially secured in the primary position, it was observed that there is still sufficient pressure applied to a pressure switch that retracts the stairs and deactivates the open door alarm. The forward location of the pressure switch in the door jam may contribute to the false reading.

### **Lessons Learned**

The chain of a potentially tragic event was broken due to following factors:

The attentiveness of FF #3 (watching out for each other)

The controlled driving of the fire apparatus as demonstrated by the Engineer

Both firefighters credit the Engineer’s driving habits as a key factor in avoiding a tragic outcome, commenting; due to the experience, skill and controlled driving demonstrated by the Engineer when making the right turn, -we averted disaster.

1. The Fire Department **REQUIRES** that ALL fire fighters who ride on ANY moving emergency fire apparatus are seated and secured by seat belts. [Policy number deleted]Discussion: The Fire Department has been aggressively addressing the issue of seat belt compliance. A SCBA & Seatbelt Awareness presentation was presented to ALL Firefighters during the 2007 2nd quarter company training. The training boldly stated that the Fire Department was taking a **ZERO TOLERANCE** view on the adherence of the seat belt policy. This **ZERO TOLERANCE** campaign was further reinforced during the 2007 National Safety Stand-down Day for ALL shifts in June 2007. The training echoed the same

concepts of the Seat Belt Awareness Presentation as well as addressing, safe methods of donning turnout gear and SCBA's during code 3 responses while using the seat belt restraint system. The Safety Stand Down also addressed the use of seat belts in the back of ambulances.

2. Revision to SOP [# deleted] to include that emergency apparatus will NOT move without personnel seated and in seat belt restraints, including a verbal confirmation of the seat assignment with a "READY". A "READY" meaning that the person in that assigned position is seated and belted. Personnel will NOT don personal protective equipment (turnout gear and SCBA) in ANY moving fire apparatus, PPE must be donned while the apparatus is in a stationary position prior to initiating a response OR upon arrival on scene. Personnel will NEVER be onboard a moving fire apparatus while not seated and unrestrained under ANY circumstances.
3. Incorporate the available audible/visual warning device technology indicating when a fire fighter is un-restrained or not seated.
4. Update SOP's to address tampering with or disabling warning devices.
5. Make fire apparatus manufacturer aware of the potential design flaw that exist with the present location of the pressure switch (door alarm). Recommend that the pressure switch be relocated towards the aft end of the door jam.
6. Advocate for participation of compliance with the National Fire Fighter Safety Seat Belt Pledge department wide.
7. Truly adopt and enforce a "ZERO TOLERANCE POLICY" within department SOP's and policy.

Squared brackets [] indicate reviewer added/changed content

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**08-174**

**Event Description**

I was the front seat passenger of an engine responding to a grass fire in a housing complex. My rear seat passenger asked a question from the open cab portion of the truck and as I turned to talk to the back seat crew; my turnout coat hooked the door handle. The driver was turning up hill and the passenger door came open nearly throwing me from the truck. I fortunately had my seat belt secured. My driver stopped the truck and I closed the door. Following this incident, our SOG was written, stating the driver and passenger of this truck are not to have the turnout coat on until arriving on the scene.

**Lessons Learned**

Always have your seatbelt on and lock the door.

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# I N T E R N A T I O N A L FIRST RESPONDER SEATBELT PLEDGE

## BUCKLE UP! SO EVERYONE GOES HOME®

I agree to sign the *International First Responder Seatbelt Pledge*. As a participant in this pledge, I will make this first step toward safety by wearing my seatbelt, following all seatbelt laws, and department policies. I make this pledge willingly; to honor my family, my department, my fellow responders, my community, and myself. **Wearing my seatbelt is the right thing to do - It is my life on the line! I Pledge to Wear My Seatbelt.**

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Authorized Signature: \_\_\_\_\_ Printed Name: \_\_\_\_\_

Rank: \_\_\_\_\_ Contact E-mail Address: \_\_\_\_\_

**Please use as many sheets as necessary to collect signatures. Once completed, please fax to 410-721-6213 or scan and send to [seatbelts@EveryoneGoesHome.com](mailto:seatbelts@EveryoneGoesHome.com). Visit Us at: [www.EveryoneGoesHome.com/seatbelts](http://www.EveryoneGoesHome.com/seatbelts)**



**Homeland Security**

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