



## National Fire Fighter Near-Miss Reporting System Reports Related to Vehicle Backing

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**Report Number:** 05-0000170

Report Date: 05/27/2005 1410

### **Demographics**

Department type: Combination, Mostly volunteer

Job or rank: Assistant Chief

Department shift: 10 hour days, 14 hour nights (2-2-4)

Age: 43 - 51

Years of fire service experience: 24 - 26

Region: FEMA Region I

Service Area: Urban

### **Event Information**

Event type: Vehicle event: responding to, returning from, routine driving, etc.

Event date and time: 04/10/2005 0900

Hours into the shift: 0 - 4

Event participation: Told of event, but neither involved nor witnessed event

Weather at time of event:

Do you think this will happen again? Yes

What do you believe caused the event?

- SOP / SOG

What do you believe is the loss potential?

- Life threatening injury
- Property damage

### **Event Description**

Driver/FF backing ladder truck into fire station. Station equipped with a rear drive thru door. Driver/FF had pulled the vehicle onto the front apron of the fire station to check vehicle. Instead of driving around the building to the drive thru door, driver/FF elected to back the vehicle in. The driver/FF did not do a walk-around of the vehicle prior to backing in. He reportedly had a spotter on the driver's side rear. Rear upward opening compartment door was left open. As the vehicle was backed in the rear compartment door struck the column of the bay. An estimate of \$26,000 of damage was done to the building and another \$4,000 to the apparatus. Our department has an SOP on backing vehicles that requires a walk-around will be done prior to the vehicle moving. Also, two spotters are to be utilized whenever backing a vehicle. This particular fire station has a drive-thru bay area. For this reason, a policy was put into place stating that all vehicles will be driven thru the rear bay doors.

### **Lessons Learned**

Lessons learned - FFs must follow SOPs. The Fire Department's Training Officer has reviewed the department's backing policy with all members.

**Report Number:** 06-0000033

**Report Date:** 01/24/2006 1133

### **Demographics**

Department type: Paid Municipal

Job or rank: Assistant Chief

Department shift: 24 hours on - 24 hours off

Age: 34 - 42

Years of fire service experience: 11 - 13

Region: FEMA Region VI

Service Area: Urban

### **Event Information**

Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.

Event date and time: 01/10/2006 2115

Hours into the shift: 9 - 12

Event participation: Told of event, but neither involved nor witnessed event

Weather at time of event:

Do you think this will happen again? Yes

What do you believe caused the event?

- Situational Awareness
- Decision Making
- SOP / SOG
- Communication
- Individual Action

What do you believe is the loss potential?

- Lost time injury
- Property damage
- Life threatening injury

### **Event Description**

On January 10, 2006, E-(A) was responding to a possible structure fire in a townhouse neighborhood. Upon entering the neighborhood and approaching the street they were responding to, the driver/operating turned left when she should have turned right to get the street address. By turning left, she entered a small dead-end street that required her to reverse out of it. Our policy states that while backing any apparatus, there will be a spotter available, with high visibility spotter wands, available to direct the driver where to go. The spotter is supposed to position his or herself to the side of the truck where they can see the driver in the mirror and the driver can see them. At any time the driver loses site of the spotter, they should come to a complete stop until they make visual contact with them again. The spotter was the firefighter who was in full PPE ensemble including SCBA and Face Piece. This significantly reduced his peripheral vision and the environment surrounding him. He began spotting the truck back and made the decision to spot the truck back to the right instead of the left. Turning the truck to the right was very tight and would require the truck to pull forward and reverse twice to clear both ends of the vehicle. Directing the truck to the left had no obstructions and a clear area to make the turn one time. I am sure the urgency of the

situation and tunnel vision caused this decision to be made poorly. While backing the truck, the spotter was attempting to watch a parked car behind him and watch the truck too as it closed the distance between the two. The spotter looked back at the car again and found himself between the truck and the car with the truck still backing up. While this was happening, the driver was trying to watch the front left corner of the truck to clear a large rock that was at the intersection of the two streets. When she look back she could not see the spotter and stopped the truck immediately, but it was too late she had knocked the firefighter down and pinned him between the truck and car. Fortunately, she was at a snails pace while backing up, but personal injury and property damage did occur. By the Grace of God, the firefighter only received a partially torn ACL to the right knee. Damage to the car was significant, and by looking at the car, you would expect more personal injury to the firefighter.

### **Lessons Learned**

There are many lessons learned here and corrective measures that can be taken to prevent this from happening in the future. 1. A driver/operator and company officer has to know their first in district better so that they don't make a wrong turn that puts them in a situation like this. This can be accomplished by having better maps of your district, doing more non-emergency driving in those districts where streets may be confusing and learning block numbers and house numbers for those various neighborhoods in your district. 2. Spotters and drivers need more training on using good judgment in decision making when found in a situation like that. They have to be able to get an overall look of the area around the truck and spot the truck back in the most safe and efficient manner. Even though there is an urgency to get to the incident, we still have to get there safe. This apparatus never made it to the scene because of the accident that happen. Therefore, it was no help to the situation at all. We have to slow down sometimes and not get tunnel vision and look at the big picture when making decisions like these. 3. Spotters have to bear in mind and be well aware of their surroundings when spotting these apparatuses. The spotter should never position him or herself between the truck and another obstacle. They should never be directly behind the truck, but position to see the driver in the mirror and the driver see them. Drivers have to keep a visual on those spotters at all times and stop immediately when they loose sight of them for any reason. 4. This spotter was in full PPE ensemble with face piece, which reduced his vision. A spotter should have clear vision of the entire area to spot that truck back. The time it would have took to remove his mask and spot the truck back would not have made a difference in the response. They had already turned the wrong way and could not continue the response until they were turned around. 5. Spotter wands being used will be addressed to see if visibility of them at night can be improved.

**Report Number:** 06-0000103

Report Date: 02/17/2006 1509

### **Demographics**

Department type: Volunteer

Job or rank: Other: Chief Retired

Department shift: Respond from home

Age: 52 - 60

Years of fire service experience: 30+

Region: FEMA Region III

Service Area: Suburban

### **Event Information**

Event type: Vehicle event: responding to, returning from, routine driving, etc.

Event date and time: 02/16/2006 2000

Hours into the shift: 0 - 4

Event participation: Witnessed event but not directly involved in the event

Weather at time of event:

Do you think this will happen again? Yes

What do you believe caused the event?

- Unknown

What do you believe is the loss potential?

- Life threatening injury

### **Event Description**

On the night of February 16, 2006, while in a classroom that was located in the engine bays of this station, the group learning about Near-Miss Reporting witnessed an action taken by an FD member. The engine that had gone out on a run was being backed into the station, and a member jumped on the side of the truck while it was backing in. It appeared that he was positioning the engine so that they could plug in the shoreline. The instructor of the Near Miss looked at me. I commented to the group, about 60 fire chiefs, that I was going to write up a report to be placed on the near-miss reporting. I don't even think the other officers of this company thought that anything he did was wrong, when asked what would happen if he fell, hit his head, traveled up under the wheels. It was scary. We have folks in our business that don't think we can tell someone that they are performing unsafe acts. We must and we have to for the protection of our brothers and sisters.

### **Lessons Learned**

If you are having a safety program at your station, everybody should be acting in a safe manner. What is scary is they didn't think there could be an injury. As a safety guy, I would tell my folks, "Kids don't act like you are performing your job in a safe manner when the safety guy is here. I'm not here 24 - 7." Most of the time it's attitude; "It will never happen here," or "It will never happen to me."

**Report Number:** 06-0000296

Report Date: 05/25/2006 0948

### **Demographics**

Department type: Combination, Mostly paid

Job or rank: Captain

Department shift: 10 hour days, 14 hour nights (2-2-4)

Age: 34 - 42

Years of fire service experience: 14 - 16

Region: FEMA Region II

Service Area: Suburban

### **Event Information**

Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.

Event date and time: 06/15/1999 1200

Hours into the shift: 0 - 4

Event participation: Involved in the event

Weather at time of event:

Do you think this will happen again? No

What do you believe caused the event?

- Human Error
- Procedure
- SOP / SOG
- Training Issue

What do you believe is the loss potential?

- Lost time injury
- Life threatening injury

### **Event Description**

While returning from a Haz-Mat incident our Engine was dispatched to a structure fire. While responding we could see a large cloud of black smoke in the air. The weather was warm, sunny and clear. I, as the Captain turned to my crew and gave assignments while at the same time saying to settle down. We arrived on scene second due and prepared to back down a narrow street to perform a reverse lay. The structure was a half a block from the local high school and there were numerous bystanders in the street. I got out of the Officer's side and proceeded to walk down the street clearing the people from the roadway. The driver of the apparatus began to back down the street at a high rate of speed. I was facing the fire scene moving bystanders away from the street when the apparatus hit me from behind. I don't remember the accident itself. The only thing that I remember was hearing the sound of the motor getting louder before I was hit. Witnesses said that I was hit by the Officer's side tailboard and the handrail knocked my helmet off. The apparatus driver stated that he did not see me and he stopped when people began yelling. My body was lying in the path of the rear tires and the apparatus stopped approximately 1 foot from my legs. I was knocked unconscious for a short time. When I came to I pulled myself from the underside of the rig. Other firefighters came to my aid but I felt as if I were ok. The Engine driver proceeded to lay a line to the hydrant and I went to work with my crew. When the fire was knocked down I

began feeling a headache. The headache progressed to the point that I could not keep my eyes open. I then went to the Incident Commander and told him about the accident and my need for medical attention. I was taken to the emergency room and treated for a concussion. I also had pains in my lower back and right shoulder. The results of my injuries turned out to be pretty severe. For a short time I lost some of my motor skills. I was unable to read. I could see letters on a paper but I could not comprehend what they were. I had surgery on my right shoulder where they removed sections of my clavicle. I was out of work for 7 months. I still to this day have constant pain in my shoulder and lower back. I get headaches along the right side of my head. I have an MRI and an EEG once a year and each time my EEG comes back abnormal.

### **Lessons Learned**

I was very fortunate that I was able to return to work. Hell, I was fortunate to be able to go home. If that rig didn't stop when it did I probably would have been killed. Before this event our Department had no SOG or procedure for backing up apparatus. My crew was young and inexperienced. I attempted to calm them down before we got there. I even told them to take a deep breath before I got out of the rig. None of that worked. The driver should have waited for me to clear the street before he began backing up. I should have been facing the apparatus. I should have told him not to back in until I signaled him. The driver should have backed in slowly. I take full responsibility for what happened that day. I had a young crew that looked at me for leadership and I didn't go home with them that day. As an Officer you should be there to look out for your crew and make sure that everyone goes home. If you're knocked out of the picture you can't bring your crew home. Our department now has a policy on backing apparatus. Each member of the department has taken a CEVO course. They also recertify in the CEVO course annually. Each shift the drivers rotate to ensure that all of our members get experience driving. When backing into a fire scene every member must get off of the rig and there needs to be someone on both sides of the rig while backing up. Nothing replaces experience and training. Get out of the firehouse and practice.

**Report Number:** 06-0000315

Report Date: 06/10/2006 1950

### **Demographics**

Department type: Combination, Mostly volunteer

Job or rank: Lieutenant

Department shift: 24 hours on - 24 hours off

Age: 25 - 33

Years of fire service experience: 7 - 10

Region: FEMA Region I

Service Area: Rural

### **Event Information**

Event type: Training activities: formal training classes, in-station drills, multi-company drills, etc.

Event date and time: 06/06/2006 2000

Hours into the shift: 13 - 16

Event participation: Involved in the event

Weather at time of event:

Do you think this will happen again? Yes

What do you believe caused the event?

- Individual Action
- Situational Awareness
- Human Error

What do you believe is the loss potential?

- Life threatening injury

### **Event Description**

During a water shuttle drill, I was the officer on one of the tankers in the shuttle. At the fill site, the tankers had to back into position to be filled by an engine. The fill site officer was backing a tanker into position. On our second trip to the fill site, while backing into position, a firefighter walked behind tanker on the officer side to attach the 4" supply line. The officer directing us to backup was on the driver side, didn't see firefighter, and continued to tell us to back up. The driver was following the direction of this backup officer and did not see the firefighter. I saw the firefighter in my mirror and had the driver stop the vehicle.

### **Lessons Learned**

As a driver and an officer on a vehicle we must continue to be aware of the scene and not just rely on one person backing up the apparatus. Also, whenever you are backing up any vehicle you must continue to assess the scene and all personnel and civilians. Also, personnel operating on any scene must wait for the air brake to engage or other sign that the vehicle has stopped moving and is secured before approaching the apparatus.

**Report Number:** 06-0000494

**Report Date:** 09/30/2006 1803

### **Demographics**

Department type: Combination, Mostly paid

Job or rank: Captain

Department shift: 24 hours on - 24 hours off

Age: 25 - 33

Years of fire service experience: 7 - 10

Region: FEMA Region IX

Service Area: Suburban

### **Event Information**

Event type: Vehicle event: responding to, returning from, routine driving, etc.

Event date and time: 08/27/2006 2355

Hours into the shift: 13 - 16

Event participation: Involved in the event

Weather at time of event:

Do you think this will happen again? No

What do you believe caused the event?

- Situational Awareness
- Human Error
- Decision Making

What do you believe is the loss potential?

- Property damage
- Life threatening injury
- Minor injury

### **Event Description**

My 4-person ALS engine company had had an average day with about 5 calls, several hours of training, and 1 hour of PT. We had gone to bed around 2130. We were dispatched at 2248 for a man having a seizure. This event occurred returning from this call. My engine was stopping at the hospital to pick up our paramedic/firefighter, who had just ridden in on the ambulance with a patient. Our engines routinely back up into the driveway of the emergency room to be off the street. Despite our SOG on vehicle backing procedures, a backer is not routinely used in this maneuver. This time, both the senior firefighter and myself noticed a police car parked just past our normal parking spot. I assumed my engineer saw it also. Unfortunately, we backed up into the back bumper of the police car at less than 2 mph impact speed. All occupants noted the jolt; the engineer immediately pulled forward and set the parking brake. No damage was noted to the police car, but the right edge of the tailboard on the engine had been noticeably deflected downward approximately 2". Fortunately, the police officer was not standing behind his car when we backed up. This could have ended very badly for us all. My engineer had no excuse for backing into the car. When asked how he could back into a highly visible police car, he simply stated, "I wasn't paying attention." In addition, he had failed to turn on his rear floodlight to illuminate the rear view of the truck. Simply remembering to use the equipment that was put there for that use may have prevented this near-miss. I failed as

the officer by not communicating what I saw and confirming that he understood what I told him. I also failed by not confirming that he was aware of his surroundings.

### **Lessons Learned**

1. Follow your department's backing policy. It is not worth the risk to disregard it even once.
2. Always use a backer.
3. Ensure good communication in the cab between all occupants. If a hazard is noted, please say something. It may prevent an injury or death.
4. If you are driving an apparatus, you **MUST** pay attention at all times. Regardless of the time of day or how tired you are, you are responsible for many lives when you are driving a 33,000+ lb. fire truck.

**Report Number:** 07-0000980

**Report Date:** 06/29/2007 1426

### **Demographics**

Department type: Volunteer

Job or rank: Fire Chief

Department shift: Respond from home

Age: 43 - 51

Years of fire service experience: 30+

Region: FEMA Region II

Service Area: Suburban

### **Event Information**

Event type: Vehicle event: responding to, returning from, routine driving, etc.

Event date and time: 05/10/2007 1535

Hours into the shift: Volunteer

Event participation: Told of event, but neither involved nor witnessed event

Weather at time of event: Clear and Dry

Do you think this will happen again? Yes

What do you believe caused the event?

- Procedure
- Protocol

What do you believe is the loss potential?

- Other

### **Event Description**

Incident involved backing of emergency vehicle (ambulance service used for transport, we provide BLS first response only) from driveway onto a 2-lane road. Our SOG's require a rear spotter and a front spotter when backing any vehicle; in addition, our fire police are located on the road approx 200 yards from the vehicle location in both directions. All protocols were in place. As vehicle was backing the front and rear spotter noticed that a loaded 18 wheel tractor trailer hauling aggregate from a local quarry was not slowing down and was heading toward them and the vehicle. Both shouted to vehicle operator who accelerated back into the driveway and both spotters had to run/sprint in opposite directions to avoid being hit by the truck. Our fire police officers attempt to slow down the vehicle went unnoticed by the driver of the 18 wheel vehicle. It is our belief that both firefighters would have suffered serious injury if they had not run from the scene. Also, if we did not have the spotters in place, I am sure that the vehicle would have been t-boned by the 18 wheel truck.

### **Lessons Learned**

The importance of following SOG's on every call. SOG's require spotters and fire police in place; we review this SOG often and require it on every call. Many departments would not require this on non-fire or EMS calls. This incident highlights the need for spotters anytime a vehicle is backing. We addressed the issue of truck speed on this stretch of road with local law enforcement agencies and they will monitor the situation. I am very thankful, that our firefighters followed the protocol and are here today to discuss this near miss.

**Report Number:** 07-0001116

**Report Date:** 11/11/2007 1629

### **Demographics**

Department type: Paid Municipal

Job or rank: Lieutenant

Department shift: 24 hours on - 48 hours off

Age: 34 - 42

Years of fire service experience: 24 - 26

Region: FEMA Region IV

Service Area: Suburban

### **Event Information**

Event type: Training activities: formal training classes, in-station drills, multi-company drills, etc.

Event date and time: 05/17/2006 1530

Hours into the shift:

Event participation: Witnessed event but not directly involved in the event

Weather at time of event:

Do you think this will happen again?

What do you believe caused the event?

- Human Error

What do you believe is the loss potential?

- Property damage

### **Event Description**

While backing a fire apparatus during drivers training, the trainee bumped a utility box. A backer signaled the driver numerous times to stop to include slapping the side of the apparatus. Trainee stopped vehicle on last attempt to stop him just as vehicle began to make contact with box. No damage to either vehicle or utility box but the potential was there.

### **Lessons Learned**

Backers should have portable radios to communicate to drivers and standardized hand signals should be established to ensure drivers understand when to stop.

**Report Number:** 08-0000006

Report Date: 01/02/2008 1818

### **Demographics**

Department type: Paid Municipal

Job or rank: Fire Fighter

Department shift: 24 hours on - 24 hours off

Age: 43 - 51

Years of fire service experience: 21 - 23

Region: FEMA Region IX

Service Area: Urban

### **Event Information**

Event type: Vehicle event: responding to, returning from, routine driving, etc.

Event date and time: 02/20/2007 1200

Hours into the shift:

Event participation: Involved in the event

Weather at time of event: Clear and Dry

Do you think this will happen again?

What do you believe caused the event?

- Equipment

What do you believe is the loss potential?

- Life threatening injury

### **Event Description**

I was the tillerman on [Designation withheld] a ladder truck with enclosed cab. While traveling down [location withheld] we traveled over a rough section of road. With no warning from the operator, who was driving [the truck] for the first time as driver training, I was catapulted into the ceiling of the tiller cab twice, striking the left and top portion of my head on the ceiling. There was a massive "snap" in my neck... The tiller cab in the ladder truck is about 1-1/2" above my head. The seat had approx. 12" of play, causing me to be catapulted into the ceiling. The result was [A severe spinal injury with extensive reconstruction]. I ran out of time on the books and had to go without pay for a while before I was forced to retire early after 24 years of duty. [Reviewers interview revealed that seatbelts were used during this event.]

### **Lessons Learned**

This as well as ALL ladder trucks with this tiller cab should be immediately pulled out of service until the problem can be rectified, possibly by raising the ceiling, or doming the ceiling.

**Report Number:** 08-0000175

**Report Date:** 04/14/2008 1033

### **Demographics**

Department type: Volunteer

Job or rank: Fire Chief

Department shift: Respond from home

Age: 25 - 33

Years of fire service experience: 11 - 13

Region: FEMA Region III

Service Area: Suburban

### **Event Information**

Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.

Event date and time: 04/14/2008 0435

Hours into the shift:

Event participation: Told of event, but neither involved nor witnessed event

Weather at time of event: Clear and Dry

Do you think this will happen again?

What do you believe caused the event?

- Procedure
- Training Issue
- SOP / SOG
- Communication
- Human Error

What do you believe is the loss potential?

- Lost time injury
- Minor injury
- Life threatening injury
- Property damage

### **Event Description**

While enroute to a confirmed garage fire, the engine driver turned the incorrect direction at a four way intersection of an alley and a main street. The engine was laying LDH supply line at the time. While backing out of the alley the company chief was attempting to move the LDH from the apparatus path and was almost struck. He was acting as a spotter for backing, but communication with the driver was ineffective and the engine did strike a parked vehicle.

### **Lessons Learned**

An independent spotter is necessary. Drivers and spotters must be trained in proper hand signals and use them at all times. Other members of the engine crew should be assigned to move hose if necessary.