



National Fire Fighter Near-Miss Reporting System:

Reports Related to Water Tankers

February 2012

[www.firefighternearmiss.com](http://www.firefighternearmiss.com)

Report Number	Synopsis:	Page Number
05-0000515	Car pulls into intersection in front of responding tanker.	2
06-0000009	Some things to consider during tanker operations.	3-4
06-0000017	Tanker damaged during backing maneuver.	4-5
06-0000039	Tanker collides with train during out of district response.	6-7
06-0000268	2 1/2" hose knocks firefighters off their feet.	7-9
06-0000415	Driver skill level nearly flips tanker.	9-11
07-0001111	Tanker almost forced into ditch by inattentive driver.	11-12
08-0000142	Tanker/Tender rolls over, seat belt saves driver.	12-13
08-0000307	Alert crew avoids accident with other responder.	13-15
08-0000394	Tanker slides off driveway and rolls over.	16-17
08-0000627	Brake failure results in crash.	17-18
09-0000105	Tanker/Tender overcorrection leads to rollover.	18-19
09-0000108	Tanker rolls from over-correction.	19-21
09-0000148	Police car passes apparatus.	21-22
09-0000319	Tanker rollover prompts attitude shift.	22-24
09-0000986	Tire blows out while driving tanker.	24-25
09-0001087	Tire fails even after inspection.	25-27
09-0001108	Seatbelts save FFs from injury.	27-28
10-0000154	Tanker driver loses control on ice covered road.	29-30
10-0000238	Shuttle tanker rolls while responding to a fire.	30-31
10-0000281	Engine slides on ice and crashes, FFs trapped.	31-33
10-0000690	Apparatus collide enroute to grass fire.	33-34
10-0000887	Tanker still in reverse after dumping tank.	34-35
11-0000254	Tanker tire blows during training.	36-37

**Report Number:** 05-0000515

**Report Date:** 09/17/2005 19:39

**Synopsis:**

Car pulls into intersection in front of responding tanker.

**Demographics:**

**Department type:** Volunteer

**Job or rank:** Fire Fighter

**Department shift:** Respond from home

**Age:** 43 - 51

**Years of fire service experience:** 14 - 16

**Region:** FEMA Region VI

**Service Area:** Rural

**Event Information:**

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

**Event date and time:** 06/21/1987 11:32

**Hours into the shift:** 0 - 4

**Event participation:** Involved in the event

**Weather at time of event:**

**Do you think this will happen again?** Yes

**What were the contributing factors?**

- Human Error

**What do you believe is the loss potential?**

- Property damage

**Event Description:**

On a clear day as I was responding to a call for the tanker to a house fire, I was running full code coming up on a 4 way intersection. The signal was red for me and I slowed down and sounded the air horn. All traffic stopped but as I entered the intersection, a car driven by a senior citizen proceeded forward into my path. The apparatus I was driving was a 4000 gallon tanker and I was traveling about 20 mph. They saw me at the last minute and I was already taking evasive action to avoid a collision. It would have been no good to slam on the brakes for it would have caused a roll-over. I veered into another lane and part way onto an open parking lot. A collision was avoided and I made it to the scene without incident. I was the only person in the cab. I reported the near miss to the Chief and he made a report.

**Lessons Learned:**

1st, do not assume that because all traffic is stopped that they see the apparatus coming.  
2nd, always see an out if you need to evade other cars entering your path like I did.  
3rd, even though I had been moving at a slow speed before the intersection, slower would have been better. At least the tanker would still have the forward momentum to allow me to regain speed after clearing the intersection and proceed to the fire scene safely.

**Report Number:** 06-0000009

**Report Date:** 01/13/2006 13:52

**Synopsis:**

Some things to consider during tanker operations.

**Demographics:**

**Department type:** Volunteer

**Job or rank:** Assistant Chief

**Department shift:** Respond from home

**Age:** 61+

**Years of fire service experience:** 30+

**Region:** FEMA Region VI

**Service Area:** Urban

**Event Information:**

**Event type:** Other

**Event date and time:** 08/20/2005 00:00

**Hours into the shift:** 0 - 4

**Event participation:** Involved in the event

**Weather at time of event:**

**Do you think this will happen again?** Uncertain

**What were the contributing factors?**

- Individual Action
- Human Error
- Decision Making

**What do you believe is the loss potential?**

- Property damage

**Event Description:**

While driving tanker to get fuel, one of our citizens failed to stop and look both ways at a stop sign. I noticed that she looked to her right and then proceeded thru the intersection without looking back to the left. This is the direction I was coming from and I honked the air horn but she proceeded into the intersection and hit the tanker in the right side behind the door. The resulting accident did damage to the compartment for fittings and sliced the rear wheel. The impact caused her vehicle to be totaled.

There were no injuries from this incident. The weather was clear with dry roads.

This is one of those accidents where you can say that everything slowed down; I saw her and could not stop the tanker. 2500 gallon tank going approx.25mph.

**Lessons Learned:**

The city has removed some trees that are around some of our intersections.

Be more mindful of the stopping distance of tanker due to the weight

**Report Number:** 06-0000017

**Report Date:** 01/17/2006 06:51

**Synopsis:**

Tanker damaged during backing maneuver.

**Demographics:**

**Department type:** Volunteer

**Job or rank:** Fire Chief

**Department shift:** Respond from home

**Age:** 34 - 42

**Years of fire service experience:** 4 - 6

**Region:** FEMA Region III

**Service Area:** Rural

**Event Information:**

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

**Event date and time:** 08/14/2005 15:30

**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?**

**What were the contributing factors?**

- Teamwork
- Human Error
- Protocol
- Decision Making

**What do you believe is the loss potential?**

- Property damage

**Event Description:**

Tanker responding to a rural wildland/tractor fire. Tanker missed turnoff, and proceeded to back up to re-negotiate turn. During the turnaround, the tanker struck a rock hidden by tall brush, causing considerable damage to the rear of the truck and compartments on passenger side.

**Lessons Learned:**

Instituted 100% spotter policy when backing any fire department apparatus.

**Report Number:** 06-0000039

**Report Date:** 01/26/2006 10:35

**Synopsis:**

Tanker collides with train during out of district response.

**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 VI

**Service Area:** Rural

**Event Information:**

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

**Event date and time:** 12/24/2005 14:30

**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?** No

**What were the contributing factors?**

- Human Error
- Decision Making
- Individual Action

**What do you believe is the loss potential?**

- Life threatening injury

**Event Description:**

We were dispatched to a large wildland fire to assist multiple agencies. We were enroute with a wildland fire apparatus, and a water tanker to provide assistance. Both apparatus were occupied with one firefighter each. The department's assistant chief and firefighter were following in the assistant chief's private vehicle behind the apparatus. The wildland fire apparatus was in front and water tanker was following behind on a rural Farm to Market Road when they approached a train crossing. The wildland apparatus went across the railroad tracks and made a left turn on another Farm to Market Road to travel to the fire. The driver of the water tanker failed to look at the flashing warning lights. The railroad tracks did not have cross arms, just flashing lights. The driver of the water tanker didn't see the train approaching until it was too late and collided with the first locomotive just behind the front axles, and wheels on the locomotive. The driver of the wildland fire apparatus never saw the collision and proceeded to the scene, thinking the driver of the water tanker had stopped for the train. The water tanker was equipped with two 600 gallon water tanks, which upon collision unbolted from the frame of the apparatus and pressed the cab of the apparatus against the train partially ejecting the driver out the driver side window, pinning him from the thigh area down. The driver was extricated with the jaws-of-life, from a mutual aid department, and flown to a trauma center. The driver of the water tanker spent several weeks in intensive care, underwent numerous major surgeries, and is undergoing extensive rehabilitation for his injuries.

**Lessons Learned:**

Lessons Learned:: Ensure all personnel are trained extensively in emergency vehicle operations. This individual was properly trained in emergency vehicle operations. He lacked knowledge of the response district, and the train crossings he had to proceed over en route to the scene of the incident. My suggestions to prevent similar incidents from happening are to always stop at railroad crossings, look both ways to ensure there are no trains approaching. Never rely on lights, or cross arms to alert you that a train is approaching, and know where train crossings are, whether in your response district or mutual aid department districts. Actions to correct the situation are to ensure all individuals are properly trained in emergency vehicle operations, and know how to approach railroad crossings, and know that a train cannot swerve out of the way to miss you, and even with warning lights, and sirens activated a train will not be able to stop for you. Lastly, always stay alert when operating an emergency vehicle, know your route of travel before leaving the station, and the possible hazards and delays of traveling that route.

**Report Number:** 06-0000268

**Report Date:** 05/08/2006 14:06

**Synopsis:**

2 1/2" hose knocks firefighters off their feet when valve is quickly closed, causing a water hammer.

**Demographics:**

**Department type:** Volunteer

**Job or rank:** Lieutenant

**Department shift:** Respond from home

**Age:** 34 - 42

**Years of fire service experience:** 4 - 6

**Region:** FEMA Region III

**Service Area:** Rural

**Event Information:**

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

**Event date and time:** 11/14/2005 03:41

**Hours into the shift:** 0 - 4

**Event participation:** Involved in the event

**Weather at time of event:**

**Do you think this will happen again?** Uncertain

**What were the contributing factors?**

- Human Error
- Individual Action
- Decision Making
- Training Issue
- Communication

**What do you believe is the loss potential?**

- Lost time injury
- Life threatening injury
- Minor injury

**Event Description:**

It was an early cool and dry November morning, when our department was dispatched to respond with our tanker to a multiple structure fire in a nearby town.

Upon arrival at the scene we were instructed to set up a fill station at a hydrant two blocks away from the scene, for all incoming tankers to be filled.

We immediately tied into the hydrant with a twenty-five foot pony section of 5" hose and a three way two and a half-inch distribution valve.

The mission of filling the incoming tankers was running smoothly until approximately three hours into the incident when one of the tankers to be filled had arrived at the hydrant with a driver and a passenger, who had apparently not been properly trained in how to prevent a water hammer.

My partner and I hooked the two and one half-inch line coming from the distribution valve, onto the tanker intake and began to fill the tank.

The driver of the tanker was operating the intake valve of the truck, while my partner was operating the distribution valve coming off the pony section from the hydrant. The passenger of the tanker and I were standing a couple of feet away, side by side, in front of the two and one half inch line going to the tanker.

When water began to overflow from the tanker, indicating that the tank was full, the driver operating the intake valve got excited and abruptly shut the valve off, causing a water hammer in the two and one half inch line.

Before the passenger or I could react to it, we were both violently swept off our feet by the two and one half-inch line and were lying flat on our backs.

Unfortunately, the passenger of the tanker was not wearing his helmet, and he sustained a minor head injury. I was wearing full turnout gear, along with my helmet which was secured properly, and still sustained some minor bruises.

Later my partner noted that the base of my helmet hit directly on the corner of the curb, and if I did not have my helmet on, I may have sustained a serious head and/or neck injury.

**Lessons Learned:**

Always wear your full turnout gear and have it secured properly. To prevent water hammer, never rapidly close any valve. Always remain calm. "Perfect practice makes perfect."

**Report Number:** 06-0000415

**Report Date:** 08/12/2006 20:31

**Synopsis:**

Driver skill level nearly flips tanker.

**Demographics:**

**Department type:** Wildland / Forestry

**Job or rank:** Fire Fighter

**Department shift:** Respond from home

**Age:** 16 - 24

**Years of fire service experience:** 4 - 6

**Region:** FEMA Region VI

**Service Area:** Rural

**Event Information:**

**Event type:** Non-fire emergency event: auto extrication, technical rescue, emergency medical call, service calls ,etc

**Event date and time:** 06/22/2006 21:45

**Hours into the shift:** 0 - 4

**Event participation:** Involved in the event

**Weather at time of event:**

**Do you think this will happen again?** Uncertain

**What were the contributing factors?**

- Decision Making
- Individual Action
- Training Issue
- Human Error

**What do you believe is the loss potential?**

- Property damage
- Lost time injury
- Other
- Environmental
- Life threatening injury

**Event Description:**

While responding to a mutual aid grass fire in our tanker, the driver, a younger rookie with no driving experience, was approaching a series of curves a little too fast. He tried taking the ninety degree curve at 55mph. When he realized that the tanker was unstable, he slammed on the brakes in the middle of the curve. Our tanker got on two tires and did a one-eighty until the water in the tank pushed us back on

four wheels, then back on the other two tires. By the time we landed, we were on four tires blocking two lanes of traffic. The driver walked back to the station.

**Lessons Learned:**

Do not drive too fast. Water in a tank does not stop when you slam on the brakes.

**Report Number:** 07-0001111

**Report Date:** 11/08/2007 16:35

**Synopsis:**

Tanker almost forced into ditch by inattentive driver.

**Demographics:**

**Department type:** Combination, Mostly volunteer

**Job or rank:** Fire Fighter

**Department shift:** 24 hours on - 24 hours off

**Age:** 25 - 33

**Years of fire service experience:** 11 - 13

**Region:** FEMA Region VII

**Service Area:** Suburban

**Event Information:**

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

**Event date and time:** 07/13/2007 14:30

**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 were the contributing factors?**

- Individual Action

**What do you believe is the loss potential?**

- Life threatening injury

**Event Description:**

A vehicle pulled out of a driveway in front of our tanker responding to a brush fire. The driver was not paying attention to our siren and air horn. I had to make a decision to hit vehicle or take the ditch. As the tanker was heading to the ditch, the vehicle pulled to the shoulder where I could pass safely.

**Lessons Learned:**

Never assume you have the right of way in an emergency vehicle. Always respond with due regard to others.

**Report Number:** 08-0000142

**Report Date:** 03/13/2008 16:57

**Synopsis:**

Tanker/Tender rolls over, seat belt saves driver.

**Demographics:**

**Department type:** Volunteer

**Job or rank:** Driver / Engineer

**Department shift:** Respond from home

**Age:** 34 - 42

**Years of fire service experience:** 0 - 3

**Region:** FEMA Region VI

**Service Area:** Rural

**Event Information:**

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

**Event date and time:** 03/11/2008 10:15

**Hours into the shift:**

**Event participation:** Involved in the event

**Weather at time of event:** Fog with reduced visibility

**Do you think this will happen again?**

**What were the contributing factors?**

- Training Issue
- Weather
- Human Error

**What do you believe is the loss potential?**

- Property damage

**Event Description:**

Tanker/Tender driver was responding to a structure fire and came upon a curve in the road. He slowed down but the back wheels of the tandems went off the pavement and started digging into the soft dirt. The apparatus then rolled over 3/4 times. Driver did have on a seat belt per our SOG's. Driver was not injured.

**Lessons Learned:**

The tanker was built as a fire apparatus not a conversion. This prevented major damage or even death. Lesson learned is to have more driving on the apparatus prior to assigning drivers [and wear seat belts].

**Report Number:** 08-0000307

**Report Date:** 06/20/2008 20:52

**Synopsis:**

Alert crew avoids accident with other responder.

**Demographics:**

**Department type:** Combination, Mostly paid

**Job or rank:** Fire Fighter

**Department shift:** 24 hours on - 72 hours off

**Age:** 25 - 33

**Years of fire service experience:** 0 - 3

**Region:** FEMA Region I

**Service Area:** Suburban

**Event Information:**

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

**Event date and time:** 06/06/2008 10:30

**Hours into the shift:**

**Event participation:** Involved in the event

**Weather at time of event:** Cloudy and Rain

**Do you think this will happen again?**

**What were the contributing factors?**

- Communication
- Human Error
- Individual Action
- Situational Awareness
- Decision Making

**What do you believe is the loss potential?**

- Property damage
- Life threatening injury
- Lost time injury

**Event Description:**

On June 6th, 2008, I was assigned to the rider seat on our engine. At approximately 1030 hours, we were dispatched to an automatic fire alarm activation reported by a private monitoring company. With the closest hydrant to the address being well over 1500 feet away, a tanker from the local all-volunteer department was added to the normal 2 & 1 assignment.

My partner and I were to be first due with our engine and had to travel about two miles on the interstate highway to respond to this address. As we pulled off the highway and proceeded down the exit ramp, our Opticom gave us a green light and clear intersection. Due to light rain and wet roads, we slowed our speed dramatically and approached the busy intersection with caution so that we could maintain control of the intersection and remain at an appropriate speed to stop if necessary (we had to make a right turn at the bottom of the ramp). We were within 10-15 feet of the intersection itself when the responding tanker disregarded their red traffic light and flew through the intersection (left to right

from our perspective), nearly colliding with our engine. Our best estimate of the tankers speed was 50+ MPH through the red light.

As both units turned onto the street to which we were responding, the shift commander ordered the tanker to standby the hydrant and our engine to respond directly to the address for investigation. Staging the tanker is common practice and the tanker operator was likely aware that he would have this water supply assignment regardless of if he arrived before or after our first due engine. Additionally, the shift commander did not witness this near miss, so no bias was shown in his decision to stage the tanker. The alarm turned out to be unintentional and was attributed to food on the stove.

**Lessons Learned:**

Luckily, we were doing several things correctly:

- Both of us were seat belted.
- We were traveling at a reasonable speed.
- We recognized the need to adjust our response for the road conditions.
- Our traffic emitter was working properly.
- Our vehicle is well maintained.
- We were using teamwork to check for hazards (rider checking to the right, driver looking towards the left).

We also have determined the following:

- The traffic emitter was not functional when traveling along the tanker's route (it has been that way for some time)
- The tanker presumably was traveling too fast for the conditions
- The line of site to the left is impaired due to a lower highway overpass

Our chief has met with the administration of the neighboring department to address his concerns and to remind that department to be more cautious. This issue appears to stem from either poor judgment on the part of that vehicle operator or from a lack of training and/or experience.

To prevent a similar event, our responses need to be examined. Is it necessary to have a tanker with 2000-3000 gallons of water responding lights and sirens to the scene? What would be the time to the scene for that unit if they responded with traffic? For automatic alarms, a 2-3 minute delay on water supply may be acceptable because it takes a certain amount of time for the first due engine to travel past the hydrant to the address, to exit the rig and make entry to the building, and to determine if there is even a need for water supply. Obviously, this would change if indicators of an actual fire were present (i.e. phone calls to the dispatch center reporting fire, smoke showing on arrival, etc.) and the incoming units could adjust their responses accordingly to a lights and siren response. Much of this goes back to the risk vs. benefit analysis that must be considered on every run.

**Report Number:** 08-0000394

**Report Date:** 08/22/2008 13:58

**Synopsis:**

Tanker slides off driveway and rolls over.

**Demographics:**

**Department type:** Volunteer

**Job or rank:** Fire Fighter

**Department shift:** Respond from home

**Age:** 16 - 24

**Years of fire service experience:** 4 - 6

**Region:** FEMA Region III

**Service Area:** Rural

**Event Information:**

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

**Event date and time:** 03/15/1981 06:00

**Hours into the shift:**

**Event participation:** Involved in the event

**Weather at time of event:** Cloudy and Snow

**Do you think this will happen again?**

**What were the contributing factors?**

- Weather

**What do you believe is the loss potential?**

- Property damage

**Event Description:**

We were responding to a working confirmed barn fire. As we were traveling down the snow covered dirt lane, our 2500 gallon tanker-pumper started to slide off of the actual driveway and onto the farmer's

field, about a 2 foot drop. Once the tanker hit flat ground it rolled over on its passenger side, landing in a 3 foot snow drift. Speed was not a factor; neither was driver error. What contributed were the snow covered narrow driveway and the weight of the tanker. Once it came to rest, the driver and crew, including myself, crawled out of the apparatus. The one firefighter who was riding in the jump seat [name deleted] was thrown clear of the tanker and landed head first into the snow drift. The only damage that occurred was the right rear compartment door sustained a dent when it hit a big rock under the snow. No one was hurt and we all stood there in shock, not really believing what had just happened.

**Lessons Learned:**

Be aware of weather conditions and the condition of the road or driveway surface you are traveling on at all times. Also know the restrictiveness of your apparatus (height, weight, and maneuverability)

**Report Number:** 08-0000627

**Report Date:** 12/06/2008 12:42

**Synopsis:**

Brake failure results in crash.

**Demographics:**

**Department type:** Volunteer

**Job or rank:** Assistant Chief

**Department shift:** Respond from home

**Age:** 34 - 42

**Years of fire service experience:** 17 - 20

**Region:** FEMA Region III

**Service Area:** Rural

**Event Information:**

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

**Event date and time:** 09/01/2002 10:00

**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 were the contributing factors?**

- Human Error
- Situational Awareness
- Equipment

**What do you believe is the loss potential?**

- Life threatening injury

**Event Description:**

Units arrived on the scene of a structure fire. As they were advancing lines from an engine parked on the roadway, they heard air horns of the next arriving unit. Crews neglected to look in the direction of the approaching apparatus. An incoming tanker had a brake failure and was traveling downhill at a high rate of speed. The tanker passed the parked engine on a narrow country road and rolled down the embankment.

**Lessons Learned:**

Remain constantly aware of surroundings and avoid complacency.

**Report Number:** 09-0000105

**Report Date:** 02/03/2009 09:49

**Synopsis:**

Tanker/Tender overcorrection leads to rollover.

**Demographics:**

**Department type:** Combination, Mostly paid

**Job or rank:** Fire Fighter

**Department shift:** Straight days (10 hour)

**Age:** 34 - 42

**Years of fire service experience:** 7 - 10

**Region:** FEMA Region IV

**Service Area:** Suburban

**Event Information:**

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

**Event date and time:** 01/09/2009 11:15

**Hours into the shift:**

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

**Weather at time of event:** Clear and Dry

**Do you think this will happen again?**

**What were the contributing factors?**

- Human Error
- Decision Making

**What do you believe is the loss potential?**

- Lost time injury
- Property damage

**Event Description:**

A firefighter was enroute to the fuel pumps with a water tender (tanker). At the time of the near miss, the tank was full of water which was approximately 3,300 gallons. The firefighter involved in the accident, stated the right side tire fell off of the side of the road. He over-corrected the steering and because of the weight of the water and the weight of the tanker, the unit began to barrel roll. The firefighter rolled the vehicle five times and the vehicle ended upright. The firefighter extricated himself and was transported to the medical center by the ambulance service. The firefighter sustained a broken rib on the right and left side of the chest and soreness in the shoulders and right knee.

**Lessons Learned:**

Always wear your seat belt.

If possible, keep the vehicle straight until you can slow your speed and then correct the steering.

**Report Number:** 09-0000108

**Report Date:** 02/03/2009 09:54

**Synopsis:**

Tanker rolls from over-correction.

**Demographics:**

**Department type:** Combination, Mostly volunteer

**Job or rank:** Fire Fighter

**Department shift:** Other : 9 hr days and 9 hr nights

**Age:** 34 - 42

**Years of fire service experience:** 7 - 10

**Region:** FEMA Region IV

**Service Area:** Suburban

**Event Information:**

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

**Event date and time:** 01/09/2009 11:15

**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 were the contributing factors?**

- Individual Action
- Training Issue
- Human Error

**What do you believe is the loss potential?**

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

**Event Description:**

The following is my account as the firefighter and driver of tanker [number removed] concerning my accident.

The tanker had just been placed back-in-service following repairs done to the starter. I felt it needed to be ran because it had been sitting for multiple weeks. I got in the tanker and fastened my seatbelt. I was pulling out of the station and advised dispatch that I was going to get fuel. While driving south on [road name removed], I felt the right side tires leave the pavement. This caused the tanker to jerk a bit to the right. When I tried to correct my path of travel by steering to the left, the tanker shot quickly across the road. My last action was to try and steer the tanker back to the right. At that point, the tanker began to roll toward the driver side. The tanker rolled several times and when it came to a rest, I unfastened my seatbelt and moved away from the vehicle. I lay still on the ground until emergency workers arrived and began caring for me.

**Report Number:** 09-0000148

**Report Date:** 02/06/2009 11:25

**Synopsis:**

Police car passes apparatus.

**Demographics:**

**Department type:** Volunteer

**Job or rank:** Fire Fighter

**Department shift:** Respond from home

**Age:** 34 - 42

**Years of fire service experience:** 17 - 20

**Region:** FEMA Region V

**Service Area:** Rural

**Event Information:**

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

**Event date and time:** 11/10/1990 22:30

**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 were the contributing factors?**

- Communication
- Individual Action
- SOP / SOG

**What do you believe is the loss potential?**

- Life threatening injury
- Property damage

**Event Description:**

I was responding to a structure fire call in a rural area using our 3,300 gallon tanker. I was traveling down a normal two lane rural road when suddenly the town police car came around me without giving due notice. I was taking more than my share of the road and did not know he was even behind me. His sudden appearance startled me. I did not hear his siren because I had mine on. I knew I was the last truck to leave the station. Because I was taking my share of the road, he was riding the berm of the road trying to pass me and nearly took out a mailbox. This sudden sight of a police car next to my driver's window caused me to jerk the wheel to the right nearly causing me to loss control of the tanker.

**Lessons Learned:**

Establish with all area departments (including police department) the proper way to pass responding apparatus. We had a policy of our own but had failed to share it with local agencies. Don't pass until you make proper communication with apparatus being passed.

**Report Number:** 09-0000319

**Report Date:** 03/26/2009 22:33

**Synopsis:**

Tanker rollover prompts attitude shift.

**Demographics:**

**Department type:** Volunteer

**Job or rank:** Assistant Chief

**Department shift:** Respond from home

**Age:** 25 - 33

**Years of fire service experience:** 0 - 3

**Region:** FEMA Region IV

**Service Area:** Rural

**Event Information:**

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

**Event date and time:** 07/02/2008 15:00

**Hours into the shift:**

**Event participation:** Told to and submitted by safety officer

**Weather at time of event:** Clear and Dry

**Do you think this will happen again?**

**What were the contributing factors?**

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

**What do you believe is the loss potential?**

- Lost time injury
- Minor injury
- Property damage

**Event Description:**

Our department experienced a tanker rollover. While decelerating a hill and in preparation of making a right hand turn, the tanker operator did not reduce the apparatus speed to safely make the turn. The water in the baffled tank of this 2,000 gallon tanker shifted to the point that the vehicle became uncontrollable, lifting two wheels off the roadway.

This lack of control and surface contact resulted in a shift in the center of gravity of the vehicle causing a rollover and sustaining significant structural damage. Fortunately, the driver/operator was belted into

the vehicle and was not severely injured only sustaining superficial wounds. The outcome could have been much worse as our department could have seen their first Line of Duty Death.

**Lessons Learned:**

Tanker operations are the most dangerous in the fire service. Some discussions within the department to prevent recurrence are to remove the lights and siren from the tanker and only allow it to respond "non-emergency". Additional training and operator drive time experience in dealing with the heavier apparatus are pivotally important. Training, training, training are the key to preventing this event in the future.

**Report Number:** 09-0000986

**Report Date:** 11/13/2009 20:00

**Synopsis:**

Tire blows out while driving tanker.

**Demographics:**

**Department type:** Volunteer

**Job or rank:** Captain

**Department shift:** Respond from home

**Age:** 25 - 33

**Years of fire service experience:** 0 - 3

**Region:** FEMA Region V

**Service Area:** Rural

**Event Information:**

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

**Event date and time:** 10/11/1983 22:30

**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 were the contributing factors?**

- Equipment

**What do you believe is the loss potential?**

- Property damage
- Life threatening injury
- Other

**Event Description:**

After fighting a structure fire, I drove the tanker to town for water. While returning to the station that is approximately six miles away, the left front tire blew out. I was driving 50 mph when the tire blew. I was able to keep the tanker from rolling over, but was fortunate there was no oncoming traffic. I had to cross the centerline of a two lane highway as I brought it to a stop.

**Lessons Learned:**

Always do equipment checks and drive defensively. Have a way out.

**Report Number:** 09-0001087

**Report Date:** 12/11/2009 14:46

**Synopsis:**

Tire fails even after inspection.

**Demographics:**

**Department type:** Combination, Mostly volunteer

**Job or rank:** Fire Chief

**Department shift:** Duty night (in-station)

**Age:** 43 - 51

**Years of fire service experience:** 30+

**Region:** FEMA Region IV

**Service Area:** Suburban

**Event Information:**

**Event type:** Non-fire emergency event: auto extrication, technical rescue, emergency medical call ,service calls ,etc

**Event date and time:** 12/01/2001 09:15

**Hours into the shift:**

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

**Weather at time of event:** Clear and Dry

**Do you think this will happen again?**

**What were the contributing factors?**

- Decision Making
- Procedure

**What do you believe is the loss potential?**

- Life threatening injury
- Lost time injury
- Minor injury

**Event Description:**

On [date deleted] our department was dispatched to a MVA crash involving two vehicles with the driver of each vehicle pinned in. The initial dispatch included our department, two county EMS units, county rescue squad and a bordering fire department that also provides extrication rescue service. Our response consisted of a primary first out engine, first responder squad unit and a pumper/tanker. The close call happened as the pumper/tanker approached the incident. As the driver slowed on approach to the incident, the right front tire on the apparatus failed and had a total loss of air pressure. The vehicle was traveling at an estimated speed of 15-20 mph at the time of the failure. He was able to maintain control of the vehicle and bring it to a complete stop on the left hand shoulder of the roadway. The pumper/tanker was taken out of service and an investigation was started before the unit was removed from the incident. The vehicle was taken to a local truck maintenance shop and repairs were made. In addition, the truck shop employees and department personnel inspected the vehicle for any damage or safety issues that needed to be addressed. The unit was returned to the station later that day and department personnel completed another inspection before the unit was placed back in service.

**Lessons Learned:**

The importance of visual inspections: The vehicle had been inspected that morning by department staff personnel and no defects or problems were found on any of the tires.  
The importance of safe driving practices and expecting the unexpected: There was no indication that the failure was about to happen. Vehicle maintenance programs should include replacing tires within recommended standards and practices regardless of appearance. This incident could have resulted in a very different outcome if the driver had not maintained control of the vehicle or had been traveling at a

higher speed. It is my hope that this close call incident will cause drivers, line officers and chief officers to take note and check the tires of all their department vehicles.

**Report Number:** 09-0001108

**Report Date:** 12/17/2009 15:49

**Synopsis:**

Seatbelts save FFs from injury.

**Demographics:**

**Department type:** Paid Municipal

**Job or rank:** Other : Standards Manager

**Department shift:** 24 hours on - 48 hours off

**Age:** 52 - 60

**Years of fire service experience:** 30+

**Region:** FEMA Region IV

**Service Area:** Rural

**Event Information:**

**Event type:** Non-fire emergency event: auto extrication, technical rescue, emergency medical call, service calls, etc

**Event date and time:** 12/14/2009 06:23

**Hours into the shift:** 21 - 24

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

**Weather at time of event:** Clear with Wet Surfaces

**Do you think this will happen again?** Yes

**What were the contributing factors?**

- Individual Action
- Situational Awareness

- Equipment

**What do you believe is the loss potential?**

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

**Event Description:**

We were dispatched to a motor vehicle accident (MVA) involving a pickup truck and rolled over semi-tractor trailer with ensuing fire under a bridge overpass. Initial dispatch was a multi-unit assignment comprised of 2 pumpers, 1 pumper tanker, and an ambulance provider. Incident weather conditions consisted of dense fog causing poor visibility and wet/slippery road conditions. All response routes leading to incident scene were 2-lane rural roads with speed limits posted between 45 and 55mph. The tanker pumper (3,000 gallon, tandem axle, commercial truck design) responded with a crew of 2 personnel from the first-due station located approximately 5 miles away. This unit within approximately 1 mile of the incident scene was approaching a sweeping “S” curve at approximately 35mph. When the driver released the accelerator to slow down, the exhaust braking system engaged causing the rear tires to break road traction. The brakes were applied, but the skid on the “black ice” was already in a right-rear motion. As the brakes were applied, the tires came in contact with the off-road surface causing the tires to grab and roll the apparatus to its right side. The unit rolled completely over one full rotation landing upright on its wheels and coming to rest on top of the roadside guardrail. Damage was extensive to all sides of cab and water tank. The guardrail fortunately got entangled with the rear tandem tires which prevented the unit from a continued slide or subsequent rolls down a moderately steep embankment. Additional units were diverted to this call and upon arrival both the driver and officer were triaged, stabilized, and packaged for transport. Both were ground transported with one being taken to the nearest hospital and the other to the local trauma center. Both were treated and released with minor injuries.

**Lessons Learned:**

The happy ending to this storyline is that both the driver and officer survived this serious rollover accident because they were properly using and wearing seatbelt harnesses. Our agency is a proud supporter and participant in the National Firefighter Seatbelt Pledge Campaign with 100% compliance. This pledged support (in writing) adds a higher level of safety awareness. If our personnel had not been wearing their seatbelts, this rollover incident would have most certainly resulted in a very different and tragic ending with both crew members being ejected and potentially crushed by the rolling apparatus. Apparatus can be replaced – our firefighters cannot. The other important point under Lessons Learned: is that drivers should make sure that exhaust braking systems are NOT engaged when traveling or responding on wet and/or slippery road surfaces. Dense fog conditions produce a moisture film on road surfaces, which in this case turned to what drivers in the south call “black ice” conditions. Drivers should check the operational status of these systems before responding. During wet/slippery conditions, these braking systems should be disengaged with use of the brake pedal only per the manufacturer’s operator manual recommendations.

**Report Number:** 10-0000154

**Report Date:** 01/19/2010 18:14

**Synopsis:**

Tanker driver loses control on ice covered road.

**Demographics:**

**Department type:** Paid Municipal

**Job or rank:** Fire Fighter

**Department shift:** 24 hours on - 48 hours off

**Age:** 25 - 33

**Years of fire service experience:** 0 - 3

**Region:** FEMA Region V

**Service Area:** Rural

**Event Information:**

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

**Event date and time:** 06/13/2000 14:00

**Hours into the shift:**

**Event participation:** Involved in the event

**Weather at time of event:** Clear with Frozen Surfaces

**Do you think this will happen again?**

**What were the contributing factors?**

- Human Error
- Decision Making
- Weather

**What do you believe is the loss potential?**

- Property damage
- Life threatening injury
- Lost time injury

**Event Description:**

During my probation year, I was driving a [name deleted] tanker on a winter day. I was supplying water for a house on fire in a rural area of a neighboring county. I dropped the load and headed back to the hydrant which was three or four miles away on a curvy, ice covered road. On a curve, I started fish tailing and tried to keep the tanker on the road and get it under control. Another department's engine was coming up the hill and rounding a curve headed straight for me. Luckily, I got it under control and in my lane before a head-on collision happened.

**Lessons Learned:**

I thought I was going slow enough, but apparently I was not. Now when I think I am driving slowly enough, I go even slower.

**Report Number:** 10-0000238

**Report Date:** 02/07/2010 21:14

**Synopsis:**

Shuttle tanker rolls while responding to a fire.

**Demographics:**

**Department type:** Combination, Mostly volunteer

**Job or rank:** Fire Fighter

**Department shift:** 24 hours on - 48 hours off

**Age:** 25 - 33

**Years of fire service experience:** 0 - 3

**Region:** FEMA Region IV

**Service Area:** Rural

**Event Information:**

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

**Event date and time:** 06/20/2009 12:00

**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 were the contributing factors?**

- Equipment
- Human Error

**What do you believe is the loss potential?**

- Minor injury

**Event Description:**

On [date deleted] Firefighter [A] and Firefighter [B] responded in our tanker to a structure fire. While en route, we made a right hand turn downhill. The water shifted and the tanker rolled two complete turns, trapping both of us inside. The second due engine stopped and extricated us from the wreckage. We were lucky to have walked away with only minor injuries. The tanker, on the other hand, was a total loss

**Report Number:** 10-0000281

**Report Date:** 02/15/2010 08:31

**Synopsis:**

Engine slides on ice and crashes, FFs trapped.

**Demographics:**

**Department type:** Volunteer

**Job or rank:** Safety Officer

**Department shift:** Respond from home

**Age:** 25 - 33

**Years of fire service experience:** 7 - 10

**Region:** FEMA Region III

**Service Area:** Suburban

**Event Information:**

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

**Event date and time:** 02/14/2010 13:29

**Hours into the shift:**

**Event participation:** Told to and submitted by safety officer

**Weather at time of event:** Clear with Wet Surfaces

**Do you think this will happen again?**

**What were the contributing factors?**

- Human Error
- Training Issue
- Weather

**What do you believe is the loss potential?**

- Property damage
- Minor injury

**Event Description:**

On [date omitted] at approximately [time omitted], fire departments from [location omitted] were responding to a report of a working house fire in the [location] area of the county. Engine [1], out of the [name omitted] station, was operated by Firefighter [A], who responded with the equipment out of the [name omitted] station.

While proceeding down [street name omitted] near the [street name omitted] intersection, Firefighter [A] lost control of the pumper/tanker after hitting a patch of ice/water and the apparatus spun around in the road. As a result, the cab of the truck on the driver's side impacted a frozen snow bank on the side of the road. After striking the frozen snow bank, the pumper/tanker then spun around again, impacting the large traffic signal pole at the [name omitted] intersection.

After the impact, the pumper/tanker came to rest against the pole up on the concrete island. Firefighter [A] and the passenger, Firefighter [B], were trapped in the cab of the apparatus for a short period of time. Firefighters [C], [D], [E] and [F], who were riding in the crew cab of the pumper/tanker, were

transported to the hospital. They were treated and released with minor injuries, mostly bumps and bruises, and all are resting at home.

**Lessons Learned:**

Speed, control of the vehicle, awareness of road conditions, seat belt use: all could contribute to preventing accidents and the resulting injuries of this nature in the future.

**Report Number:** 10-0000690

**Report Date:** 04/06/2010 21:47

**Synopsis:**

Apparatus collide enroute to grass fire.

**Demographics:**

**Department type:** Volunteer

**Job or rank:** Captain

**Department shift:**

**Age:**

**Years of fire service experience:**

**Region:** FEMA Region V

**Service Area:** Rural

**Event Information:**

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

**Event date and time:** 04/06/2010 19:00

**Hours into the shift:**

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

**Weather at time of event:** Clear and Dry

**Do you think this will happen again?**

**What were the contributing factors?**

- Human Error
- Other
- Decision Making
- Equipment
- Individual Action

**What do you believe is the loss potential?**

- Property damage
- Other
- Minor injury

**Event Description:**

Note: Brackets denote reviewer de-identification.

Our department was en route to provide mutual aid for a grass fire with no structure threat or exposures of any kind. An engine, a brush truck, and a tanker left the station at nearly the same time. The engine pulled off of the main road onto a side road where the incident was located. The brush truck missed the turn and came to a complete stop in the middle of the road at the bottom of a hill. The tanker came over the hill and literally ran over the back of the brush truck, injuring the drivers of the brush truck and the tanker truck. The accident totaled out a brush truck and did significant damage to the tanker. The firefighter in the brush truck admitted to [consuming alcohol and prescription medications] prior to responding. The driver of the tanker reported that the brakes were not working in the tanker truck. This tanker is a "home-made" tanker made by members of the department.

**Lessons Learned:**

Does a grass fire with no exposures require an emergency response? Ensure that all apparatus are safe and operable at all times. Conduct random drug/alcohol screenings to ensure that the public and other firefighters are safe. No home-made apparatus should be allowed to be in operation at any fire department!

**Report Number:** 10-0000887

**Report Date:** 06/24/2010 17:29

**Synopsis:**

Tanker still in reverse after dumping tank.

**Demographics:**

**Department type:** Paid Municipal

**Job or rank:** Lieutenant

**Department shift:** 24 hours on - 48 hours off

**Age:** 43 - 51

**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:** 03/17/2010 13:00

**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 were the contributing factors?**

- Human Error

**What do you believe is the loss potential?**

- Property damage
- Other

**Event Description:**

During a training event utilizing a tanker and draft tank, water was dumped into the dump tank. After this was accomplished, the tanker was going to be moved to refill it. Upon releasing the emergency brake, the transmission was in reverse instead of second gear, which caused the apparatus to go backwards into the dump tank and causing damage to the frame of the tank. No persons were behind the apparatus at the time of the incident. No safety backers were needed as the tanker was supposed to be pulling away from the tank.

**Lessons Learned:**

To keep this from happening again, a louder back-up horn could be installed on the tanker as it has a very low tone. Also, visually watch the shifter move to the proper gear pattern to ensure that it does not go in a wrong position.

**Report Number:** 11-0000254

**Report Date:** 07/12/2011 21:20

**Synopsis:**

Tanker tire blows during training.

**Demographics:**

**Department type:** Combination, Mostly volunteer

**Job or rank:** Lieutenant

**Department shift:** Duty night (in-station)

**Age:** 16 - 24

**Years of fire service experience:** 4 - 6

**Region:** FEMA Region III

**Service Area:** Suburban

**Event Information:**

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

**Event date and time:** 07/20/2011 16:00

**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 were the contributing factors?**

- Equipment
- Task Allocation
- Training Issue
- Protocol
- Unknown

**What do you believe is the loss potential?**

- Property damage
- Life threatening injury

**Event Description:**

During driver training on our department's tanker, one of the tires experienced a blowout. The training was during the day in clear weather. The tanker [manufacture deleted], with 2500 gallons of water and seating for eight, was being driven on a limited access highway at the posted speed limit of 65 mph. The driver was already qualified on the station's other two engines and had nearly completed driver training on this unit. Driver training was being conducted by the station's captain, who was qualified on the tanker and experienced in qualifying individuals for driving.

While driving in the right of two northbound lanes, a buzzer activated in the cab identical to one heard when traveling above the recommended speed for the unit. The driver and officer discussed this, as the unit was not travelling at a speed that should have caused the buzzer to activate. The driver began letting off of the accelerator as the officer asked the driver to check the dash for any warning lights. Due to the angle of the sun, the driver took a few moments to notice a dim warning light. It is believed that the light activated was the oil pressure light. This light went out almost as soon as it was noticed (the buzzer also turned off). The intention of the crew at this point was to exit the highway and review any issues that the tanker was having.

Within thirty seconds of the alarm buzzer turning off, the front driver's side tire blew-out. The tanker immediately veered into the adjacent northbound lanes by about four or five feet. Vehicles in the adjacent lane were able to evade the tanker. The driver immediately released the accelerator, regained steering control, began pulling the tanker to the right breakdown lane/shoulder, and slowly engaged the brakes in a gentle pumping motion. Once stopped, the driver, officer, and one additional crew member confirmed with each other that there were no injuries in the unit. The unit notified county communications and requested police assistance for debris removal and traffic control. The tanker's officer made further notifications and placed emergency flares to warn drivers of the hazards. The tanker driver communicated with a motorist who had pulled over and learned that there were no injuries or damage to any other vehicles. The motorist had pulled over to check on the safety of the tanker's crew and advise that he saw the wheel vibrating strangely immediately before the blowout.

Significant damage occurred to the front left of the tanker – wheel well, undercarriage, rim, etc. The unit required towing from the scene and is expected to be out of service for over a month.

**Lessons Learned:**

Tires should be regularly inspected and maintained. A replacement schedule should be developed and followed. Hazards identified by firefighters should be addressed by management. Training should include defensive driving such as responsive actions during a blowout.