Informational Bulletin

Close Call Incidents

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Approved By: Kalvyn W. Smith, Fire Rescue Chief

In an effort to improve safety and awareness, the Health and Safety Committee has put together a few incidents for review. The following attached incidents brought unique challenges to our crews that we were able to overcome through experience and assistance from other agencies.

Captain Donald Jackson will be the point of contact for future notable incidents. Please utilize FRF 967, Significant Incident After Action Review, after a significant incident you feel is important to review.

Questions regarding this informational bulletin should contact Battalion Chief Arft or Captain Jackson.

Significant Incident After Action Review

Incident Number: 2307737

Date: 9/21/23

Incident Type: Illness

Dispatch Time:	1228		**Rural or Hydrant:**	N/A
Time of First Arrival:	1231		**Time of Last Cleared:**	1304
Box Number:	0101		**Incident Audio Reviewed?**	Yes
Apparatus:	**Call Sign:**	**Staffing**	**Personnel**	
Medic	M1101	3	Tec. Rakestraw / Tech Carr-Dunn / EMT Litchford	
EMS Sup	EMS 1101	1	Lt. Coleman	
BC 2	BC 1102	1	BC McEvilly	
DC	DC 1102	1	DC Kidwell	
Did Any Apparatus Fail?	**No**			

Additional Requests			
Apparatus:	**Call Sign:**	**Staffing**	**Personnel**

Initial Information (Dispatched Report, On Scene Report, 360, Strategy and Tactics)
At 1228hrs M1101 was dispatched for a reported illness at 57 Sullivan St. – Town of Warrenton. Initial notes were that the patient, who is well known to EMS and WPD, was having pain and requesting to go to the hospital, and that he does not want to harm himself today. EMS 1101 added to the incident based on the

lengthy history with this patient. EMS 1101 requested the status of an LE response which communications advised they did not have the call, therefore, EMS 1101 requested that LE be dispatched.

Upon arrival, EMS 1101 and M1101 crews proceeded to the front door and stood on either side of the doorway. The patient opened the door and crews immediately observed what appeared to be a fresh laceration to the inner elbow of his left arm. As the patient stepped into full view he produced a standard kitchen steak knife in his left arm. He began to take a step towards the EMS crews he stated "I'm sick of this". At this point EMS 1101 announced "knife, he has a knife". Crews began to retreat off the porch as WPD was arriving on scene.

Once off the porch EMS 1101 called a Signal One. Communications immediately confirmed receipt of the Signal One. M1101 and EMS 1101 left the scene and moved to a staging location.

During this time, BC1102 and DC1101 marked up responding to the incident.

Incident Analysis

Changes Made (or required)

Crews retreated once the threat was noticed. Two crew members did not hear the alarm raised by the members confronted by the patient. Crew members were not familiar with **OP 501 Responder in Danger**.

Safety Issues Encountered/Overcome

ECC Operations (From the IC perspective)

ECC was not familiar with OP 501 Responder in Danger. ECC did acknowledge the signal 1 but did not announce the unit that called the signal 1. Law Enforcement was dispatched to the call but first due engine, second due EMS unit and Command/Battalion Officer were never dispatched as defined in OP 501.

Closing (Strengths / Areas for Improvement / Lessons Learned)

Pictures/Supplemental

Significant Incident After Action Review

Incident Number: 2308927

Date: 06/12/23

Incident Type: MVC

Dispatch Time:	1506		**Rural or Hydrant:**	N/A
Time of First Arrival:	1515		**Time of Last Cleared:**	
Box Number:	0366		**Incident Audio Reviewed?**	N/A
Apparatus:	**Call Sign:**	**Staffing**	**Personnel**	
Wagon	W1103	3		
Engine	E1104	3		
Ambulance	AA1105	2		
Did Any Apparatus Fail?	**No**			

Additional Requests			
Apparatus:	**Call Sign:**	**Staffing**	**Personnel**

Initial Information (Dispatched Report, On Scene Report, 360, Strategy and Tactics)
June 12, 2023 at 15:06 Wagon 3, Engine 4 and Advanced Ambulance 5 where dispatched to Interstate 66 at the 21.8 mile marker for a traffic crash. At the time of the incident there was a weather system moving through the area that produced heavy rain and limited visibility. Wagon 3 and Engine 4 responded with 3 personnel respectively and Advanced Ambulance 5 responded with 2 personnel.

Advanced Ambulance 5 was first to arrive at 15:15 and reported a single vehicle off the roadway at the dispatched mile marker. Wagon 3 arrived 13 seconds after Advanced Ambulance 5 and took a blocking position in the number 2 lane to protect Advanced Ambulance 5. As the crew from Wagon 3 began to exit the apparatus to assess the incident, a vehicle approaching the incident lost control and slid into the incident scene narrowly missing Wagon 3 and the personnel that has already exited the vehicle. The vehicle came to a stop next to the officer side of Wagon 3. The vehicle left the roadway with enough force that all of the vehicle's airbags deployed.

ECC Operations (From the IC perspective)

Closing (Strengths / Areas for Improvement / Lessons Learned)

This incident took place prior to personnel setting up traffic directing cones and prior to the arrival of the second engine company. Fortunately, our personnel operating on this incident were vigilant and exercising caution due to the weather conditions and incident location. There were no injuries to our personnel reported or damage to any county or volunteer apparatus.

Pictures/Supplemental

Significant Incident After Action Review

Incident Number: 2308927

Date: 10/31/23

Incident Type: MVC with Entrapment

Dispatch Time:	0735		**Rural or Hydrant:**	N/A
Time of First Arrival:	0741		**Time of Last Cleared:**	1100
Box Number:	0711		**Incident Audio Reviewed?**	N/A
Apparatus:	**Call Sign:**	**Staffing**	**Personnel**	
Rescue Engine	E1107	2 +1		
Engine	E1101	3		
Engine	E505	4		
Rescue	R1101	4		
EMS Sup	EMS1101	1		
Medic	M1107	3		
AirCare	AirCare 6			
Medic	M504			
Fire Chief	Chief1100	1	Chief Smith	
Battalion Chief	BC 1101	1	BC Arft	
Fire Chief	Chief1107	1	Chief Moore	
Did Any Apparatus Fail?	**No**			

Additional Requests			
Apparatus:	**Call Sign:**	**Staffing**	**Personnel**

Initial Information (Dispatched Report, On Scene Report, 360, Strategy and Tactics)
Dispatched for a MVC with Entrapment, Arrived on scene to a box truck on its side with one trapped.
○ RE7 arrived on scene 1st ○ W1 arrived on scene 2nd

        - W1 assisted with extrication
        - Hose line deployed
        - W1 officer completed inner and outer circle size up
- One victim confirmed trapped and pinned
- Hazards
    - Powerlines above
- Initial stabilization Completed
    - Box cribbing and" Rescue Jack Struts"
- Heavy Duty rotator requested
- Extrication operational decision made
    - Control roll of box truck to gain access for dash manipulation
        - Chain hoist used for initial tie back for pulling vehicle off tree
            - Anchor point was another tree perpendicular from box truck
        - R7 utilization of pinned winch to control movement from opposite side
            - 100ft of 3/8" chain
- Roll started
- Rolled stopped due to horizontal shift of box truck
- Readjustment of anchor points and stabilization

Changes Made (or required)

- Lacking vertical movement needed during initial stages
- Unwanted Horizontal movement occurring due to hinge point (vehicle tires) not gripping in soil
    - Change in rigging points on dirty side
- Aaron's Towing arrived on scene took over winching for the roll
- Change over to wrecker pulling completed quickly due to R1 and RE7 carrying appropriate equipment for tasks at hand
    - Vehicle movement for roll 3-4ft
- Switched Paratech gold struts from R1 to captured progress due to Rescue Jack Struts being too short for initial placement
- Rescue Jack Struts moved to another location on box truck

- Extrication of Patient
    - Driver/patient pinned in the cab
        - Drivers lower extremities pinned by steering column
    - Driver's side door removed first
    - Dash manipulation needed/started from exterior of box truck
    - Ratchet straps used to lift steering column off upper part of patient's legs
    - Combination and ram hydraulic tools were used to free patient's right leg
        - Ram inserted between steering column and driver's seat.
    - Patient's left leg freed shortly after using smaller ram

- Commercial / Large vehicle entrapments call type in CAD revised/created
    - Adding to CAD dispatched for entrapment an additional heavy rescue and/or rescue engine

- Adding a Heavy wrecker to initial dispatch algorithm
  - Reduce response time

Safety Issues Encountered/Overcome

- Equipment
  - Rescue Jack Struts
    - Design flaw of putting personnel in harm's way when adjusting height
    - Cumbersome in adjusting height to keep up with lift
  - Paratech Gold Struts utilizing the air lift would have eliminated this
- Interoperability between rigs
  - Both rigs use HURST hydraulic tools
    - Not the case with other rigs in the county though
  - Fauquier County Fire and Rescue need to create a standard for extrication equipment
    - Hydraulic tools
      - Corded and Battery operated
    - Stabilization equipment
      - Struts
      - Cribbing
- Crush hazard from rolling the box truck off the tree
  - Progress captured with Paratech Struts
  - Assigned a safety to monitor stabilization struts
- Removal of personal protective equipment
  - Example structural firefighting Helmets
  - RE7 has tech rescue helmets to be used

Recommendation of procurement for other specialties to have tech rescue helmets

ECC Operations (From the IC perspective)

Closing (Strengths / Areas for Improvement / Lessons Learned)

- Strengths
  - Volunteers and Career working seamless together on this incident
    - Task oriented objectives completed with no freelancing
  - Equipment compliments on RE7 and R1
    - Hydraulic equipment
    - Paratech Struts
    - Chains
  - Advanced Patient Care started early
- Weaknesses
  - Heavy wrecker rotator not on initial CAD response
  - No Cross training with Special services

- Heavy wrecker rotators

- Lessons learned
  - Early requesting of heavy rotator for large commercial vehicles
  - Strengths and weaknesses on battery powered vs corded hydraulic tools

"Rescue Jack Structs" reach and capabilities vs the Paratech Struts

Pictures/Supplemental

Initial strategies and Tactics

Lt Flinn- Initial assignment for Wagon 1 on arrival was to assist with Extrication.
Wagon 1 driver stretched a line for suppression efforts if needed.
Wagon 1 Officer completed an inner and outer circle of the vehicle.
Upon completion of size up, one occupant was noted to be trapped and pinned. Initial stabilization was completed with box cribbing and "Rescue Jack Struts". Heavy Duty Rotator was requested.
The decision was quickly made that a control roll needed to be utilized to gain enough access to manipulate the dash.
A chain hoist was used as the initial tie back to pull the vehicle over, and Rescue Engine 7 used their pinned winch as a tie back to control the movement. All grade 100 3/8" chain was utilized in this process.
Initial roll was started.

AC Koglin- Lt. Flinn's game plan worked perfectly. While we made minor changes on the fly, the overall strategy of rolling the truck remained the same throughout the incident. Several times, people mentioned pulling the truck from the tree but with the power lines overhead, there was no way to maintain stabilization while the truck was pulled back.

AC Moore- Initially our plan was to lift (controlled roll) the truck off the tree via chain hoist, anchored to a nearby tree. As we began to lift, the truck showed signs of moving horizontally, so we stopped to readjust.

BFC Arft- Great plan that worked out. Unit officers had a Backup plan and were all on the same page if Plan A needed to change.

Changes Made/Required

Lt Flinn- During the initial roll, it was noted that we were not getting enough vertical movement and strictly horizontal, due to the hinge point (vehicles tires) not biting into the soil. The decision was made to change the rigging points on the dirty side of the vehicle. Aaron's towing had arrived on scene and their winch was utilized to complete the roll. This increased the speed at which we could roll the vehicle, and the distance we could allow it to travel without a reset. This changeover was done quickly due to Rescue Engine 7 and Rescue 1 carrying high quality chain that's compatible with the towing industry.
Total vehicle travel was approximately 3-4 feet. Paratech struts were used to capture the lift. The patient was significantly pinned in the vehicle and dash manipulation was confirmed to be needed. The driver's side door was removed first, and an initial dash roll was started from the exterior of the vehicle. The patient was also pinned by the steering wheel and column. Two ratchet straps were used to lift the steering column approximately 6 inches and free the upper part of the patient's leg. The patient's right leg was still pinned from the knee down. A combination tool was used to spread enough room to get a small ram inside between the steering column and the driver's seat. This created enough room to free the patient's right leg. The patient's left leg was freed shortly after by using a small ram. The patient was back boarded and placed on a stretcher.

AC Koglin- Commercial / large vehicle entrapments are not common but they are not rare either. We need to "build" a commercial / large vehicle call type in CAD. In addition to the standard dispatch for entrapments, and additional Rescue / Rescue Engine should be added. We have also mentioned this before but we need to work on adding a heavy wrecker to the dispatch algorithm. Some do but there are some that will spend too much time using what they have on their rig before calling for one.

AC Moore- The heavy wrecker then arrived on scene, but due to the power lines above the truck, he was not able to use the boom to lift the vehicle in the direction needed. So we continued with the original plan, only using the wrecker's winch to lift, and RE winch to capture if the truck reached the tip-over point. We used struts and cribbing to capture progress. The lift surpassed the length of the Res-Q-Jacks and became too tall for cribbing, so we elected to use Paratech gold struts from Rescue 1, and then moved the Res-Q-Jacks and cribbing to another location on the truck.

BFC Arft- Two Heavy Rescues should be added to all large vehicle with entrapment calls.

Safety /issues Encountered / Overcome

Lt Flinn- The primary safety concern I noted was the use of "Rescue Jack Struts" to chase the controlled roll of the vehicle. Due to the design of the strut, personnel had to be placed close to the crush point of the vehicle and failure of the roll could have led to significant injuries. This is not really the intended use of these struts either, crews had difficulties keeping up with the roll of the vehicle. However, all equipment being utilized was well within weight limit capabilities and the required safety factors.
Paratech Struts utilizing air to chase the lift would have eliminated this concern.

AC Koglin- Interoperability between RE-7 and R-1 was crucial. I mention this because we both run HURST but that is not the case across the county. While the purchase of the equipment carried is up to the individual volunteer companies, we, as a system, really need to work towards a singular operating systems and equipment. This includes extrication equipment, shores/struts, chains, etc. R-1 has heavy vehicle stabilization / lift capability, but I'm not sure what R-2, R-3 and RE-13 have. Many of us have become used to battery powered extrication equipment, and they work great for 90% of our standard extrications. While they performed well yesterday, their bulkiness can limit use in constricted spaces. There were several times yesterday that we had to switch to corded / hose-based tools because of their smaller size. There were no safety issues / concerns. I will say that I wish we had placed the Para-tech struts earlier in the event, solely for their length.

AC Moore- All personnel were mindful of staying out from under the truck when lifting. Crews had to operate under the truck during extrication, but we ensured the truck was captured and stabilized the entire process. We assigned a member of RE-7 to monitor the struts and cribbing throughout the extrication.

BFC Arft- Safety Equipment was wore as should but noted that during some situations Fire helmets had to be removed. I know RE 7 Carries Tech Rescue Helmets but maybe all specialty units should.

Incident Analysis (Strengths / Weaknesses / Lessons Learned

Lt Flinn- Recognition of the crews' abilities to work together seamlessly must be noted as the greatest strength. This was a very complex incident. All crews remained composed for the duration of the incident and stayed committed to tasks assigned. No freelancing or individual ideas were noted throughout the incident.
The complement of Hurst Hydraulic tools on Rescue Engine 7 also played a vital role in the incident. The mix of traditional corded hydraulic tools and Edraulics proved to be a necessity. Battery operated tools played a very limited role in the extrication due to access limitations. The smaller profile hydraulic tools had to be utilized for most of the cuts and dash manipulations. A heavy-duty rotator and heavy-duty rescue being on the initial dispatch for all commercial vehicle entrapments needs to be seriously considered. This would have eliminated all noted safety concerns mentioned above. This would have also allowed the winches of the rotator to be used for the initial rigging and rolling of the vehicle and saved a little time during the extrication process. This also brings valuable experiencing to the scene and basically unlimited rigging equipment. Cross training with special services in the county could also be viewed as beneficial. Differences in equipment and lack of familiarization could lead to issues down the road. The vast amount of experience and training from the majority of personnel on the scene negated this issue but could pose concerns in future incidents.

AC Koglin- I make no bones about it…we had some damn good dudes there. There was almost no debating and it was like we were reading each other's minds. While it was lengthy, every single volunteer and career member remained focused, purpose driven and exceptionally calm, making the entire operation smooth. We had the equipment and the right guys/gals. They say that there is always something that can be improved on regardless of the situation, but in this instance, nothing sticks out. Again, I think a big piece of the success was solely because of the knowledge, skills and abilities of those on scene.

AC Moore- We had personnel from different units that have had extensive training in heavy vehicle extrication, and most of us have worked together many times before. The communication and teamwork was outstanding during this incident. Command also called for the heavy wrecker and additional Rescue very early, which really paid off on this incident.

BFC Arft- Crews worked well with EMS to start Advanced care while the patient was still inside the vehicle. Aircare integrated will with units on scene.

(Pictures Below)


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WARRENTON
VOL. FIRE CO.
RESCUE
WARRENTON
1
VOLUNTEER
FIRE CO.
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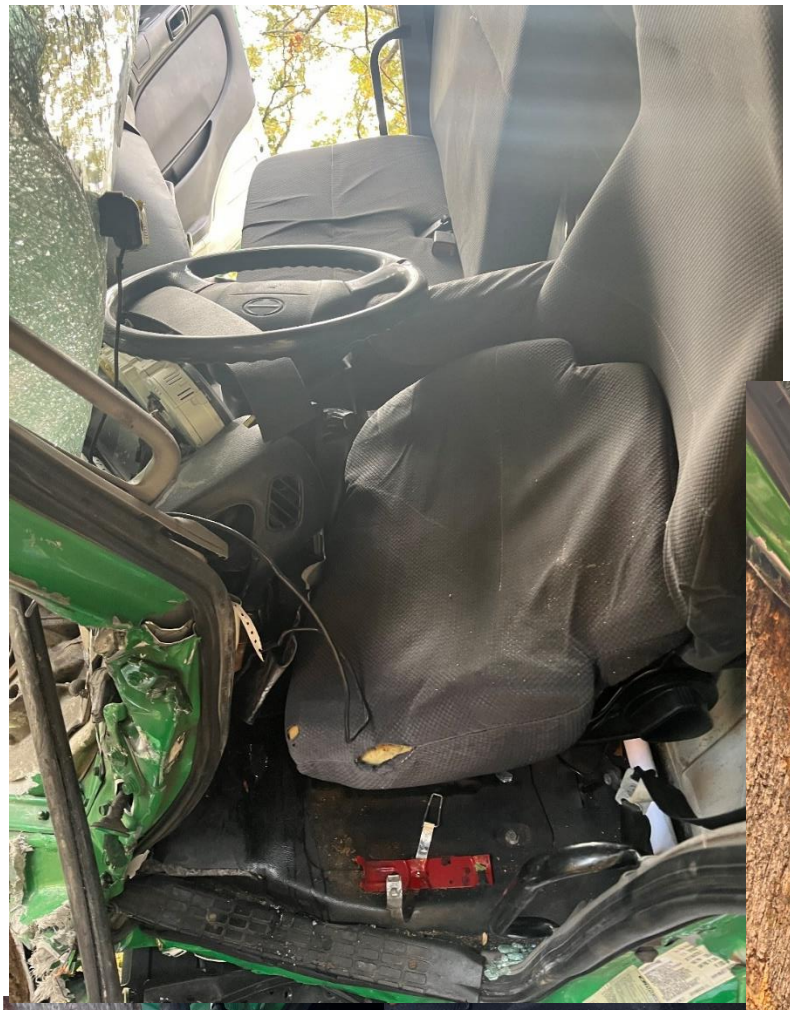

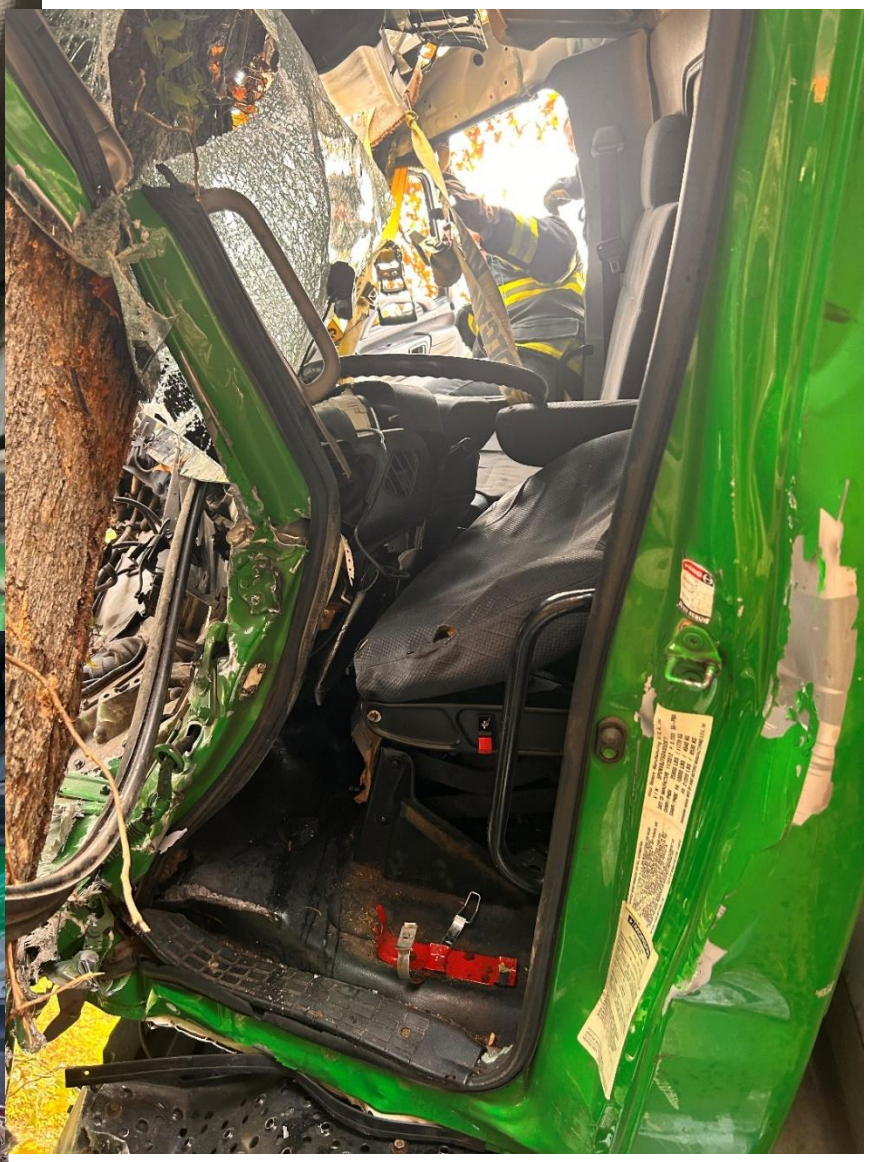


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