

**LINE OF DUTY
DEATH REPORT
REPORT SLIDES**



F2020-07

51-Year-Old Firefighter Suffers a Sudden Cardiac Event and Crashes Engine While Responding to a Residential Structure Fire - West Virginia



Summary



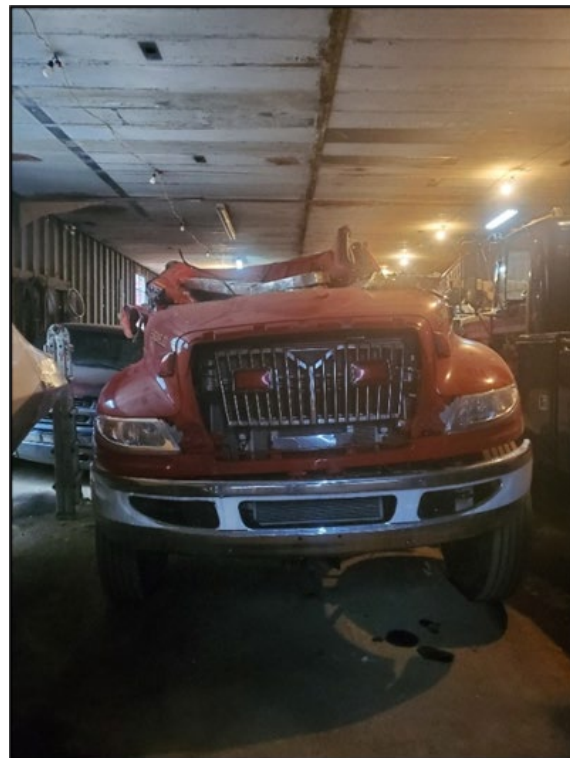
Fire engine balancing on its roof after leaving the roadway and rolling down a hill.
(Photo courtesy of the Fire Department)

- In 2020, a 51-year-old male volunteer firefighter responded to a mutual aid call for a residential structure fire.
- While driving the department's engine to the fire scene, the firefighter suffered a sudden cardiac event causing him to lose control of the apparatus approximately ½ mile from the structure fire.
- The engine left the roadway and began to roll down an embankment, but a small hillside tree prevented the engine from rolling all the way down the hill into a creek.
- The engine came to rest on its roof in a very unstable position.



Summary

- A firefighter from a neighboring fire department, also responding to the mutual aid call, came upon the crash site and notified dispatch.
- Over the next 15 minutes, multiple emergency responders responded to the crash scene.
- They found the firefighter unconscious, trapped inside the cab.
- The firefighter was wearing his shoulder and lap belt and had donned all his turnout gear except for his helmet.



Damage to the front of Engine 22 stored at the wrecking/salvage yard.
(NIOSH photo)



Summary



Overturned Engine 22 with tire skid marks on the roadway where the driver lost control of the engine.
(Photo courtesy of the Fire Department)

- Emergency responders climbed into the engine's cab to take the firefighter's vital signs.
- The firefighter was unresponsive, did not have a pulse, and was not breathing.
- Due to firefighter's grave condition and the engine's unstable position, no cardiopulmonary resuscitation (CPR) was administered, and no immediate attempt was made to extricate the firefighter.



Summary

- The wrecker crew arrived on-scene approximately 45 to 60 minutes after the crash.
- It took a significant amount of time to stabilize the engine which was then righted onto the roadway.
- The roof of the engine's cab had to be cut way to extricate the firefighter.



Engine 22 righted onto the roadway after the deceased firefighter was removed. Rain was falling at the time of this photograph, about 2 to 3 hours after the crash.
(Photo courtesy of the Fire Department)



Summary

- The Medical Examiner was called to the scene and pronounced the firefighter deceased.
- The Chief Medical Examiner for the State of West Virginia performed the autopsy and completed the death certificate.
- “Sudden death” was listed as the immediate cause of death, caused by a “likely dysrhythmia,” due to years of “hypertensive cardiovascular disease.”
- “Positional asphyxia” could not be excluded as “contributory.”



Contributing Factors

- Lack of fire department medical evaluations to screen firefighters for risk factors for cardiovascular (CV) disease
- Lack of exercise stress tests (ESTs) for firefighters at increased risk for CV disease
- Lack of annual medical clearance for unrestricted firefighting duties, including operations of fire department apparatus
- Stress of responding to a fire emergency.



Recommendations

- Fire departments should ensure pre-placement and annual medical evaluations are provided to all firefighters.
- Fire department physicians should ensure symptom-limiting exercise stress tests (ESTs) are provided to firefighters at increased risk of CV disease.
- Fire department medical programs should be under the direction of a physician knowledgeable about the physical demands of firefighting, the personal protective equipment (PPE) used by firefighters, and the medical guidance provided by NFPA 1582.
- Fire department physicians should use the information from the annual medical evaluation to make final medical recommendations regarding medical clearance for unrestricted firefighting duties and tasks such as driving fire department apparatus.

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