

**LINE OF DUTY
DEATH REPORT
REPORT SLIDES**



F2022-07 FL

Career Firefighter Dies from
Crush Injuries During Sand
Trailer Operations - Florida



Summary

- On June 30, 2022, two firefighters (FF-A and FF-B) were assigned to relocate a hazardous materials spill unit (sand trailer) from the fire department storage facility.
- While hooking the sand trailer to the tow vehicle, the coupler of the sand trailer tilted upward, pinning FF-A underneath the load at the rear.
- FF-A was pinned across his shoulders, chest, and lower legs.
- FF-B immediately called for help using a portable department radio and verbally yelling for help.
- Firefighters nearby heard the emergency call for assistance and quickly responded to the storage facility
- Medical evaluation was conducted while rescue efforts were initiated.



Summary

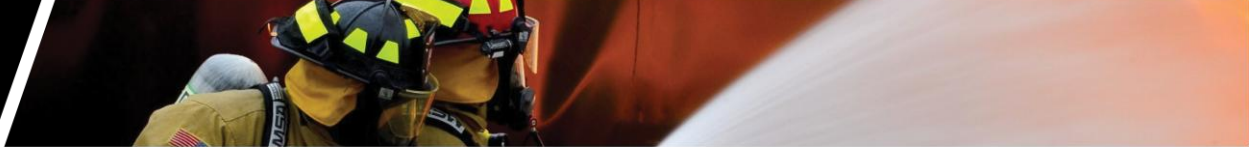
- FF-A was reportedly unresponsive and fully cyanotic (blueish discoloration of the skin due to a lack of oxygenation) from mid-chest and up, including fully involved cerebral and neck edema.
- Crews worked quickly to stabilize and lift the load from FF-A. Upon release of the load on FF-A's chest and shoulders, FF-A was heard taking in a deep breath and became progressively more responsive with diminishing cyanosis.
- Full extrication took place and FF-A was transferred to a stretcher and to the fire department's emergency medical service (EMS) unit.
- Request for medical flight from the scene to the hospital was made; however, the driving distance to the hospital was determined to be faster than the provided response time of the medical helicopter.



Summary

- FF-A was transported by EMS, with full trauma protocol initiated, to the emergency room (ER). Upon arrival to the ER, FF-A was engaging in limited conversation with the EMS crew.
- FF-A was evaluated and diagnosed with crushing blunt force trauma to the trunk and upper extremities and a lower leg fracture. He was admitted to the intensive care unit.
- During the next 15 days, FF-A developed acute respiratory distress syndrome due to the crushing blunt force trauma, which required extracorporeal membrane oxygenation (ECMO) and kidney dialysis treatments.
- FF-A died from crushing blunt force trauma injury complications on July 15, 2022, as reported by the medical examiner.

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Driver side tire (*left*) showing extensive weathering of the tire and rusting and flaking of the wheel. Passenger side tire (*center*) with visible size, type, and capacity rating. Wheel displays rusting and flaking. (*Photos by NIOSH*) Post-incident photo (*right*) showing rear utility jack in fully retracted position. (*Photo by fire department*)



Photo 2: Rear of sand trailer with rear stabilizing jack in retracted position located on the center of the frame. The rear stabilizing jack was reported to be in this position when rescue efforts began.
(Photo by NIOSH)

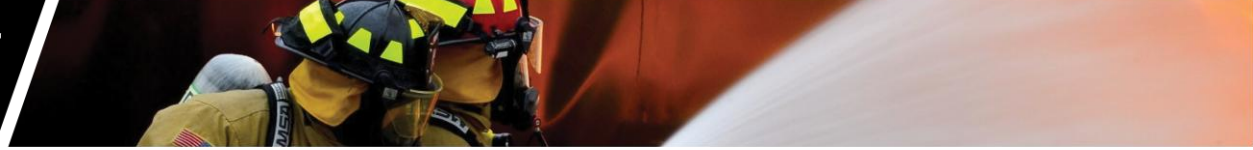
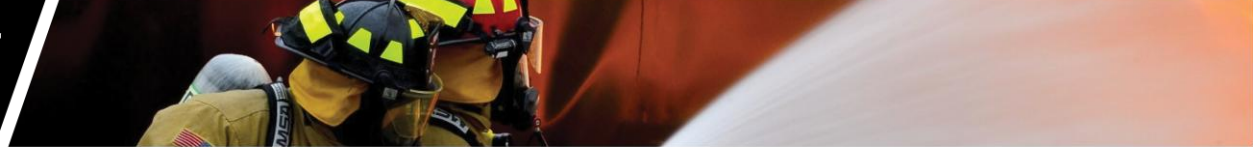
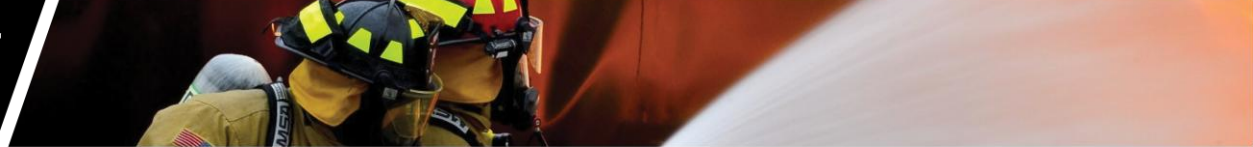


Photo 1: Front of sand trailer with front stabilizing jack in retracted position located on the front frame behind the trailer coupler (not visible), while being stored at the city's storage yard. *(Photo by NIOSH)*



Contributing Factors

- Vehicle and equipment inspection and maintenance
- Inspection criteria and accountability for vehicles and equipment
- Real-time risk assessment



Recommendations

- Develop a comprehensive vehicle and equipment inspection and maintenance program that includes emergency vehicle technician training and fleet management training:
 - Vehicle and equipment inspection and maintenance program,
 - Professional development to support preventative maintenance activities,
 - Vehicle driver/operator education training programs, and
 - Individual training meets JPRs prior to task assignment.



Recommendations

- Work with AHJ, ASE-certified mechanics and Emergency Vehicle Technicians to ensure inspection and maintenance criteria are developed and available to identify deficiencies that render vehicles or equipment out of service
- Develop a risk management program that reinforces personnel situational awareness throughout real-time risk assessments

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