

REPORT#: 18MI037

REPORT DATE: 3/9/20

INCIDENT HIGHLIGHTS



DATE:

Spring, 2018



TIME:

10:00 a.m.



VICTIM:

Manager/Tow Truck Driver
in his 40s



INDUSTRY/NAICS CODE:

Transportation/48



EMPLOYER:

Wrecker Service



SAFETY & TRAINING:

CDL, Towing



SCENE:

Shoulder of expressway



LOCATION:

Michigan



EVENT TYPE:

Struck By

Tow Truck Driver Died When School Bus Was Struck by SUV

SUMMARY

In Spring 2018, a tow truck driver in his 40s died when he was pinned against a tow truck lift fork and run over by a school bus tire when the bus was struck by an SUV traveling at a high rate of speed. Due to a flat tire, the bus driver pulled over onto the shoulder near the entrance of an exit ramp. The decedent responded to the call and parked his truck approximately 8-10 feet in front of the school bus. The decedent was lying on the ground, looking under the bus trying to decide what equipment he would need to hook the bus to move it. An SUV traveling in the left lane abruptly veered right, swerving across the right and exit lanes, driving onto the shoulder.... [READ THE FULL REPORT](#)> (p.3)

CONTRIBUTING FACTORS

Key contributing factors identified in this investigation include:

- SUV driver allegedly impaired by alcohol and drugs lost vehicle control due to an abrupt lane change
 - Empty school bus parked on shoulder of exit ramp on busy expressway
- [LEARN MORE](#)> (p.8)

RECOMMENDATIONS

MIFACE investigators concluded that, to help prevent similar occurrences, employers should:

- School districts and firms employing school bus drivers should develop a policy regarding stopping on an active roadway.
- Tow truck operators should work in conjunction with law enforcement/emergency service providers to secure the work area prior to loading and securing a vehicle. [LEARN MORE](#)> (p.8)

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MICHIGAN

State **FACE** Program

Fatality Assessment & Control Evaluation

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Michigan Fatality Assessment and Control Evaluation (FACE) Program

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SUMMARY

In Spring 2018, a tow truck driver in his 40s died when he was pinned against a tow truck lift fork and run over by a school bus when the bus was struck by an SUV traveling at a high rate of speed. Due to a flat tire, the bus driver pulled over to the shoulder near the entrance of an exit ramp. The decedent responded to the call and set up his truck approximately 8-10 feet in front of the school bus. The decedent was lying on the ground, looking under the bus trying to decide what equipment he would need to hook the bus to move it. An SUV traveling in the left lane at a high rate of speed made an abrupt turn to the right swerving across two lanes, driving onto the shoulder. As the SUV attempted to reenter the freeway it struck the driver's side rear of the school bus, pushing it forward eight to ten feet. The bus pinned the decedent against the boom, the tire ran over and crushed him, and the bus spring shackle bolts struck him in the chest. He was declared dead at the scene.

INTRODUCTION

In Spring 2018, a tow truck driver in his 40s died when he was pinned against a tow truck lift fork and run over by a school bus when the bus was struck by an SUV traveling at a high rate of speed. MIFACE learned of this incident upon receiving notification from MIOSHA. MIFACE personnel contacted the owner of the towing firm who agreed to be interviewed. MIFACE reviewed the death certificate, police and medical examiner reports, and the MIOSHA file during the writing of this report. Pictures used in the report are courtesy of the responding police department, Google maps, and the MIOSHA file, which also included a media photograph. MIFACE has removed identifying information from the photographs.

EMPLOYERS

The towing company owner began the towing business in 1988 with one truck. The business had grown to include three tow businesses and two junkyards. The firm had been at this tow facility location for 20 years. The firm had four heavy-duty tow vehicles. Three had been dispatched to other Michigan locations; his firm was under towing contracts with several municipalities, colleges, sheriff departments and the Michigan State Police. This was the first time the tow vehicle the decedent was using had been dispatched.

The firm employed twenty-eight individuals at the location where the decedent worked.

The post-collision Michigan DOT inspection of the tow truck did not find any violations.

WRITTEN SAFETY PROGRAMS and TRAINING

The firm had a written health and safety policy. One of the firm's policies was that drivers were not permitted to change a vehicle tire on an active roadway; they must tow the vehicle to another location. There was no deficiency found in the employer's programs, training, enforcement or disciplinary policy.

The firm held safety meetings at least one time per month. Safety meetings covered a variety of topics, including but not limited to safe work procedures involving where and how to hook a vehicle, assessment of location dangers and how to temporarily hook to get to a safer area, temperature stressors and prevention activities, importance of wearing high-visibility vests/clothing and how to conduct a daily driver inspection of equipment.

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Company policy mandated that workers start “low on totem pole”, first as a dispatcher, then as a driver. Some tow operators began work in the junkyard, learning towing techniques in that capacity. An individual must be with the firm for 3-4 years as a driver before the owner considered providing further training to become a heavy-duty tow truck operator.

After initial training, new drivers are required to have a “ride-a-long” with an experienced driver; the length of the drive-a-long depended upon the competence of the new driver. Additionally, heavy-duty tow truck drivers are required to take and successfully complete Wreck Master training. Non-heavy-duty truck drivers are required to successfully complete Towing and Recovery Association (TRAA) tow operator training. All drivers must complete Traffic Incident Management classes.

The firm performed unscheduled audits (spot checks) by a veteran driver to verify the tow operators are following company safety rules.

WORKER INFORMATION

The decedent had been with firm since 2004. His current job title was manager/driver. The decedent had been a heavy-duty tow operator for seven years after he successfully completed the Wreck Master training. The owner considered him to be a highly-skilled tow truck operator. He was also responsible for training some of the new operators.

The decedent worked full time and had been on the job for a couple of hours on the day of the incident. He had a valid medical card and a Group A designation (operate a combination of vehicles with a gross combination weight rating (GCWR) of 26,001 pounds or more including a towed trailer or vehicle with a gross vehicle weight rating (GVWR) of more than 10,000 pounds).

The decedent did not usually perform towing activities, but because the three heavy-duty tow trucks had been dispatched and because he thought there were children on the disabled bus, he decided to answer the distress call and drove to the scene.

INCIDENT SCENE



Photo 1. Incident scene. Driving eastbound in right travel lane. Photo courtesy of Google Maps

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Photo 2. Overhead drone view of incident site showing location of tow truck, bus and SUV. Note tire tracks on outside of shoulder.

The incident scene was an eastbound, 3-lane, dry expressway with a posted speed limit of 70 mph. Two expressway lanes were eastbound travel lanes and the far-right lane was the exit lane associated with an exit ramp providing access to another expressway (Photos 1 and 2). The incident occurred mid-morning.

The bus driver parked the disabled bus on the exit ramp shoulder, approximately 75-80 yards from the exit ramp's departure point from the eastbound expressway.

The decedent drove the heavy-duty 2018 Freightliner tow truck to the incident site. The tow truck had a 25-ton Century lifting hoist in the back of the truck with a lifting fork that had a 128-inch under-lift. The controls for the lift forks could be operated by remote control or from compartments on the back-right side or left side of the truck (Photo 3). The truck was purchased three weeks prior to the incident. All truck components, including the horn, hoist, tires, cables and hooks, etc., were in good working order and functioned as intended.

The vehicle striking the school bus was an SUV. The driver of the SUV had a suspended license.

WEATHER

The weather at the time of the crash was entered by dispatch and noted: Temperature 84°F, east wind, humidity 54%, dew point 65, pressure 29.99, visibility 20 miles.

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INVESTIGATION



Photo 3. Tow truck driven to disabled bus



Photo 4. Driver's side outside dual rear tire of school bus causing driver to exit expressway

A school district had eliminated school bus service and had contracted with an outside transportation firm to provide student bus service. The contract bus driver and an aide were returning to the district from another elementary school district when the bus had a blowout of the outside driver's side rear dual tire (Photo 4). The bus driver continued to drive the empty bus for approximately 3 miles before pulling off and parking the bus onto an exit ramp shoulder. The bus was parked completely on the shoulder. The driver set the emergency brake, which was only active on the rear wheels, and activated the flashers. The bus driver called the school district for assistance. The school district called the decedent's employer to tow the bus.

The towing firm received the request for assistance at 9:35 a.m. He was dispatched at 9:40 a.m. and enroute by 9:45 a.m. He radioed the towing firm that he was on scene at 10:00 a.m.

When the decedent arrived, he was dressed in a gray t-shirt with logo of tow business, a pair of black safety pants with bright green reflector tape, a pair of black high-top shoes, black socks and boxer shorts. He parked the tow truck approximately 8-10 feet in front (east) of the disabled bus and activated the tow truck's lights, flashers, and emergency lights.

After speaking with the bus driver and aide, he directed them to sit in the tow truck cab while he determined where to place the lifting mechanism/how to secure the bus.

The decedent was lying on the ground under the bus with the remote in his hand when the incident occurred.

The SUV driver was traveling eastbound in the left lane at a high rate of speed (at least 77 mph). It was hypothesized by witnesses that the driver wanted to exit but was in the wrong lane. Witnesses stated the driver veered abruptly to the right crossing over the two right lanes, and onto the shoulder. The vehicle traveled 4-5 feet off the shoulder onto the gravel and it looked like the SUV was going to go to the right of the school bus, but the driver attempted to correct and re-enter the expressway. The SUV struck and went under the school bus (driver's side) and burst into flames (Photo 6).

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The force of the impact moved the back of the bus out into traffic and caused the back tires to lift off the ground, which disabled the bus's emergency brake, permitting the bus to be pushed forward 10-12 feet into the wrecker (Photos 7-9). As the bus was pushed forward, it pinned the decedent against the lift fork of the wrecker and the ground. The front passenger bus tire ran over the decedent and the front right spring shackle bolts struck him in the back.

Another driver on the expressway witnessed the crash and made the 911 call at 10:11 a.m.

There were no skid marks made by the SUV at the scene. The SUV's event data recorder data showed that the driver did not, at any point, apply the SUV brakes. Passersby attempted to rescue the trapped passengers and the SUV driver and douse the flames.

The decedent was unresponsive when emergency responders arrived. No resuscitation was attempted. He was declared dead at the scene.



Photo 5. Use of remote to position lift forks



Photo 6. SUV under the school bus, driver's side.



Photo 7. Front of school bus pushed 10-12 feet forward into rear of tow truck.

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Photo 8. Yellow paint transfer from school bus on rear of tow truck



Photo 9. Yellow paint transfer from school bus (Expanded view)

The SUV driver had detectable levels of alcohol (0.035 grams alcohol per 100 ml blood), active and inactive marijuana metabolites (3 ng/ml and 14 ng/ml respectively), and fentanyl (0.8 ng/ml) in her bloodstream post-incident.

The resulting damage to the bus from the collision can be seen in Photos 10-11.



Photo 10. Damage to rear of school bus



Photo 11. Damage to front of school bus

MIOSHA Citations

The MIOSHA General Industry Safety and Health Division did not issue a violation to the employer at the conclusion of its investigation.

CAUSE OF DEATH

The death certificate listed the cause of death as crushing chest injuries due to or as a consequence of a SUV-bus collision. Post-mortem toxicology was negative for alcohol, illegal and prescription drugs.

CONTRIBUTING FACTORS

Occupational injuries and fatalities are often the result of one or more contributing factors or key events in a larger sequence of events that ultimately result in the injury or fatality. The following hazards were identified as key contributing factors in this incident:

- *SUV driver allegedly impaired by alcohol and drugs lost vehicle control during an abrupt lane change at high speed*
- *Empty school bus parked on shoulder of exit ramp on busy expressway*

RECOMMENDATIONS/DISCUSSION

Recommendation #1: School districts and firms employing school bus drivers should develop a policy regarding stopping on an active roadway.

Discussion: Although one tire was damaged, the remaining tires would have permitted the bus driver to drive the bus one more mile to the next exit leading to roadway, which had several business parking lots near the exit with adequate space for him to pull off and call for assistance and that would have provided a safer area for the decedent to work.

Stopping on the expressway ramp near the junction of the ramp with the expressway placed all parties at risk for several reasons: the tow truck could not be seen in front of the bus due to the angle of the ramp and there was only one exit lane available which did not permit motorists from “moving over” a lane as required by the “Move Over” law.

Although it may mean more time to pull off the road rather than pulling over to the shoulder of the road, a parking lot or other non-active roadway area is a safer place for tow truck drivers to hook and tow/load a vehicle than an active roadway. School districts and firms employing school bus drivers should develop a policy regarding when to stop on an active roadway and under what circumstances the driver should proceed to the next nearest safe stopping point.

Recommendation #2: Tow truck operators should work in conjunction with law enforcement/emergency service providers to secure the work area prior to loading and securing a vehicle.

Discussion: Towing operators often must work in areas where the tow truck driver is lacking shoulder space to safely work on the traffic-facing side of the tow truck and/or with their backs turned to approaching traffic while securing loads. MIFACE recommends that tow operators request traffic-control assistance from law enforcement and/or other vehicles covered by the 2018 Move Over law (see list in Recommendation #8) when they need to perform towing duties in an area directly adjacent to/involving the following:

- multi-lane, high speed and/or high-volume vehicle traffic
- weather-related/site/environmental concerns.

The tow operator should not load and secure the vehicle until the traffic control assistance (e.g., police, fire, other tow trucks, DOT vehicles, etc.) is present. The drivers of traffic control assistance vehicles should remain in their vehicles for safety and ensure that the light bar is activated during the entire duration of the loading procedures.

Recommendation #3: Tow truck operators should consider National Traffic Incident Management Responder Training, regardless of company size.

Discussion: Tow truck drivers should complete TIM training to be knowledgeable of roadside assistance best practices and to be aware of potential hazards that are inherent to the job. Training topics include:

- TIM fundamentals and Terminology
- Notification and Scene Size-up
- Safe Vehicle Positioning
- Scene Safety
- Command Responsibilities
- Traffic Management
- Special Circumstances
- Clearance and Termination

More information on the National Traffic Incident Management Responder Training can be found by visiting the SHRP2 page on the FHWA website at:

https://www.fhwa.dot.gov/goshrp2/Solutions/Reliability/L12_L32A_L32B/National_Traffic_Inc.

Michigan employers may contact the State SHRP2 representatives by accessing the following webpage:

<https://www.fhwa.dot.gov/goshrp2/Content/Documents/Factsheets/TIM%20Training%20State%20POC%20List.pdf>

Recommendation #4: Tow truck operators working in active roadways should always wear appropriately selected protective equipment.

Discussion: Although not a contributing factor in this fatality, a tow truck operator should always wear all required personal protective equipment while providing services to disabled vehicles. The decedent was not wearing his required high visibility vest. To decrease the likelihood that tow operators will forget to don their vest before exiting the cab, employers should also consider a policy requiring tow operators to always wear their vests while operating a tow truck.

Recommendation #5: Towing companies should consider utilizing portable emergency warning devices.

Discussion: The warning devices the decedent used were the lights on the tow truck. The tow truck's overhead lights were obscured from oncoming traffic by the bus's position.

Portable warning devices such as cones, flashing triangles, and roadside flares warn approaching motorists of a stopped emergency vehicle ahead and provide time for drivers to slow down and move over. When setting the reflective cones, operators should carry the cone in front of them to increase visibility to passing drivers. Tow operators should never place, retrieve, or adjust cones with their back turned to the travel lane. Warning devices should be placed in accordance with §392.22(b), as follows:

- On a two-lane road with traffic in both directions, place the first device on the traffic side of the tow truck 10 feet (4 paces) from the front or rear, depending on the direction the truck is facing the adjacent traffic lane. Place another device 100 feet (40 paces) behind and ahead of the tow truck.
- On a one-way road or divided highway, place one device 10 feet, 100 feet, and 200 feet (80 paces) toward the approaching traffic.
- Within 500 feet of a hill, curve, or obstruction, place a device 100 to 500 feet from the tow truck in the direction of the hill, curve, or obstruction.

Magnesium-based flares can pose both a safety and environmental hazard. To evaluate alternatives to magnesium-based flares, using funds from the U.S. Department of Justice, researchers evaluated the use of chemical and electrical flares and issued a [report](#) to the National Institute of Justice. Research found that if the chemical and electrical flares were elevated to 36-inches above ground (i.e., on top of a highway cone), the flare was visible to oncoming motorist for one mile.

Recommendation #6: Motorists should never drink and drive and always plan to ensure they have a ride with a sober driver.

Discussion: In 2018, there were 9,786 Michigan traffic crashes that involved drinking, killing 315 individuals and injuring 5,392. Of the 905 fatal crashes that occurred in Michigan, 287 (31.7%) were alcohol-related, involving at least one drinking operator, bicyclist, or pedestrian. The 315 alcohol-related fatalities accounted for 32.3% of the total number of people killed (974) according to the Michigan State Police 2018 Year End Traffic Crash Statistics report.

Michigan considers a crash alcohol-related if any driver, pedestrian, or cyclist involved was reported as had-been-drinking (HBD) by the police officer on the Traffic Crash Report. Michigan law considers persons with a blood alcohol content (BAC) of .08 or greater to be driving drunk.

To make roads safe for all users, no one should ever drive under the influence of alcohol or other substances. Motorists should plan to ensure they have a sober ride if consuming alcohol or other impairing substances. There are many events and situations where a motorist has advanced notice that they will be consuming alcohol. In these types of situations, before consuming alcohol, ask a friend or family member to provide a ride to where you need to go after consuming alcohol. If there is a group of people, designate a sober driver. This person will not drink and will be responsible of getting the people who have been drinking to their desired location. If planning ahead didn't work out as expected and there is no sober driver when it is time to leave, hail a ride-sharing car, taxi service, or use public transportation.

ADDITIONAL RESOURCES

- National Traffic Incident Management Responder Training Program". US Department of Transportation Federal Highway Administration.
https://www.fhwa.dot.gov/goshrp2/Solutions/Reliability/L12_L32A_L32B/National_Traffic_Inc
- Kentucky FACE Report 14KY033: Pedestrian Tow Truck Operator Struck and Killed by Drunk Driver While Rendering Assistance on Highway Roadside <https://www.cdc.gov/niosh/face/stateface/ky/14ky033.html>

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- Kentucky FACE Report 16KY052: Tow Truck Driver Struck and Killed by Passenger Vehicle While Securing Disabled Vehicle onto Flatbed Tow Truck <https://www.cdc.gov/niosh/face/stateface/ky/16KY052.html>
- Michigan [“Move Over” Law brochure](#).
- MA FACE Report #16-MA-023: *Foreman of a Highway Line Painting Crew Killed When a Car Enters the Work Zone – Massachusetts*. <https://www.cdc.gov/niosh/face/pdfs/16ma023.pdf>
- National Institute of Justice, *Police Roadside Safety: Tools to Increase Visibility*. <https://nij.ojp.gov/topics/articles/police-roadside-safety-tools-increase-visibility>
- Mesloh, C., Ph.D., Henych, M., Ph.D. et al. [Evaluation of Chemical and Electrical Flares](#), Award #2006-IJ-CX-K008 June 12, 2008.

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- State of Michigan, Michigan Department of State Police. Annual Crash Statistics: 2018. 2018 Year End Traffic Crash Statistics. https://www.michigan.gov/msp/0,4643,7-123-1586_3501_4626---,00.html

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