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**Special Crash Investigations:
Remote Move-Over-Law Crash
Investigation;
Vehicle: 2006 GMC TC6500
Wrecker/Nonmotorists;
Location: Montana;
Crash Date: October 2020**

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16. Abstract This report documents the Special Crash Investigations remote investigation of a Move-Over-Law crash in Montana in October 2020. It was dark at the time of the crash with light snow. An earlier crash occurred involving a Ford pickup and U-Haul trailer. Two tow trucks were on-scene. A "Wrecker Ahead" sign had been placed on the roadside approximately 65 m (1,200 ft west of the crash site. The struck subject vehicle was a 2006 GMC TC6500 rollback wrecker in the second lane from the right in front of the U-Haul trailer. The Ford pickup from the previous crash was already secured to the tow truck for travel. The tow truck operators (nonmotorists) were on the roadway near the rollback wrecker. The striking vehicle was a 2016 Ram 3500 pickup driven by a belted 18-year-old male. The Ram was in the first lane from right and was pulling a trailer. The other involved vehicle was a 2016 Volvo VLN tractor trailer driven by a 57-year-old male and was traveling ahead of the Ram in the same lane. The Volvo driver saw the "Wrecker Ahead" sign and began slowing. The Ram driver attempted to change lanes to the left to avoid rear-ending the Volvo. The Ram struck the back of the Volvo's trailer with its right plane. The Ram driver noticed the previous crash site ahead and steered the Ram to the right and struck the Volvo a second time. The Volvo was displaced to the right and struck a metal guardrail. The Ram's left plane then struck the U-Haul trailer and pushed it into the GMC wrecker. The displaced trailer struck both tow truck operators and then continued east and contacted the front of the towed Ford pickup. Both tow truck operators were fatally injured.			
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Special Crash Investigations
Remote Move-Over-Law Crash Investigation
Case Number: DS21007
Vehicle: 2006 GMC TC6500 Rollback Wrecker/Nonmotorists
Location: Montana
Crash Date: October 2020

Background

This report documents the remote investigation of a crash selected by the Special Crash Investigations (SCI) team of the National Highway Traffic Safety Administration to be included in its Move-Over-Law investigations. The investigation used data obtained from local authorities, the police report, on-scene police photos, and other sources. The source material documented the reconstruction of the crash relative to Montana's Move Over Law. Montana Code 61-8-346 says when approaching stationary emergency and towing or maintenance vehicles that have flashing lights on, it is the law to slow down and move over. The Montana Code also notes that when on a highway with a speed limit of at least 50 mph, drivers must slow down to 20 mph below the posted speed limit when driving in the lane next to stationary emergency vehicles.

This investigation was initiated by SCI in response to a notification sent by the SCI team with online news accounts, the police report, and on-scene images submitted on September 30, 2021. The case was assigned to Dynamic Science, Inc., in October 2021. The event data recorder (EDR) for the striking vehicle was imaged by the police but efforts to obtain the report were unsuccessful.

This crash occurred in the pre-dawn morning in October 2020. The crash site was in the eastbound lanes of a two-lane divided interstate highway. It was dark at the time of the crash with light snow falling. The roadway was snow-packed. The speed limit was 128 km/h (80 mph) for passenger vehicles and 112 km/h (70 mph) for commercial vehicles. A crash had occurred earlier involving a 1985 Ford pickup and a U-Haul trailer. Two tow trucks were on-scene. A "Wrecker Ahead" sign had been placed on the roadside approximately 365 m (1,200 ft) west of the crash site. Several orange cones were on the roadway that appear to have been part of a line of cones directing travel from the right lane to the left lane.

The struck subject vehicle was a 2006 GMC TC6500 medium/heavy truck configured as a rollback wrecker (Figure 1). The GMC wrecker was in the second lane from the right in front of the U-Haul trailer. The deck was tilted, and the operator was near the right side of the tow bed and was in the process of loading the trailer. The second tow truck was east of the GMC wrecker in the same lane. The Ford pickup from the previous crash was already secured to the tow truck for travel. The 28-year-old and 37-year-old male tow truck operators (nonmotorists) were on the roadway near the rollback wrecker. Both wore reflective clothing.



Figure 1. Struck subject vehicle, 2006 GMC TC6500 rollback wrecker (police photo)



Figure 2. Striking vehicle, 2016 Ram 3500 with trailer (police photo)

The striking vehicle was a 2016 Ram pickup (Figure 2) driven by a belted 18-year-old male. A belted 13-year-old male was seated in the front right passenger seat. The Ram was in the first lane from right and was pulling a 12 m (40 ft) gooseneck trailer. The other involved vehicle was a 2016 Volvo VLN tractor that was driven by a 57-year-old male and was pulling a 2019 East 16 m (53 ft) trailer. It was traveling ahead of the Ram in the same lane. The Volvo driver saw the “Wrecker Ahead” sign and began slowing.

The Ram driver attempted to change lanes to the left to avoid rear-ending the Volvo. The Ram struck the back plane of the Volvo’s trailer with its right plane (Event 1) and began jackknifing. The Ram driver noticed the previous crash site in the travel lane ahead. He steered the Ram to the right and struck the left plane of the Volvo (Event 2) a second time. The Volvo was displaced to the right and struck a metal guardrail (Event 3). The Ram began to rotate clockwise. The left plane of the Ram struck the U-Haul trailer (Event 4) and pushed it into the GMC wrecker (Event 5). The displaced trailer struck both tow truck operators and then continued east and contacted the front of the towed Ford pickup (Event 6). The Ram continued forward and ran over tow truck operator 2 (Event 7). The Volvo continued east and came to rest against the guardrail (Event 8).

The Ram continued east and came to rest against the left plane of the Volvo (Event 9). The GMC was initially displaced to the south and began a clockwise rotation. The vehicle continued east, struck the guardrail (Event 10), and came to rest on the roadway facing west.

Both tow truck operators were fatally injured. The drivers of the Ram and the Volvo were not injured.

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Summary

Crash Site

The crash site was in the eastbound lanes of a two-lane divided interstate highway (Figure 3). The travel lanes were approximately 3.6 m (12 ft) wide and were separated by dashed white painted lines. The roadway was bordered on the left edge by a solid yellow painted fog line, a paved shoulder with a rumble strip, and a metal guardrail. The roadway was bordered on the right edge by a solid white painted fog line, a paved shoulder with a rumble strip, and a metal guardrail. Leading up to the crash site was a sweeping right curve with a negative grade. Directly before the crash site the roadway straightened out but continued downhill. At the time of the crash all the pavement markings were covered by snow and ice. The coefficient of friction was extremely low due to snow and ice conditions. It was dark at the time of the crash with no artificial illumination. The weather according to the nearest weather station was reported as -15 °C (5 °F), calm winds, 87 percent humidity, and snow showers. The speed limit was 128 km/h (80 mph) for vehicles and 112 km/h (70 mph) for commercial vehicles. A crash diagram and crash site satellite view are included at the end of this report.



Figure 3. Eastbound approach (police photo)

Pre-Crash

A single-vehicle crash occurred earlier in the morning. A 36-year-old male was driving a 1985 Ford pickup pulling a U-Haul trailer. A 31-year-old female was a passenger. The Ford was traveling eastbound. The driver lost control of the vehicle, spun out, and struck the guardrail on the left side of the road. The vehicle came to rest facing west. County sheriffs responded to the crash, followed by a Montana Highway Patrol trooper. Emergency medical services was requested and responded to the scene. EMS personnel examined the passenger and determined that no further care was needed. The tow company was contacted and arrived on scene. The deputy remained on scene for several hours with the occupants of the Ford. The Montana Highway Patrol trooper decided that the vehicle recovery work was going to take longer than would be reasonable to wait and asked the deputy to transport the passenger and several pets to a motel while he transported the driver.

Two tow trucks were on-scene to recover the Ford and the trailer. A “Wrecker Ahead” sign had been placed on the roadside approximately 365 m (1,200 ft) west of the crash site (Figure 4). Several orange cones were on the roadway that appeared to be a part of a line of cones directing travel from the left lane to the right lane.



Figure 4. Eastbound approach “Wrecker Ahead” sign (police photo)

The damaged Ford pickup from the previous crash was already secured to the Chevrolet tow truck for travel. The GMC wrecker was in the second lane from the right in front of the Ford’s U-Haul trailer. The bed was tilted, and the operators were in the process of loading the trailer. The second tow truck was east of the GMC in the same lane. The 28-year-old and 37-year-old tow truck operators were on the roadway at the rear of the wrecker tow bed, one on each side. Both were wearing reflective clothing.

The Ram was in the first lane from right and was pulling a 2002 Travalong TL LBRT 2-axle, 12 m (40 ft) gooseneck trailer. The vehicle was driven by a belted 18-year-old male. A belted 13-year-old male was seated in the front right passenger seat. The Volvo tractor trailer was traveling ahead of the Ram in the same lane. The 57-year-old male Volvo driver saw the “Wrecker Ahead” sign and began slowing. The Ram driver attempted to change lanes to the left to avoid rear-ending the Volvo.

Crash

The Ram struck the back plane of the Volvo’s trailer with its right plane (Event 1) and began jackknifing. The Ram driver noticed the previous crash site in the travel lane ahead. He steered the Ram to the right and struck the left plane of the Volvo (Event 2). The Volvo was displaced to the right and struck a metal guardrail (Event 3). The Ram began to rotate clockwise. The left plane of the Ram struck the U-Haul trailer (Event 4) and pushed the trailer into the back of the GMC wrecker (Event 5). The trailer continued east and struck the two tow truck operators. The U-Haul trailer was displaced to the east and struck the front plane of the disabled Ford pickup that was attached to the Chevrolet wrecker (Event 6). The 37-year-old tow truck operator appears to have been run over by the Ram as it traveled east (Event 7). The Volvo continued east and struck the guardrail (Event 8). The Ram continued east and struck the left plane of the Volvo

(Event 9). The GMC was initially displaced to the south and began a clockwise rotation. The vehicle continued east and struck the guardrail (Event 10).

The GMC rotated clockwise after impacting the guardrail and came to rest on the roadway facing west.

The Ram came to rest in the left lane with its right plane in contact with the left plane of the Volvo. The Volvo came to rest in the right shoulder slightly rear of the Ram. The left plane of the Volvo was in contact with the right plane of the Travalong trailer and its right plane in contact with the right guardrail.

The U-Haul trailer came to rest in the left shoulder, facing southeast. It was in contact with the Ford pickup that was being towed by the Chevrolet C7 wrecker. According to the police report, the Ford pickup and the second wrecker were not damaged.

Post-Crash

The fire department was dispatched 16 minutes post-crash and arrived 29 minutes post-crash. The driver and front right passenger of the Ram and the Volvo driver were not injured and were not treated or transported. Both tow truck operators were fatally injured. They were declared deceased on scene. The Ram and GMC were towed from the scene and placed on a police hold.

Move-Over-Law Discussion

The Montana law regarding move over laws was originally known as the Steer Clear Law. It was revised in April 2021 and renamed the Move-Over-Law. The law change was put forward in July 2020 in response to several crashes, including those that killed a tow truck driver and injuries to law enforcement personnel. The new Montana law is as follows.

Section 61-8-346. Operation of vehicles on approach of authorized emergency vehicles or law enforcement vehicles -- approaching stationary emergency vehicles or law enforcement vehicles -- reckless endangerment of emergency personnel. (1) Upon the approach of an authorized emergency vehicle making use of audible and visual signals meeting the requirements of 61-9-402 or of a law enforcement vehicle properly and lawfully making use of an audible signal only, the operator of every other vehicle shall yield the right-of-way and shall immediately drive to a position parallel to, and as close as possible to, the right-hand edge or curb of the roadway clear of any intersection and shall stop and remain in that position until the authorized emergency vehicle or law enforcement vehicle has passed, except when otherwise directed by a police officer or highway patrol officer.

(2) This section does not relieve the driver of an authorized emergency vehicle or law enforcement vehicle from the duty to drive with due regard for the safety of all persons using the highway.

(3) On approaching and passing a stationary authorized emergency vehicle, law enforcement vehicle, or tow truck that is displaying visible signals of flashing or rotating amber, blue, red, or green lights or any temporary sign advising of an emergency scene or accident ahead, the operator of the approaching vehicle shall:

(a) cautiously and in a careful manner reduce the vehicle's speed to a reasonably lower and safe speed appropriate to the road and visual conditions or to the temporarily posted speed limit, but to a careful and prudent speed if a temporarily posted speed has not been posted;

- (b) proceed with caution; and
- (c) if possible considering safety and traffic conditions:
 - (i) move to a lane that is not adjacent to the lane in which the authorized emergency vehicle, law enforcement vehicle, or tow truck is located;
 - (ii) move as far away from the authorized emergency vehicle, law enforcement vehicle, or tow truck as possible; or
 - (iii) follow flagger instructions or instructions on sign boards.
- (4) An operator of a vehicle who violates subsection (3) commits the offense of reckless endangerment of emergency personnel.

It is unknown if the Ram driver was familiar with the old law and the actions required of drivers in such circumstances. The pertinent part of the old law was as follows. “Upon approaching a stationary authorized emergency vehicle or police vehicle that is displaying visible signals of flashing or rotating amber, blue, red, or green lights on a public highway with a posted speed limit of 50 miles per hour or greater when driving in a lane that is directly next to the emergency vehicle or police vehicle, the operator of the approaching vehicle shall reduce the vehicle's speed by at least 20 miles per hour below the posted speed limit.”

The Ram driver reported that he did not see the “Wrecker Ahead” sign. Both wreckers were stationary in the travel lanes with their emergency lights activated. When he saw the wreckers he braked and steered to the right and lost control of the vehicle.

The police identified several causal factors for this crash, including weather conditions (falling snow and snow kicked up by the semi), the road conditions (snow packed and ice), the driver’s higher rate of speed not prudent for the road conditions, and the lane closure start distance of the traffic cones being shorter than recommended by the Manual on Uniform Traffic Control Devices.

2006 GMC TC6500 Regular Cab Chassis

Description

The struck vehicle was a 2006 GMC TC6500 configured as a rollback wrecker. It was identified by its Vehicle Identification Number (VIN) 1GDJ6C1316Fxxxxxx. The vehicle had a regular cab with two doors, rear-wheel-drive, a 7.8-liter, 6-cylinder diesel engine, manual transmission, 4-wheel antilock brake system (ABS), and dual rear tires. The cab was gray in color and the deck was black.

Emergency Lighting Discussion

The vehicle had a roof level overhead LED light bar with amber/white lighting, roof-mounted amber marker lights, amber marker lights along the bed, 4-way amber flashers, and standard head lamps and tail lamps. All the lighting was active at the time of the crash (Figures 5).

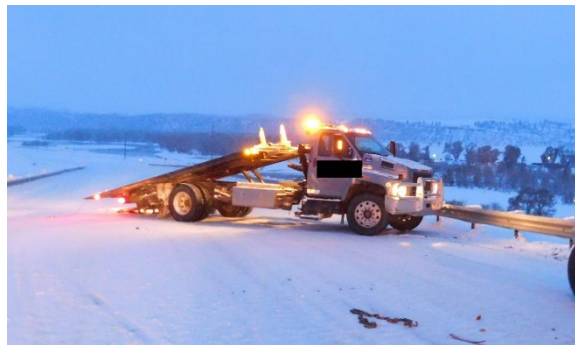


Figure 5. 2006 GMC TC6500 wrecker lighting, looking north (police photo)



Figure 6. 2006 GMC TC6500, bed damage, looking southeast (police photo)

Exterior Damage

The unoccupied GMC was parked in the left travel lane with the bed in the inclined position. The disabled U-Haul trailer was positioned near or on the lower lip. The tow cable was in the spooled out position. As the Ram pickup struck the trailer, the trailer was displaced forward and struck the lower edge of the inclined tow deck (Figure 6). The estimated truck deformation classification (TDC) for the GMC was 06BYLWA. There was damage to the right door that appears to have been caused by debris during the crash sequence. The GMC was displaced forward in the crash and struck the guardrail with its front plane. The TDC for this impact was 12FRLW1.

NHTSA Recalls and Investigations

Searches in December 2021 and March 2024 using the GMC's VIN revealed no unrepaired recalls.

2016 Ram 3500 Crew Cab Pickup

Description

The 2016 Ram 3500 was identified using the VIN 3C63R3DL5GGxxxxxx. The manufacture date was unknown. The Ram was a 4-door crew cab with a gross vehicle weight rating between 4,536 kg (10,001 lbs) and 6,350 (14,000 lbs), 4-wheel drive, and seating for five. Standard equipment included a 6.7-liter, 6-cylinder diesel engine, 4-wheel disc brakes with ABS and a 6-speed automatic transmission. It was equipped with LT275/70R18 Nitto Ridge Grapple tires. The Ram was pulling a 2002 Travalong TL LBRT 10 m (34 ft) 4-axle gooseneck trailer that weighed 6,123 kg (13,500 lbs). The trailer was equipped with ST235/85R16 Goodride tires.

Exterior Damage

The Ram sustained moderate right plane damage to the right door and right bed from the impact to the left corner of the East trailer attached to the Volvo tractor (Figure 7) in event 1. The TDC for this impact was 12RZEW2.

The Ram sustained minor front to right plane damage (Figure 8) from the impact to the left tire of the Volvo's trailer in Event 2. The direct damage began at the left front bumper corner and extended to the left. The damage continued along the right plane. The estimated TDC for this impact was 12FREE4.



Figure 7. Right plane damage, 2016 Ram 3500 (police photo)



Figure 8. Front plane damage, 2016 Ram 3500 (police photo)

The Ram sustained moderate left plane damage from the impact to the U-Haul trailer during Event 4 (Figures 9 and 10). Portions of the trailer were embedded in the gap between the cabin and bed. The estimated TDC for this impact was 11LZEW3. The Ram appears to have struck or run over tow truck operator 2 on the way to the Ram's final rest during Event 7. The Ram came to rest with the right plane in contact with the tractor trailer. The TDC for this impact was 12RTLWA. The coupler hitch for the trailer was deformed but remained attached to the truck bed.



Figure 9. Left plane damage, 2016 Ram 3500 (police photo)



Figure 10. Left plane damage, 2016 Ram 3500 (police photo)

NHTSA Recalls and Investigations

A search in December 2021 using the Ram's VIN revealed unrepaired recalls associated with side air bag inflatable curtain inflators (NHTSA Recall Number 21V-632). A search in March 2024 revealed an unrepaired recall associated with the outboard steering linkage jam nut that could allowing one end of the drag link to separate from the adjuster sleeve (NHTSA Recall Number 19V-021).

Occupant Data

The driver was a belted 18-year-old male who was not injured. He was given alcohol and drug tests which came back negative. The front right passenger was a 13-year-old male who was not injured. There were no air bag deployments during this crash. At some later point the driver pleaded "no contest" to a misdemeanor charge of driving too fast for conditions and received a 6-month suspended license sentence and a \$1,000 fine.

2016 Ram 3500 Occupants

Driver Demographics

Age/sex: 18 years/male
 Height: Unknown
 Weight: Unknown
 Eyewear: Unknown
 Seat type: 40/20/40 bench
 Seat track position: Unknown
 Manual restraint usage: Lap and shoulder belt used
 Usage source: Police report
 Air bags: Driver's frontal air bag available, not deployed
 Alcohol/drug data: Test given, results negative
 Egress from vehicle: Under own power
 Transport from scene: None
 Type of medical treatment: None

Striking Vehicle Driver

(Move over data, obtained from police report)

Police Law enforcement injury severity:	0 (no injury)
Speeding related:	Yes, too fast for conditions
Condition (impairment) at time of crash:	None
Police reported alcohol presence:	Yes
Alcohol test:	Yes
Alcohol test result:	Negative
Police reported other drug presence:	Not reported
Method of drug determination by police:	Not reported
Other drug test result:	Not reported
Physical/mental conditions:	None noted
Driver fatigue:	Not reported
Driver's distraction/inattention to driving:	Not reported
Driver's distractions:	Other, per PCR
Driver illness:	No illness
Driver's license type/status:	Full driver license, non-commercial
GDL status:	NA
Violations charged:	Unknown
Striking vehicle driver sight line to the struck firstresponder vehicle clear:	Yes
Striking vehicle driver sight line to the struck firstresponder vehicle obscured:	Yes
Driver notes:	None

Front-Row Right Occupant Demographics

Age/sex:	13 years/male
Height:	Unknown
Weight:	Unknown
Eyewear:	Unknown
Seat type:	40/20/40 bench
Seat track position:	Unknown
Manual restraint usage:	Lap and shoulder belt used
Usage source:	Police report
Air bags:	Passenger's frontal air bag available, not deployed
Egress from vehicle:	Under owner power
Transport from scene:	None
Type of medical treatment:	None

2016 Volvo VNL Tractor

Description

The 2016 Volvo VNL truck tractor was identified by the VIN 4V4NC9EH3GNxxxxx. The manufacture date was unknown. The Volvo was a conventional cab behind an engine truck tractor with a 6-cylinder, 12.8-liter, diesel engine, a 6x4 drivetrain, and air brakes. The Volvo was pulling a 2019 East 53 ft soft-walled, enclosed trailer. The trailer was equipped with Michelin 455/R22.5 tires.

Exterior Damage

The east trailer sustained minor back plane damage from the first impact with the Travalong trailer (Figure 11) in Event 1. The TDC for this impact is 06BLLEA. The tractor sustained minor left plane damage from the impact with the Travalong trailer (Figure 13) in Event 2. The TDC for this impact is 07LYES1. The tractor and trailer sustained right plane damage from two impacts to the right guardrail (Figure 12) in Events 3 and 8. The TDC based on final appearance for these impacts is 12RDLS1. The tractor sustained minor damage from the last impact with the Dodge in Event 9. The TDC was 06LYLS1.



Figure 11. Back-plane damage, 2019 East trailer (police photo)



Figure 12. Right plane damage, 2016 Volvo VNL tractor (police photo)



Figure 13. Left plane damage, 2016 Volvo VNL tractor (police photo)

Occupant Data

The driver was a belted 57-year-old male who was not injured.

2002 Chevrolet C7H042 Incomplete Vehicle/Tow Truck

Description

The 2002 Chevrolet C7 series medium truck (Figure 14) was identified using the VIN 1GBJ7H1C32Jxxxxxx. The manufacture date was unknown. The Chevrolet was a conventional cab-behind-engine incomplete chassis equipped with 7.2-liter, 6-cylinder, diesel engine, dual rear wheels, and a 6-speed manual transmission. It was a heavy-duty tow truck.

Exterior Damage

The vehicle was towing a 1985 Ford pickup (Figure 15). The displaced U-Haul trailer appeared to have contacted the front plane of the towed vehicle in Event 6. The TDC for this impact was 06BDFWA.



Figure 14. 2002 Chevrolet C7 with towed pickup, looking north (police photo)



Figure 15. 1985 Ford pickup being towed by 2002 Chevrolet C7, looking northeast (police photo)

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Nonmotorists

Tow Truck Operator (1) Demographics

Age/sex: 28 years/male
 Height: 185 cm (73 in)
 Weight: 79 kg (174 lbs)
 Eyewear: Unknown
 Alcohol/drug data: Not contributory per autopsy report
 Transport from scene: None
 Type of medical treatment: None, declared deceased at scene

Tow Truck Operator (1) Injuries

Injury No.	Injury	Injury Severity AIS 2015	Involved Physical Component (IPC)	IPC Confidence Level
1	Multiple skull fractures, calvarium has basilar fracture, fracture through anterior fossa and linear fracture through occiput	150200.3	Other object (trailer)	Probable
2		150400.2		
3	Cerebral cortical contusion	140602.3	Other object (trailer)	Probable
4	Medullary hemorrhage along floor of 4th ventricle	140629.3	Other object (trailer)	Probable
5	Closed comminuted fracture of right femur	853271.3	Other object (trailer) V1 trailer	Probable Possible
6	Abrasion, right knee	810202.1	Other object (trailer)	Probable
7	Multiple facial abrasions and contusions	210202.1	Other object (trailer)	Probable
8		210402.1		
9	Scalp laceration	110600.1	Other object (trailer)	Probable

Source: Autopsy report

Tow Truck Operator (1) Kinematics

This nonmotorist was standing upright toward the rear of the tilted GMC tow bed. It appears he was on the left side near the tow controls. The two tow truck operators were in the process of loading the disabled U-Haul trailer onto the tow bed. The trailer was struck by the Ram pickup and displaced to the east. The tow truck operator was struck by the trailer and displaced to the east and came to rest in the second lane from the right.

Tow Truck Operator (2) Demographics

Age/sex: 37 years/male
 Height: 183 cm (72 in)
 Weight: 87 kg (192 lbs)
 Eyewear: Unknown
 Alcohol/drug data: Non-contributory, per autopsy report
 Transport from scene: None
 Type of medical treatment: None, declared deceased at scene

Tow Truck Operator (2) Injuries

Injury No.	Injury	Injury Severity AIS 2015	Involved Physical Component (IPC)	IPC Confidence Level
1	Partial tear at the junction of right atrium and vena cava, traumatic heart rupture	441013.5	Exterior of V2 Other object (trailer)	Probable Possible
2	Bilateral rib fractures, left 1-12, right 1-7	450203.3	Exterior of V2 Other object (trailer)	Probable Possible
3	Open, comminuted fracture, left lower leg	852003.2	Other object (trailer)	Possible
4	Open, comminuted fracture, right lower leg	852003.2	Other object (trailer)	Possible
5	Bilateral pulmonary contusions	441410.3	Exterior of V2 Other object (trailer)	Probable Possible
6	Left pulmonary hilum tear	441414.3	Exterior of V2 Other object (trailer)	Probable Possible
7	Sternum fracture	450804.2	Exterior of V2 Other object (trailer)	Probable Possible
8	Left clavicle fracture	750500.2	Other object (trailer)	Probable
9	Comminuted fracture, left elbow	751800.2	Other object (trailer)	Probable
10	Liver laceration	541820.2	Other object (trailer)	Probable
11	Medullary hemorrhage along floor of 4th ventricle	140629.3	Exterior of V2 Other object (trailer)	Probable Possible
12	Pelvic fracture	856100.2	Exterior of V2 Other object (trailer)	Probable Possible

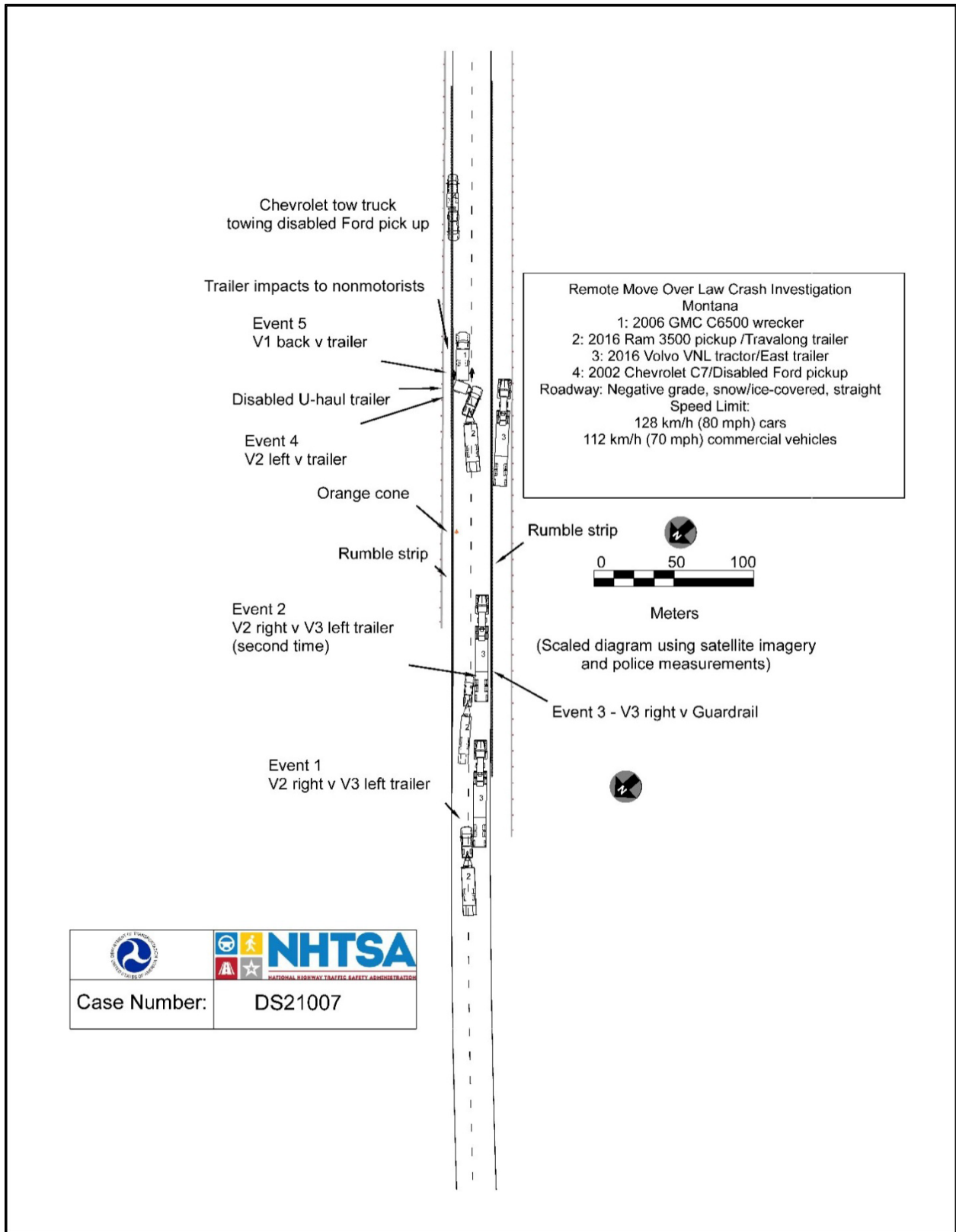
Injury No.	Injury	Injury Severity AIS 2015	Involved Physical Component (IPC)	IPC Confidence Level
13 14 15	Multiple abrasions, contusions, and laceration of face	210202.1 210402.1 210600.1	Ground	Possible
16 17 18	Multiple abrasions, contusions, and laceration of head	110202.1 110402.1 110600.1	Ground	Possible

Source: Autopsy report

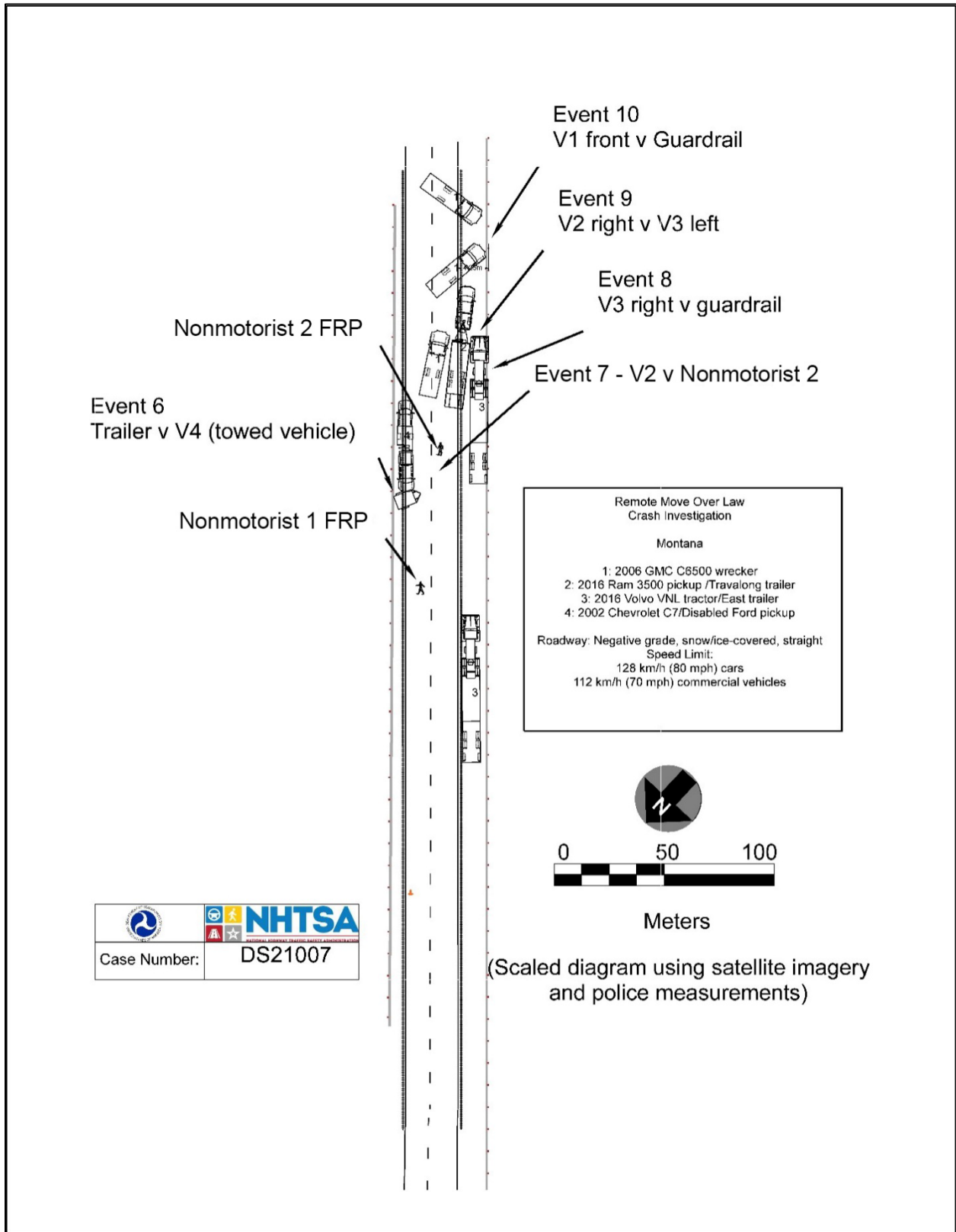
Tow Truck Operator (2) Kinematics

This tow truck operator was standing upright towards the rear of the tilted GMC tow bed. It appears he was on the right side. The two tow truck operators were in the process of loading the disabled U-Haul trailer onto the tow bed. The trailer was struck by the Ram pickup and displaced to the east. The tow truck operator was struck by the trailer and displaced to the east. He was then likely run over by the Ram.

Crash Diagram (Events 1-5)



Crash Diagram (Events 6–10)



DOT HS 813 571
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U.S. Department
of Transportation
**National Highway
Traffic Safety
Administration**



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