



**NATIONAL TRANSPORTATION SAFETY BOARD
OFFICE OF HIGHWAY SAFETY
WASHINGTON, D.C.**

**VEHICLE FACTORS GROUP CHAIRMAN'S
FACTUAL REPORT**

A. CRASH INFORMATION

Location: State Highway 2 (SH-2), Randolph, in Coos County, New Hampshire

Vehicle 1: 2016 Ram 2500 Tradesman Pick-up pulling a flatbed trailer

Operator 1: 23-year-old male (no injuries)

Vehicle #2: 1998 Harley Davidson FLHT

Operator #2: 59-year-old male (deceased)

Vehicle #3: 2019 Harley Davidson FLTRXS

Operator #3: 48-year-old male (no injuries)

Passenger #3: 47-year-old female (no injuries)

Vehicle #4: 2006 Harley Davidson FLSTI

Operator #4: 45-year-old male (injured)

Vehicle #5: 2012 Harley Davidson FLHTCUSE7

Operator #5: 58-year-old male (deceased)

Vehicle #6: 2012 Harley Davidson FLHTK

Operator #6: 57-year-old male (injured)

Vehicle #7: 2005 Harley Davidson FLHTCU

Operator#7: 62-year-old male (deceased)

Vehicle #8: 2007 Harley Davidson FLHTCU

Operator #8: 58-year-old male (deceased)

Passenger #8: 58-year-old female (deceased)

Vehicle #9: 2012 Harley Davidson FLHTK EL

Operator #9: 45-year-old male (deceased)

Passenger #9: 42-year-old female (deceased)
Vehicle #10: 2015 Harley Davidson FLST
Operator #10: 52-year-old female (injured)
Vehicle #11: 2007 Harley Davidson FLHRSE3
Operator #11: 51-year-old male (injured)
Vehicle #12: 2019 Harley Davidson FLXH
Operator #12: 53-year-old male (no injuries)
Vehicle #13: 2006 Harley Davidson FLTRI
Operator #13: 70-year-old male (injured)
Passenger #13 69-year-old female (injured)
Vehicle #14: 2015 Harley Davidson FLHXS
Operator #14: 46-year old male (injured)
Passenger #14: 48-year old female (injured)
Date: Friday, June 21, 2019
Time: 6:26 p.m. Eastern Daylight Time
NTSB #: **HWY19MH010**

B. VEHICLE FACTORS GROUP

Brian Bragonier, Vehicle Factors Investigator, Group Chairman
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C. CRASH SUMMARY

For a summary of the crash, refer to the *Crash Summary Report* in the docket for this investigation.

D. DETAILS OF THE VEHICLE FACTORS INVESTIGATION

The Vehicle Factors Group Factual Report is a collection of factual information obtained during the detailed inspection of the involved vehicles. The 2016 Ram 2500 pick-up truck was inspected on June 26, 2019 at John's Wrecker Service, 107 Sheep Davis Road, Pembroke, New Hampshire. All major mechanical systems on the Ram were examined, including the steering, braking, and suspension systems. Overall accident damage, along with any damage or anomalies within major vehicle mechanical systems were documented. Some areas of the vehicle could not be reliably documented due to extensive collision and fire damage. Supporting photographs, vehicle specifications, maintenance records, and prior inspection reports were reviewed.

Nine additional involved vehicles, all Harley Davidson motorcycles, were inspected between the dates of June 24 – 25, 2019, also at John's Wrecker Service. Overall crash damage was documented for each motorcycle, along with any advanced safety equipment present. Mechanical systems were not inspected on the motorcycles.

1. Vehicle Inspections

1.1. Vehicle #1: 2016 Ram 2500 Crew Tradesman Pick-Up

1.1.1. General Information

| | |
|------------------------|-----------------------|
| VIN ¹ : | 3C6UR5CL9GG248710 |
| Registration: | Massachusetts S26138 |
| Manufacturer: | Ram |
| Model: | 2500 Crew Tradesman |
| Mileage ² : | Approximately 420,000 |
| Unit #: | 1 |
| GVWR ³ : | 10,000lbs |
| GAWR ⁴ #1: | 5,750lbs |
| GAWR ⁵ #2: | 6,000lb. |

¹ Vehicle Identification Number (VIN) used by the automotive industry to identify individual motor vehicles.

² The odometer located on the dash of the Ram was destroyed, approximate mileage based upon repair records for this vehicle

³ Gross Vehicle Weight Rating (GVWR).

⁴ Gross Axle Weight Rating (GAWR).

⁵ For consistency in describing the axles of the Ram, the front (steer) axle will be referred to as Axle #1, the drive axle as Axle #2.

Curb Weight⁶: 6,633lbs
Engine: 6.7-liter 6 Cylinder Turbo Diesel
Transmission: 4 Wheel drive automatic
Brake System: Hydraulic 4 Wheel Disc w/ABS

1.1.2. Trailer Information

Make: Quality Trailers
VIN: 5W0FL3525FL000874
Model: Flatbed
Year: 2015
Unit #: 2
GVWR: 14,000lbs
GAWR #1: 7,000lbs
GAWR #2: 7,000lbs

1.1.3. Damage Description

The entire vehicle was severely fire damaged. During the crash sequence, two of the struck motorcycles remained connected to the Ram as it traveled to final rest. The fuel tank on one of these motorcycles was ruptured, and the leaking fuel subsequently caused a post-crash fire.

There was contact damage to the entire front end, with the deepest penetration slightly to the left of center, approximately 32-inches wide and 16-inches deep. The front of the left frame rail had shifted to the left. The front bumper was deformed and damaged from side to side. All windows were missing. The right front fender was deformed and showed induced damage. The right front passenger door had contact damage across the bottom of the door which extended down the right side including the rear passenger door and the front portion of the truck bed. This damage ended at the right rear wheel well. There were indentations to the tops of both sides of the truck's bed rails. There was a missing step rail on the right side of the truck. The left side step rail was intact and in place. The hood was deformed, showing both contact and induced damage. Both driver and passenger mirrors were missing. **Figure 1** shows the damage to the Ram from the right front corner.

⁶ Curb weight is typically defined as the total weight of the vehicle with standard equipment, all necessary consumables (e.g., motor oil, coolant, etc.), and a full tank of fuel, while not loaded with passengers or cargo.

Figure 1: 2016 Ram 2500 Tradesman



The 2015 Quality trailer had damage to the front axle. Minor post-crash fire damage was evident on the pig-tail connector. No other damage was found on the trailer. **Figure 2** shows the trailer at final rest at the scene.

Figure 2: 2015 Quality Trailer at Final Rest. Photo courtesy of New Hampshire State Police.



1.1.4. Driver's Controls

Due to the extensive collision fire damage to the truck, very few driver controls were able to be documented. The dash of the was completely burned away. The steel frame of the driver's seat was located in the driver's area of the wreckage. The right front passenger and rear seats had been removed and, in their place, a makeshift sleeping area was constructed using plywood.

1.1.5. Steering

Due to collision and post-crash fire damage, no direct functional checks of the steering system could be completed. The steering wheel was destroyed in the fire and melted. The upper steering shaft was separated from the intermediate shaft and located on the floorboard of the truck. The intermediate steering shaft was visible through the firewall and was still connected to the lower steering shaft at the universal joint. The lower steering shaft was attached to the steering gear box. The steering gear box and was removed from the frame of the vehicle and placed into New Hampshire State Police evidence.

The tie rod was missing and only the tie rod ends remained, both still attached to their respective steering knuckles. The steering stabilizer had detached from the right steering knuckle but was still attached to the mounting bracket on the axle. The drag link was still attached to both the right steering knuckle and the pitman arm, but had shifted rearward, behind the transmission housing.

1.1.6. Suspension

On the Ram, Axle #1 was a single solid beam suspension with shock absorbers and coil springs. The entire axle had shifted rearward, causing the coil spring on the left side to dislodge. Axle #2 was a solid axle with a coil spring suspension supplemented with an aftermarket air bag suspension system.

On the Quality trailer, Axle #3 was a solid beam with leaf spring suspension. This axle was deformed rearward in the center. The tires on this axle were misaligned inward. Axle #4 was also a solid beam with leaf spring suspension with no damage evident.

1.1.7. Tires and Wheels

Tire pressure measurements were taken using a commercial grade tire pressure gauge. Tread depth measurements were taken in 2 locations within the major tread grooves of a given tire, the lowest of which is entered in Table 1 and represents the minimum tread depth. All tread depths measured were within the minimum tread depth regulation for commercial vehicle tires, which is 4/32 of an inch for the steer axle and 2/32 of an inch for all other axles.⁷ **Table 1** includes the tire and wheel information for the Ram as documented at the time of inspection.

Table 1: Truck Tire Information

| Axle 1 | Left | Right |
|---------------|-------------|---------------------------------|
| Tire Make | Unavailable | Firestone Transforce HT |
| Tire Size | N/A | LT265/70R17 |
| Pressure | N/A | Partial tire due to fire damage |
| Tread Depth | N/A | 5/32" |
| DOT # | N/A | UNK |
| Load Rating | N/A | 3195lbs@80psi |

⁷ : According to Federal Motor Carrier Safety Regulations (FMCSRs), Title 49 Code of Federal Regulations, Part 393.75

| Axle 2 | Left | Right |
|---------------|-------------------------|-------------------------|
| Tire Make | Firestone Transforce HT | Firestone Transforce HT |
| Tire Size | LT265/70R17 | LT265/70R17 |
| Pressure | 84psi | Flat |
| Tread Depth | 2/32" | 4/32" |
| DOT # | WBAH44116 | VNAH02516 |
| Load Rating | 3195lbs@80psi | 3195lbs@80psi |

During the tire examination, several areas of damage were noted to many of the rims and tires. The tire and rim damage, when possible, is referenced to a clock position with the valve stem being at 12:00. The tire and rim damage observed during the inspection included the following:

- Axle 1 Left
 - Tire destroyed by fire
 - Axle 1 Left – Outboard Side Rim
 - 2:00 – 3:00 – Indentation on rim
 - 5:00 – Indentation on rim
 - 8:00 – 10:00 – Indentation on rim

- Axle 1 Right
 - Tire partially destroyed by fire
 - Axle 1 Right – Outboard Side Rim
 - 3:00 – Indentation on rim

- Axle 2 Left
 - Tire inflated
 - No damage to rim
 - Missing 1 of 8 fasteners

- Axle 2 Right
 - Tire flat
 - Missing 1 of 8 fasteners
 - Axle 2 Right – Outboard Side Rim
 - 3:30 – 4:00 - Indentation on rim
 - 11:30 – Indentation on rim

Table 2 includes the tire and wheel information for the trailer as documented at the time of inspection. No damage to any tires or wheels was found.

Table 2: Trailer Tire Information

| Axle 3 | Left | Right |
|---------------|-------------|--------------|
|---------------|-------------|--------------|

| | | |
|---------------|------------------|------------------|
| Tire Make | Carlisle CSL16 | Carlisle CSL16 |
| Tire Size | ST235/80R16 | ST235/80R16 |
| Pressure | 112psi | 101psi |
| Tread Depth | 12/32" | 9/32" |
| DOT # | JETB0119 | JETB0119 |
| Load Rating | 4080lbs @ 110psi | 4080lbs @ 110psi |
| Axle 4 | Left | Right |
| Tire Make | Sampson GL285T | Road Rider ST IV |
| Tire Size | 235/80R16 | 235/80R16 |
| Pressure | 91psi | 70psi |
| Tread Depth | 8/32" | 7/32" |
| DOT # | OD5EE121418 | 1ADB5RRT11918 |
| Load Rating | 4080lbs @ 110psi | 3520lbs @ 80psi |

1.1.8. Brakes

Due to the extent of the collision and fire damage sustained by the Ram, direct functional checks of the braking system were not able to be performed. Rubber brake hoses and the master cylinder were destroyed in the fire. The Ram was equipped with hydraulic disc brakes on all wheels.

The wheels were removed from each axle end, and a detailed inspection of the brake system components was conducted. All of the brake components were examined and measured. All measurements can be found in **Table 3**. All components were within regulatory specifications other than the left brake on axle #1 which was 0.4mm under the manufacturer's recommended discard thickness⁸. No other defects or violations were found.

Table 3: Ram Brake Component Information

| Axle 1 | Left | | Right | |
|----------------------------|-------------|--------------|--------------|--------------|
| Mfg. Rotor Size | 355.6mm | | 355.6mm | |
| Minimum Rotor Thickness | 37.4mm | | 37.4mm | |
| Measured Rotor Thickness | 37mm | | 38mm | |
| Pad Thickness ⁹ | Inboard Pad | Outboard Pad | Inboard Pad | Outboard Pad |
| | 8mm | 8mm | 7mm | 7mm |

⁸ According to 49CFR 393.47(g), the thickness of the rotors shall not be less than the limits established by the rotor manufacturer.

⁹ According to 49 CFR 393.47(d), the minimum brake pad thickness for hydraulic disc brakes is 1.6mm or 1/16-inch on both the steering axle and non-steering axle brakes.

| Axle 2 | Left | | Right | |
|--------------------------|-------------|--------------|--------------|--------------|
| Mfg. Rotor Size | 355.6mm | | 355.6mm | |
| Minimum Rotor Thickness | 32.4mm | | 32.4mm | |
| Measured Rotor Thickness | 33mm | | 33mm | |
| Pad Thickness | Inboard Pad | Outboard Pad | Inboard Pad | Outboard Pad |
| | 5mm | 6mm | 2mm | 4mm |

The Quality Trailer was equipped with electric drum brakes on all axles. The wheels were removed from each axle end, and a detailed inspection of the brake system components was conducted. All of the brake components were examined and measured. All measurements can be found in **Table 4**. All components were within regulatory specifications.

Table 4: Quality Trailer Brake Information

| Axle 3 | Left | | Right | |
|-------------------------------------|-------------|---------------|--------------|---------------|
| Drum Mfg. Diameter | 304.8mm | | 304.8mm | |
| Maximum Drum Diameter ¹⁰ | 307.0mm | | 307.0mm | |
| Measured Drum Diameter | 305.0mm | | 305.0mm | |
| Pad Thickness ¹¹ | Primary Pad | Secondary Pad | Primary Pad | Secondary Pad |
| | 4mm | 3mm | 5mm | 4mm |
| Axle 4 | Left | | Right | |
| Drum Diameter | 304.8mm | | 304.8mm | |
| Maximum Mfg. Drum Diameter | 307.0mm | | 307.0mm | |
| Measured Drum Diameter | 305.0mm | | 305.0mm | |
| Pad Thickness | Primary Pad | Secondary Pad | Primary Pad | Secondary Pad |
| | 4mm | 2mm | 5mm | 3mm |

¹⁰ According to 49CFR 393.47(g), the maximum drum diameter shall not be more than the limits established by the drum manufacturer.

¹¹ According to 49 CFR 393.47(d), the minimum brake pad thickness for electric drum brakes is 1.6mm or 1/16-inch on both the steering axle and non-steering axle brakes.

The trailer was equipped with the required emergency break-away braking system. The battery on the trailer providing power for the emergency break-away system did not have enough voltage to activate the brakes upon disconnect.¹² This was a pre-crash condition.

The right brake drum on axle #4 was contaminated with oil and grease from a wheel bearing.¹³ This was a pre-crash condition.

1.1.9. Transmission

The drive shaft to axle #2 was dislodged from the slip joint just to the rear of axle #1.

1.1.10. Electrical

Due to the extent of the collision and post-crash fire damage, the Ram's entire electrical system was compromised. It was not possible to check the function or integrity of the electrical system.

The trailer was connected to another vehicle to test the electrical and lighting system. The lights were functional at the time of the test, with the exception of the license plate and the center ID lamp which were inoperative. The left rear side marker lamp had an amber lens instead of the required red lens. The front side markers on both right and left were red and should have been amber.¹⁴

The pigtail connector sustained minor heat damage in the crash and some wiring appeared to have been repaired prior to the crash.

1.1.11. Event Data

This vehicle was equipped with a module capable of recording event data. This module is also capable of diagnostics associated with engine and/or sensor faults, which may then illuminate warnings on the dash, as well as record vehicle speed, engine speed, and other various parameters during triggered events. The Airbag Control Module (ACM) appeared to be damaged by fire, however it was removed from the vehicle and forwarded to the NTSB Recorders Laboratory for further evaluation and possible retrieval of stored data. Due to heat damage sustained in the post-crash fire, no data was able to be retrieved from the module.

1.1.12. Maintenance and Inspection History

Maintenance and inspection records were obtained from the motor carrier. The records show the Ram's brake and tire maintenance over the course of its service life. There were

¹² According to 49CFR 393.43(d), every trailer required to be equipped with brakes shall have brakes which apply automatically and immediately upon breakaway from the towing vehicle. A trailer breakaway on a trailer with electric brakes works by applying 12 volts of power to the trailer brakes in the event the trailer becomes disconnected from the towing unit. The power is supplied by a battery attached to the trailer. This is an out-of-service violation.

¹³ According to 49 CFR 393.47(a), brake components must be maintained to provide for safe and reliable stopping of the commercial vehicle.

¹⁴ 49 CFR 393.11 specifies the requirements for lamps and reflective devices.

purchases for common maintenance items such as batteries, filters and wipers. Many of these records were simply receipts for parts purchases which have no reference regarding the vehicle they were purchased for.

On May 10, 2018, a New York State Department of Transportation Commercial Vehicle Inspector performed a Commercial Vehicle Safety Alliance Level 2 inspection on the Ram and trailer combination involved in the crash.¹⁵ There was a different driver in the combination unit at the time of inspection. No violations, either driver or equipment related were found.¹⁶

1.1.13. Documented Recalls and Warranty Claims

A search of the safety recall database maintained by the National Highway Traffic Safety Administration (NHTSA) on June 25, 2019, indicated there were no unrepaired safety recalls on the Ram¹⁷, however there have been a total of 12 safety recalls issued for the 2016 Ram 2500. Those recalls are as follows:

- Possibly faulty fire extinguisher.
- Aftermarket seat covers possibly interfering with airbag deployment.
- Possible faulty transmission shift interlock which may allow the vehicle to be shifted out of park without pressing the brake.
- Two recalls regarding tailgate repairs to prevent it from opening while driving due to an actuator limiter tab fracture.
- The outboard steering linkage jam nut may loosen, allowing one end of the drag link to separate.
- Improper installation and machining of the original equipment steering knuckle may weaken the joint between the steering drag link and knuckle.
- A defect that could prevent the cruise control system from disengaging. If, when using cruise control, there is a short circuit within the vehicle's wiring, the driver may not be able to shut off the cruise control either by depressing the brake pedal or manually turning the system off once it has been engaged, resulting in either the vehicle maintaining its current speed or possibly accelerating.
- Faulty water pumps leaking coolant.
- The outer surface of the wheel may fracture, resulting in rapid air loss.
- Certain driving conditions, such as driving off-road or debris striking the vehicle may cause the roll rate sensor to trigger a fault within the Occupant Restraint Controller (ORC). If this fault occurs, the rollover side curtain air bag and the seat belt pretensioner will be disabled from deploying.

¹⁵ North American Standard Level II Walk-Around Driver/Vehicle Inspection Procedure includes as a minimum, examination of: driver's license; Medical Examiner's Certificate and Skill Performance Evaluation (SPE) Certificate (if applicable); alcohol and drugs; driver's record of duty status as required; hours of service; seat belt; vehicle inspection report(s) (if applicable); brake systems; cargo securement; coupling devices; driveline/driveshaft; exhaust systems; frames; fuel systems; lighting devices (headlamps, tail lamps, stop lamps, turn signals and lamps/flags on projecting loads); steering mechanisms; suspensions; tires; van and open-top trailer bodies; wheels, rims and hubs; windshield wipers; buses, motorcoaches, passenger vans or other passenger-carrying vehicles – emergency exits, electrical cables and systems in engine and battery compartments, and seating. The walk-around driver/vehicle inspection will include only those items that can be inspected without physically getting under the vehicle.

¹⁶ See Vehicle Attachment - NYDOT Level 2 Roadside Inspection

¹⁷ The safety recall database was accessed via the NHTSA safety recall website: <https://www.nhtsa.gov/recalls>

- The Engine Control Module (ECM) may short circuit, causing the engine to stall without warning.

All safety recalls were shown as repaired on the above referenced NHTSA recall website. Records provided by the carrier show most of these repairs being completed at Ram dealers in 2018 and early 2019.¹⁸ During the inspection, the repair to the steering linkage jam nut on the drag link was observed. The repair involved spot welding the jam nuts to prevent loosening.

No safety recalls have been issued for the trailer.

1.2. Vehicle #2: 1998 Harley Davidson Electric Glide

1.2.1. General Information

| | |
|----------------------|--------------------------|
| VIN: | 1HD1DDL14WY [REDACTED] |
| Registration: | New Hampshire [REDACTED] |
| Manufacturer: | Harley Davidson |
| Model: | Electric Glide |
| Series: | FLHT |
| Motorcycle Class: | Touring/Sport Touring |
| Engine Type: | 4 Stroke |
| Engine Displacement: | 1340cc |

1.2.2. Damage Description

The auxiliary driving light on the right side was missing its lens and was twisted in its mount. The windshield was missing, as was the right rearview mirror lens. The right floorboard was displaced upward. The front fender had contact damage to the right side and to the rear. The motorcycle was missing its seat. The left handlebar was folded in half. The right rear floorboard was displaced downward. The fiberglass fairing on the right side was damaged and torn. The top saddlebag was missing its lid, and there was damage to the lid of the right-side saddlebag. The left side saddle bag was missing. The left floorboard and crash bar were displaced, and the left side tailpipe was detached. There was damage to the left side of the fuel tank. The transmission cover on the left side was fractured. **Figure 3** shows the damaged 1998 Harley Davidson Electric Glide at final rest.

¹⁸ See Vehicle Attachment - Westfield Transport 2016 Dodge Maintenance Records

Figure 3: 1998 Harley Davidson Electric Glide. Photo courtesy of the NHSP.



1.3. Vehicle #3: 2019 Harley Davidson Road Glide Special

1.3.1. General Information

| | |
|----------------------------|--------------------------|
| VIN: | 1HD1KTP11KB [REDACTED] |
| Registration: | Massachusetts [REDACTED] |
| Manufacturer: | Harley Davidson |
| Model: | Road Glide Special |
| Series: | FLTRXS |
| Motorcycle Class: | Touring/Sport Touring |
| Engine Type: | 4 Stroke |
| Engine Displacement: | 1870cc |
| Advanced Safety Equipment: | ABS Disc Brakes |

1.3.2. Damage Description

This motorcycle was not available for post-crash inspection.

1.4. Vehicle #4: 2006 Harley Davidson Heritage Softail

1.4.1. General Information

| | |
|----------------------|--------------------------|
| VIN: | 1HD1JFB146Y [REDACTED] |
| Registration: | Massachusetts [REDACTED] |
| Manufacturer: | Harley Davidson |
| Model: | Heritage Softail |
| Series: | FLSTI |
| Motorcycle Class: | Touring/Sport Touring |
| Engine Type: | 4 Stroke |
| Engine Displacement: | 1450cc |

1.4.2. Damage Description

The left handlebar was sheared off. The headlight assembly was broken, and the right mirror was torn from its mount. The throttle control on the right handlebar was broken. The right front turn signal was sheared off its mount. The right floorboard was displaced upward. The front fender was torn and deformed. The rear fender was also damaged and dented. The left rear turn signal was sheared off. The back of the passenger seat was displaced. The kickstand and gearshift were both sheared away from the frame. The left side of the transmission housing was fractured. The left rear saddle bag was torn and damaged. **Figure 4** shows the 2006 Harley Davidson Heritage Softail at final rest at the scene.

Figure 4: 2006 Harley Davidson Heritage Softail. Photo Courtesy of the NHSP.



1.5. Vehicle #5: 2012 Harley Davidson CVO Ultra Classic Electra Glide

1.5.1. General Information

| | |
|----------------------|---------------------------------|
| VIN: | 1HD1PR815CB [REDACTED] |
| Registration: | Rhode Island [REDACTED] |
| Manufacturer: | Harley Davidson |
| Model: | CVO Ultra Classic Electra Glide |
| Series: | FLHTCUSE7 |
| Motorcycle Class: | Touring/Sport Touring |
| Engine Type: | Twin Cam 110 4 Stroke |
| Engine Displacement: | 1800cc |

1.5.2. Damage Description

The front tire was missing from the motorcycle and the lower section of the front fork assembly was fractured. The instrument cluster was displaced from its mount. The handlebars were twisted and deformed. The right crash bar was displaced rearward and the right floorboard was displaced upward. All saddle bags were broken or displaced. The left front brake handle was

twisted. The windshield was missing from the bike. **Figure 5** shows the damaged 2012 Harley Davidson CVO Ultra Classic Electra Glide at final rest at the scene.

Figure 5: 2012 Harley Davidson CVO Ultra Classic Electra Glide. Photo courtesy of the NHSP.



1.6. Vehicle #6: 2012 Harley Davidson Electra Glide Ultra Unlimited

1.6.1. General Information

| | |
|----------------------|-------------------------------|
| VIN: | 1HD1KEM1XCB [REDACTED] |
| Registration: | Massachusetts [REDACTED] |
| Manufacturer: | Harley Davidson |
| Model: | Electra Glide Ultra Unlimited |
| Series: | FLHTK |
| Motorcycle Class: | Touring/Sport Touring |
| Engine Type: | 4 Stroke Twin Cam |
| Engine Displacement: | 1690cc |

1.6.2. Damage Description

The motorcycle was missing its windshield. The right front turn signal and light were broken away from their mount. There was contact damage to the front fender and the front tire pressure was low. **Figure 6** shows the damaged 2012 Harley Davidson Electra Glide Ultra Unlimited at inspection.

Figure 6: 2012 Harley Davidson Electra Glide Ultra Unlimited



1.7. Vehicle #7: 2005 Harley Davidson Electra Glide Ultra Classic

1.7.1. General Information

| | |
|----------------------|-----------------------------|
| VIN: | 1HD1FCW155Y [REDACTED] |
| Registration: | New Hampshire [REDACTED] |
| Manufacturer: | Harley Davidson |
| Model: | Electra Glide Ultra Classic |
| Series: | FLHTCUI |
| Motorcycle Class: | Touring/Sport Touring |
| Engine Type: | 4 Stroke |
| Engine Displacement: | 1450cc |

1.7.2. Damage Description

The front fender was torn and severely damaged. The left handlebar was sheared off and missing. The left floorboard was displaced upward and there was contact damage to the left and right sides of the fuel tank. The left tail pipe was damaged. The seat was torn from its mount and the left saddlebag was fractured and missing the lid. The instrument cluster was missing and torn away from the handlebars. The headlight was missing, and both turn signals were torn from their mounts. The front rim was deformed, and the tire was flat. The right floorboard was displaced upward. The clutch assembly was missing, and the left crash bar was displaced rearward. The left side transmission case, muffler, and highway peg were scratched. The left rear turn signal was missing. The right-side saddle bag was damaged. The right rear passenger floorboard was deformed. **Figure 7** shows the damaged 2005 Harley Davidson Electra Glide Ultra Classic at the time of inspection.

Figure 7: 2005 Harley Davidson Electra Glide Ultra Classic



1.8. Vehicle #8: 2007 Harley Davidson Electra Glide Ultra Classic

1.8.1. General Information

| | |
|----------------------|-----------------------------|
| VIN: | 1HD1FC4147Y [REDACTED] |
| Registration: | Massachusetts [REDACTED] |
| Manufacturer: | Harley Davidson |
| Model: | Electra Glide Ultra Classic |
| Series: | FLHTCU |
| Motorcycle Class: | Touring/Sport Touring |
| Engine Type: | 4 Stroke |
| Engine Displacement: | 1584cc |

1.8.2. Damage Description

The front of this motorcycle sustained burn damage in the post-crash fire. The front tire and wheel assembly were missing and fractured at the lower section of the fork. The seat was partially melted. The rear tire sustained fire damage. The left crash bar was displaced inward to the frame. The left floorboard was displaced upward. The instrument cluster was burned to the point only wiring was left. The motorcycle was missing its windshield. The rear passenger back rest was torn from the bike. All saddle bags were broken, fractured. The fuel tank was damaged. Both handlebars were sheared from the frame. **Figure 8** shows the damaged and partially burned 2007 Harley Davidson Electra Glide Ultra Classic.

Figure 8: 2007 Harley Davidson Electra Glide Ultra Classic



1.9. Vehicle #9: 2012 Harley Davidson Electra Glide Ultra Limited

1.9.1. General Information

VIN: 1HD1KEM17CB [REDACTED]
Registration: New Hampshire [REDACTED]
Manufacturer: Harley Davidson
Model: Electra Glide Ultra Limited
Series: FLHTK
Motorcycle Class: Touring/Sport Touring
Engine Type: 4 Stroke
Engine Displacement: 1690cc

1.9.2. Damage Description

This motorcycle was severely damaged in the crash and the post-crash fire. It was missing its front tire and wheel assemble entirely. The forks were sheared off at the shock absorbers. The instrument cluster was burned to the wires. There was damage to all sides of the fuel tank. The seat was consumed in the fire. Both side crash bars were displaced and deformed. The rear tire was consumed in the fire. **Figure 9** shows the damaged and burned 2012 Harley Davidson Electra Glide Ultra Limited.

Figure 9: 2012 Harley Davidson Electra Glide Ultra Limited.



1.10. Vehicle #10: 2015 Harley Davidson Softail Deluxe

1.10.1. General Information

| | |
|----------------------------|--------------------------|
| VIN: | 1HD1JDV13FB [REDACTED] |
| Registration: | New Hampshire [REDACTED] |
| Manufacturer: | Harley Davidson |
| Model: | Softail Deluxe |
| Series: | FLSTN103 |
| Motorcycle Class: | Custom |
| Engine Type: | 4 Stroke |
| Engine Displacement: | 1690cc |
| Advanced Safety Equipment: | ABS Disc Brakes |

1.10.2. Damage Description

There were minor scrapes to the right brake handle and right crash bar. The headlight lens, windshield, right saddle bag, and right mirror also sustained minor scrapes. There was a minor dent in the front fender. **Figure 10** shows the damaged 2015 Harley Davidson Softail Deluxe at inspection.

Figure 10: 2015 Harley Davidson Softail Deluxe



1.11. Vehicle #11: 2007 Harley Davidson CVO Road King 3

1.11.1. General Information

| | |
|----------------------|--------------------------|
| VIN: | 1HD1PG8127Y [REDACTED] |
| Registration: | New Hampshire [REDACTED] |
| Manufacturer: | Harley Davidson |
| Model: | CVO Road King 3 |
| Series: | FLHRSE3 |
| Motorcycle Class: | Touring/Sport Touring |
| Engine Type: | 4 Stroke |
| Engine Displacement: | 1800cc |

1.11.2. Damage Description

The left clutch handle sustained damage. The left side of the fuel tank had a dent and scratches. There was damage to the front fender and a dent in the headlight area. The handlebars were twisted out of position and had several scrapes on the right handlebar. The clutch cable was torn. The left foot peg was displaced inward. The left rear saddle bag was damaged. **Figure 11** shows the damaged 2007 Harley Davidson CVO Road King 3 at the scene.

Figure 11: 2007 Harley Davidson CVO Road King 3. Photo courtesy of the NHSP.



1.12. Vehicle #12: 2019 Harley Davidson Street Glide

1.12.1. General Information

| | |
|----------------------------|--------------------------|
| VIN: | 1HD1KBC17KB [REDACTED] |
| Registration: | New Hampshire [REDACTED] |
| Manufacturer: | Harley Davidson |
| Model: | Street Glide |
| Series: | FLHX |
| Motorcycle Class: | Touring/Sport Touring |
| Engine Type: | 4 Stroke |
| Engine Displacement: | 1750cc |
| Advanced Safety Equipment: | ABS Disc Brakes |

1.12.2. Damage Description

This motorcycle was driven from the scene and not available for post-crash inspection. **Figure 12** is the 2019 Harley Davidson Street Glide at controlled final rest.

Figure 12: 2019 Harley Davidson Street Glide at controlled final rest. Photo Courtesy of NHSP.



1.13. Vehicle #13: 2006 Harley Davidson Road Glide

1.13.1. General Information

| | |
|----------------------|--------------------------|
| VIN: | 1HD1FSW146Y [REDACTED] |
| Registration: | Massachusetts [REDACTED] |
| Manufacturer: | Harley Davidson |
| Model: | Road Glide |
| Series: | FLTRI |
| Motorcycle Class: | Touring/Sport Touring |
| Engine Type: | 4 Stroke |
| Engine Displacement: | 1450cc |

1.13.2. Damage Description

This motorcycle was driven from the scene and not available for post-crash inspection.

1.14. Vehicle #14: 2015 Harley Davidson Electra Glide Ultra Limited Shrine

1.14.1. General Information

| | |
|---------------|--------------------------|
| VIN: | 1HD1KNL11FB [REDACTED] |
| Registration: | Massachusetts [REDACTED] |
| Manufacturer: | Harley Davidson |

Model: Electra Glide Ultra Limited Shrine
Series: FLHTKS
Motorcycle Class: Touring/Sport Touring
Engine Type: 4 Stroke
Engine Displacement: 1690cc
Advanced Safety Equipment: ABS Disc Brakes

1.14.2. Damage Description

This motorcycle was driven from the scene and not available for post-crash inspection

E. DOCKET MATERIAL

The following attachments and photographs are included in the docket for this investigation:

LIST OF ATTACHMENTS

Vehicle Attachment - Westfield Transport 2016 Ram Maintenance Records
Vehicle Attachment - NHSP Post-Crash Level 1 Inspection
Vehicle Attachment- NYDOT Level 2 Roadside Inspection

LIST OF PHOTOGRAPHS

Vehicle Photo 1 - 2016 Ram 2500 Tradesman as seen from the right front corner
Vehicle Photo 2 - 2015 Quality Trailer at final rest as seen from the right rear corner
Vehicle Photo 3 - 1998 Harley Davidson Electric Glide motorcycle at final rest
Vehicle Photo 4 - 2006 Harley Davidson Heritage Softail motorcycle at final rest
Vehicle Photo 5 - 2012 Harley Davidson CVO Ultra Classic Electra Glide
motorcycle at final rest
Vehicle Photo 6 - 2012 Harley Davidson Electra Glide Ultra Unlimited at inspection
Vehicle Photo 7 - 2005 Harley Davidson Electra Glide Ultra Classic motorcycle at
final inspection
Vehicle Photo 8 - 2007 Harley Davidson Electra Glide Ultra Classic at inspection

- Vehicle Photo 9 - 2012 Harley Davidson Electra Glide Ultra Limited motorcycle at inspection
- Vehicle Photo 10 - 2015 Harley Davidson Softail Deluxe motorcycle at inspection
- Vehicle Photo 11 - 2007 Harley Davidson CVO Road King 3 at final rest
- Vehicle Photo 12 - 2019 Harley Davidson Street Glide at controlled final rest

END OF REPORT

Brian Bragonier
Vehicle Factors Group Chairman