

Rapid Lesson Sharing

Event Type: Engine Vehicle Fire

Date: January 12, 2026

Location: Interstate Highway 44 in Missouri

The Story and Lessons from this Major Mechanical Breakdown Incident on a Busy Interstate Highway that Starts a Wildfire

At 1015 hours on January 12, 2026, Engine-641 From the Hiawatha National Forest was called to a smoke report on Interstate Highway 44 at Mile Marker 166, near St. Roberts, Missouri. They searched the area with Battalion Chief 33. It was determined that it was too unsafe to take a “size up” of that smoke check due to its location on the side of a busy highway.

E-641 and BC33 turned around and started to return to their initial first mission of the day to go to the Sligo Fire, located On the Mark Twain National Forest, an approximate 20-30 minute drive. This was a fire from two days prior.

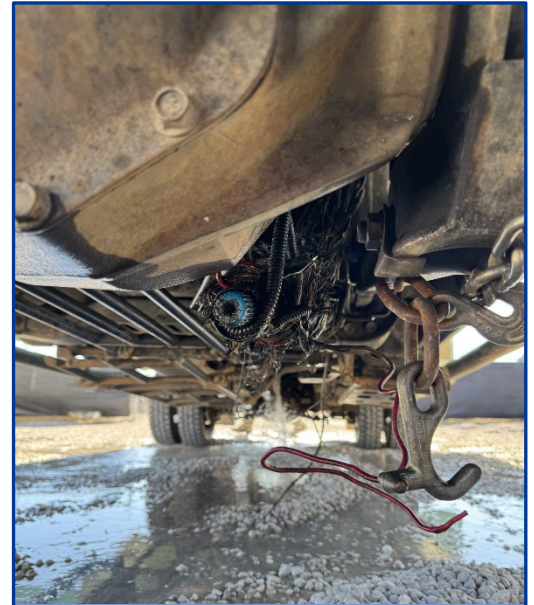
Enroute to the Sligo Fire the engine’s occupants felt a slight vibration. The driver decided they would pull off at the next exit to check the driveline. However, the vibration became worse before making it there. Within the next ten seconds, multiple loud bangs occurred. The two crew members felt the engine jump like something hit the bottom of the truck, and black smoke started to fill its cab.

As the driver pulled the engine over to the side of the highway, he noticed his brakes weren’t working correctly. He had to use the emergency brake to stop the engine. It came to a complete stop as soon as safely possible—the highway’s shoulder was very narrow with a guard rail and there was heavy vehicle traffic.

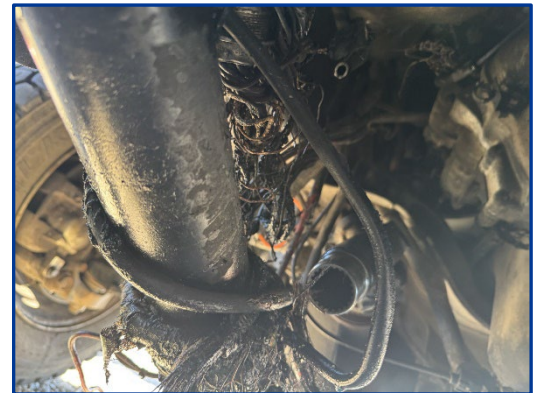
641 Chase Truck, traveling behind the engine, first noticed debris coming from underneath the engine, then smoke, and then flame coming from underneath the engine compartment. They grabbed the fire extinguisher out of the chase truck. The engine was up against the guard rail and its compartment that contained the fire extinguisher couldn’t be opened. The fire extinguisher from the chase truck was used to extinguish the fire underneath the engine. They also started the pump on the engine to use its water if needed.

Ignited Debris from E-641 Starts a Wildfire

While all this was happening, the debris from E-641 that had been ejected from under the truck went into the ditch and ignited a wildfire. The fire started on the north side of the westbound lane of I-44 at Mile Marker 152,



Front drive shaft caught in the wire harness.



Front drive shaft caught in the wire harness looking toward the front of the truck.

approximately 150 yards behind where the engine had stopped. At 1157 hours, they called Dispatch and informed them of this unfolding situation.

The crew was split into two groups to address these two ongoing efforts. One person stayed and monitored E-641 and assisted getting the engine safely off the highway. The other three crew members helped suppress the wildfire.

BC33 arrived and made unified command with Waynesville Fire Department. They arrived within 10 minutes, as they were doing fire training directly up the road. Water and leaf blowers were used to contain the wildfire.

E-641 was towed about 10 miles to a facility in St. Roberts, Missouri.

A mechanically-inclined E-641 crew member believes that the front drive shaft rear yoke broke off the transfer case, pulling the slip yoke out of the front differential drive shaft—causing catastrophic failure. The drive shaft became free and tangled in the wire harness, wrapping the drive shaft with wires. It is believed that the hot transmission fluid and fuel from the lines was ignited by the wires shorting out. The employee’s actions during this mechanical failure prevented this incident from escalating into an accident. This event provides a quality learning scenario for a sand table exercise with real world response to what occurred.



Transfer case where the front drive shaft broke off.

Lessons

- ❖ Ensure that fire extinguishers are kept in a location that is easily accessed—not stored in a compartment that could potentially be blocked from opening.
- ❖ Perform monthly PM [Preventive Maintenance] Checks and take your engine to a certified mechanic to perform an annual inspection on the entire truck.

This RLS was submitted by:
Module/Crew Overhead

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