

Rapid Lesson Sharing

Event Type: Type 6 Engine Driver Side
Dual Dismounts

Date: June 18, 2020

Location: Wyoming

“Heads Up!”

Narrative

On June 18, a Black Hills National Forest fire suppression module was leaving Spearfish, South Dakota enroute to Conifer, Colorado for a severity assignment on the Pike National Forest. The vehicle configuration was two Ford 350 crew cab pickups and a national standard Type 6 Engine.

Before departing, the crew performed the daily vehicle checks on all vehicles that were being used.

The Module departed at 6:15 a.m. and traveled to Conifer. At 10:30 a.m. the Module stopped to refuel the vehicles in Torrington, Wyoming. Once leaving Torrington, the Module was traveling on U.S. Highway 85, west of Torrington headed to Cheyenne.

At this time the Module encountered road construction with an uneven road way. The speed limit was signed at 45 miles an hour. While driving through this road construction area, the driver of the Type 6 Engine noticed a vibration coming from the back of the truck.

At 11:28 a.m. the driver of the Type 6 Engine was exiting the construction area when a call came across the radio from the crew truck that was following the engine: “Heads Up!” Next, as the engine driver slowed the vehicle, a loss of proper control of the engine occurred.

The engine moved to the shoulder of the road as the driver corrected the loss of control. The driver realized that something was very wrong. The driver continued down the road, slowing down without applying the brake and pulled off to a safe location on the side of the highway.

After pulling off the highway, the driver exited the engine and noticed the driver side rear dual tire was gone.



Top Photo – The back dual tire still on the engine.

Bottom Photo – Both tires off, showing the hub with two missing stud bolts. The remaining stud bolts still on the hub are damaged. The rims on both tires received minor damage.

Lessons

- ❖ The successes of this incident include the fact that the Type 6 Engine driver was in full control of the vehicle during the loss of the tire and did not overcorrect the vehicle.
- ❖ The Type 6 Engine driver and Module members all stayed calm during this incident.
- ❖ During a break or when fueling vehicles, walk around the vehicle and inspect all major components of the vehicle.



Photo shows the engine's final location where it was parked on the north side of the highway.

- ❖ The use of lug nut torque indicators (see photo on right) would help to visually check your lug nuts to see if they are still properly torqued to the manufacture's specifications.
- ❖ When a lug nut is overtightened, it causes the shaft to stretch and elongate. After each successive overtightening, it then takes more torque to "tighten" the lug—causing further damage. This causes a repetitive overtightening cycle that causes the lug(s) to fail by shearing, bending, or simply rattling loose.
- ❖ It only takes one incident of overtightening to damage a lug. After it is damaged, even if an operator consistently uses a torque wrench, the lug is still damaged and prone to failure.



This has happened before on an engine earlier this year!

See Next Page.



Rapid Lesson Sharing

Event Type: Engine Duals Come Off
Date: February 9, 2020
Location: Mark Twain National Forest
Missouri



Jake Hauser shares his story—insights and lessons—in hopes it might help prevent this from happening to others.

Both Driver-Side Duals Come Off at 45 MPH – Why?

By Jake Hauser, SFEO Engine 631

While driving my Ford F550 engine I recently had the driver-side duals come off. The lugs had been checked regularly. Crew members had been asked to check them daily due to finding lugs loosened.

Earlier in the day, I was driving the engine at low speeds with the windows down and heard what I thought was a wheel bearing going out. It was a clicking sound. (This 2015 engine has 100K miles on it.) As a precaution, I wanted to take weight off the vehicle so I emptied the tank.

I checked everything again and everything appeared tight.



You can see the rotor mark in the road. Notice how losing the two duals pulled the engine—traveling 45 mph—into the oncoming traffic lane. This picture is taken where the second dual came off. It shows the distance the engine traveled, approximately 130 yards, until it was stopped.

To read the story and learn the lessons from this RLS:

<https://www.wildfirelessons.net/view-document/engine-duals-come-off-1-2020>

The June 2020 Black Hills NF RLS was submitted by:

Module/Crew Overhead

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