



# NTSB 2017–2018 MOST WANTED LIST OF TRANSPORTATION SAFETY IMPROVEMENTS

## Expand Recorder Use to Enhance Safety



HIGHWAY

**MWL**  
MOST WANTED LIST

**The NTSB believes video recorders are often the best way to determine what happened in a crash.**

### What is the issue?

Recorders—data, audio/voice, and video—capture and store critical information that can help investigators determine the cause of a crash and companies and operators to take proactive steps toward prevention. Yet, most trucks and buses are still not equipped with these critical technologies, even though recorders are readily available, easily installed, and largely affordable.

Various types of recorders can be useful. Event data recorders (EDRs) capture critical vehicle information about the vehicle and occupants for a brief period of time (seconds, not minutes) before, during, and after a crash. EDRs may record a wide range of data elements, such as whether the brakes were applied, vehicle speed at the time of impact, steering angle, and whether seat belts were being used at the time of the crash. Image/video event recorders—both inward- and forward-facing—show the driver immediately before, during, and after an event.

We routinely use recorder data after an accident to determine what went wrong, how the vehicle occupants died or were injured, and the safety devices and systems employed. We have seen many cases, however, in which a lack of data hampered us from understanding the true cause of the crash. For example, in a crash involving a motorcoach and FedEx truck-tractor in Orland, California, in April 2014, the vehicles were not equipped with crash-hardened recorders, and we were not able to determine why the driver of the FedEx truck crossed the median and struck the bus, killing 10 people. Inward-facing video and vehicle information, such as brake and throttle input, could have given us the information we needed; however, we were ultimately forced to conclude that the crash occurred “for reasons that could not be established from available information.”

Recorders not only help investigators determine the cause of a crash, but, perhaps more importantly, they help companies and operators establish effective safety management strategies. Data from recorders can be used to adjust procedures and enhance crew training to prevent crashes from happening in the first place. Although some operators have implemented or are in the process of implementing recorder programs and systems, many are slow to do so without regulatory requirements.



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## What can be done?

Crash-resistant event data and image recorders are readily available, increasingly affordable, and easily installed in vehicles. Regulators should require their use and mandate that companies incorporate the data from these systems into their safety management programs. Additionally, regulators and industry should work to remove barriers for companies seeking to install event recorders and encourage voluntary implementation.

In keeping with our long history of advocating technology to record crash data in highway transportation, we encourage the National Highway Traffic Safety Administration to develop standards and require the use of EDRs in heavy vehicles (with gross vehicle weight ratings over 10,000 pounds), including motorcoaches, school buses, and truck tractor units. The lack of standards and requirements for heavy vehicle EDRs allows essential crash data to go unrecorded, impeding improvements in highway safety.

Additionally, the Federal Motor Carrier Safety Administration should require all heavy commercial vehicles to be equipped with video event recorders that capture data in connection with the driver and the outside environment, including the roadway, in the event of a crash or sudden deceleration event. The device should create recordings that are easily accessible for review when conducting efficiency testing and system-wide performance monitoring programs. Motor carriers should be required to review and use video event recorder information in conjunction with other performance data to verify that driver actions are in accordance with company and regulatory safety rules and procedures.

The NTSB believes video recorders are often the best way to determine what happened in a crash. For example, on March 3, 2015, the NTSB released a study, "[Commercial Vehicle Onboard Video Systems](#)," that discussed two recent crashes where continuous video systems were installed on commercial vehicles and proved to be extremely useful.

Companies and operators should not wait for regulators to take action, but should proactively procure recorder technology to improve the operational and safety oversight of their fleets. Additionally, fleet management groups and associations should encourage their members to

ensure that onboard vehicle video systems provide a view of the driver, each occupant seating location, and the area forward of the vehicle, and should feature an optimized frame rate and low-light recording capability.

Even technology manufacturers have a role in addressing this issue. They should develop written guidance for initial installation and long-term maintenance of onboard video systems, and publish that guidance on their websites and in future owner's manuals.

Although some headway has been made in using data and audio recorders to improve transportation safety, more work must be done by regulators, operators, fleet associations, and vehicle manufacturers to ensure recorders are installed, properly used, and incorporated into safety management programs. ■

The NTSB Most Wanted List highlights safety issues identified from the NTSB's accident investigations to increase awareness about the issues and promote recommended safety solutions.

The NTSB is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation – railroad, highway, marine and pipeline. The NTSB determines the probable cause of the accidents and issues safety recommendations aimed at preventing future accidents. In addition, the NTSB carries out special studies concerning transportation safety and coordinates the resources of the federal government and other organizations to provide assistance to victims and their family members impacted by major transportation disasters.

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### Related Accidents\*

Date	Location	Accident ID
<a href="#">February 16, 2012</a>	<a href="#">Chesterfield, NJ</a>	<a href="#">HWY12MH007</a>
<a href="#">April 10, 2014</a>	<a href="#">Orland, CA</a>	<a href="#">HWY14MH009</a>
<a href="#">September 26, 2014</a>	<a href="#">Davis, OK</a>	<a href="#">HWY14MH014</a>

\*For detailed accident reports visit [www.nts.gov](http://www.nts.gov)

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Critical changes needed to reduce transportation accidents and save lives.

