Trailer data is influencing fleet operational decisions

November 06, 2017 Brian Straight

Sensors on trailers are providing more information than ever before, and fleets are using this data to more effectively manage their assets. (Photo: Shutterstock)

With more information, carriers can make more informed decisions on usage, maintenance
In the early days of trailer tracking, companies were simply looking for missing trailers. But technology has advanced, and trailer tracking is trying to keep pace. Now, the data generated by trailers can rival that of tractors, and properly managing that data could generate more revenue potential for carriers than ever before.

“Trailers have never really been focused on much because years ago they weren’t that expensive,” Dean Croke, vice president of data products at Spireon, tells FreightWaves. Croke noted that new federal food rules from FMSA and the addition of liftgates on more trailers due to increasing regional and last-mile demands from e-commerce are changing that. “There is more focus on the trailer now, mostly because of the cost.”

Spireon, which provides GPS fleet tracking systems and trailer management systems among other solutions, has been collecting trailer data for a number of years. Roni Taylor, vice president of industry relations, says the Spireon system pings the trailer every 10 minutes, and the data collected goes far beyond simple location data. In addition to GPS location, Spireon can collect data on trailer movement, speed and mileage with optional data including power on/off (synched with tractor), trailer temperature, door open and close, and whether the trailer is loaded and open.

Savvy fleets are now using the data collected to track mileage on trailers, leading to more effective preventive maintenance schedules that don’t result in unnecessary work.

That data can also help fleets identify CSA violation trends on trailers and the number of trailers that may be sitting idle, perhaps indicating incorrect placement of assets. Several Spireon private fleet customers have been able to reduce the number of units in their overall trailer fleet by locating and allocating their units more effectively.

“[Leasing companies] use the tracking technology and can tell if a fleet is not using the trailer and ask them to return it,” Taylor explains. This leads to reduced costs for fleets and leasing companies, who can meet demands for their trailers without acquiring more units.

“The whole Internet of Things has allowed us to add more data on the trailer,” Croke says. “For instance, a trailer that spends six days in sub-zero temperatures wears differently than one in [Arizona].”
The data also can indicate if the trailer has been used in stop-and-go operation or heavy traffic environments, perhaps indicating quickly component wear.

“We can tell the fleets that these trailers have a higher chance of failure before it gets [loaded],” Croke notes, adding that certain models have different wear characteristics and violation patterns. These can be identified by cross-referencing the data.

Spireon offers sensors on the trailers, a dashboard for back-office management, and an app for drivers that can help them identify the exact trailer they are looking for in a yard.

Another use, Croke says, is in California, where trailers need to meet specific CARB requirements. By integrating Spireon’s systems with a fleet’s, the system can track the number of trailers a fleet needs in California, can identify if the fleet is sending a CARB-compliant trailer out of the state, and notify it before it sends a non-compliant trailer into the state.

The optional temperature monitoring helps fleets monitor chain-of-custody requirements as now mandated by the federal food rules.

Fleets and OEMs have been collecting thousands of data points from their tractors for years. The time has arrived where the same plethora of information is now available from their trailers, and it will be up to fleets and their data partners to best use it to improve operations and reduce costs.