Roadside inspections on the fly

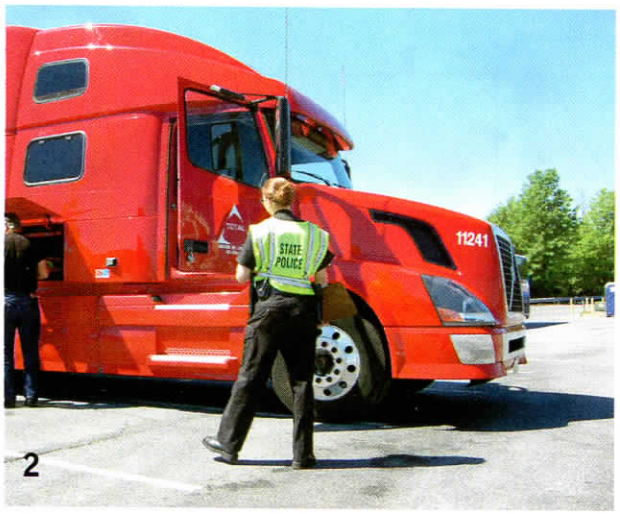
E-INSPECTIONS COULD IMPROVE CSA SCORES, PRODUCTIVITY AND DRIVER SATISFACTION

By Jim Mele, editor-in-chief

Bypassing weigh stations and paying tolls without stopping are common everyday experiences for many fleet trucks, but what if that same "no-touch" experience could be extended to roadside inspections? The technology already exists that could satisfy federal standards for basic credential checks, and automating that process could offer major benefits for well-run fleets. But before e-inspections become as widespread as bypass systems, there are important policy issues that have to be faced by both trucking businesses and regulators.

So, just what is an e-inspection? It starts with a way to transmit information from a moving truck to those conducting roadside checks. PrePass and other bypass systems use a dedicated transponder, while newer technology providers like Drivewyze employ software loaded to an onboard computer, smartphone or tablet.

For bypass purposes, the information includes carrier and vehicle data typically collected by a weigh station or state entry portal. An e-inspection would add driver elements such as CDL information and hours-of-service records as well as carrier-related safety information like its history of out-of-service violations. This additional data would make



1) Bypass systems for weigh stations and state entry portals are common—and popular with both fleets and drivers.
2) Well-run fleets want roadside inspections since good reports have a positive impact on CSA scores.
3) Every stop for a roadside check can delay a driver 15 to 20 minutes and consume up to a gallon of fuel, a cost that adds up quickly.

an e-inspection equivalent to a CVSA Level 3 roadside credentials inspection, but with one important difference.

Inspections are currently conducted by state enforcement agents, whose individual vehicle reports are then forwarded to the Federal Motor Carrier Safety Administration. FMCSA must then check the data for accuracy and enter it into the Motor Carrier Management and Information System (MCMIS) for use in the agency's Safety Measurement System (SMS) and Compliance, Safety, Accountability (CSA) scores. States conduct 3.6 million physical truck inspections a year, and it now takes an average of 8.9 days for a report to make its way to FMCSA, according to Dr. Kelly Leone, the CIO for FMCSA's Office of Research and Information Technology. With e-inspections, that data would be transmitted in near real-time, she said during a recent panel discussion at the ALK Transportation Technology Summit.

COLLECTING GOOD INSPECTIONS

E-inspections would also deliver another important advantage for fleets, according to another panelist, Drivewyze founder and CEO Brian Heath. CSA scores are only calculated after a fleet receives a minimum or threshold number of inspections. With approximately 13,000 inspectors conducting CVSA inspections across the country, they only look at one in every 200 trucks passing through an inspection site and so tend to skip equipment from fleets with good safety reputations or that looks to be in good shape. And that means fleets working to achieve good CSA scores are not getting "good inspection" reports fed into FMCSA.

"As a result, 89% of carriers don't have a full [CSA] profile," Heath said. "There's not enough data with the manual process to get CSA scores that reflect a carrier's actual safety status."

Automating at least the Level 3 inspection process has the potential to exponentially increase the amount of data collected, potentially growing to 1.2 billion safety messages a year being received by FMCSA, according to Leone.

"We want to be inspected," said the panel's fleet representative, Jim Coffren of Hirschbach Motor Lines. "We invest heavily in safety and that's one way to get [CSA] recognition for that investment. We go so far as to pay drivers bonuses for turning in good, clean inspection reports."

Not only are well-run fleets likely to be waved through a roadside inspection, but if they are stopped to generate that good report, it carries a business cost. "We estimate that [each stop] costs us 15 to 20 minutes in lost productivity and one gallon of fuel," he said. "Over time, that adds up."

FMCSA has already built prototype systems capable of receiving wireless data from trucks and producing inspection reports for both the inspectors and drivers, Leone said. And in 2012 it began an expanded field operations test with 1,000 trucks running in five states to address questions about scalability, data management and privacy. That research, however, isn't scheduled to be completed until 2017.

According to Heath, one potential problem with that project, which is known as the wireless roadside initiative, is that it focuses on creating a dedicated in-vehicle transponder

and weigh station technology instead of a software approach like that developed by his company, Drivewyze. "It didn't anticipate industry leapfrogging it in terms of technology," he told *Fleet Owner*.

And even more technology opportunities—and accompanying complications—are emerging quickly when it comes to e-inspections. Sensors already installed on trucks and used in advanced systems like remote diagnostics could enable remote CVSA Level 1, or mechanical inspections, Heath said. "Certain elements of a Level 1 are possible now without special transponders." Theoretically an e-inspection could look at actual truck conditions, though handling sensors and data streams from a variety of vehicles could make that complicated, he pointed out.

POLICY QUESTIONS

But in the immediate future, the most significant roadblock to quick adoption of e-inspections is that "the technology is ahead of policy," Heath told *Fleet Owner*. "The platform is out there to exchange that data. They've demonstrated the ability to transmit all the data elements of a Level 3 inspection [from a truck] and to populate an inspection report that can be transmitted to FMCSA. But that still leaves the bigger question—what does FMCSA do with these reports?"

One thorny policy issue not yet addressed is the question of privacy. Not only would driver names, dates of birth, CDL numbers, and other personal identifiers be included in the e-inspection transmission, but it's conceivable that results from a proposed drug and alcohol testing clearinghouse might be part of those records once FMCSA finalizes the rules governing that clearinghouse. "We take protecting privacy very seriously," said Leone.

For Heath and Coffren, a key element to any e-inspection policy is that participation be voluntary. "We're encouraged to see [regulators] moving beyond demanding things and letting us realize positive returns for investing in things like safety platforms," said Coffren. "We'd welcome voluntary participation in an e-inspection program."

Bypass systems are a good example of voluntary compliance that has worked well for over 20 years because there are rewards and benefits for all sides, Heath pointed out. "We should create a rewards-based [e-inspection] program that incentivizes participation, that leaves it up to carriers and individual drivers what data they share and who gets to see it," he said. "The voluntary approach could make e-inspection a success."

"From the agency perspective, safety is our number-one priority," said Leone. "We believe that using technology so we can touch more carriers in the inspection process will further improve safety. I encourage anyone who wants to ... come to Washington and talk to us. We're open to any ideas."

E-inspection on the road

Working with the Maryland State Police, Drivewyze demonstrated the technological capabilities of an e-inspection system just over a year ago. Using two tractor-trailers supplied by J.B. Hunt and Allied Trucking, as well as a motor coach from Dattco Inc., the project captured CDL information, hours of service (HOS), vehicle weights, and basic registration data in real time as the vehicles drove past the West Friendship Weigh Station and Inspection Site outside of Baltimore.

Unlike some earlier wireless research projects that employed dedicated transponders, this demonstration used software that can be loaded on a variety of onboard computers to send an expanded array of GPS and telematics data combined with data from vehicle sensors and electronic logs. The actual wireless transmission was over existing vehicle-to-infrastructure systems currently used for weigh-in-motion bypass duties.

One enthusiastic witness to the demonstration was FMCSA Administrator Anne Ferro. "This will allow us to leverage all the safety data available concerning drivers and vehicles and make it available to our inspectors in real time," she said. "It can't be understated how seamless and more efficient this can make safety enforcement, especially when it comes to addressing hours-of-service related issues."

The Maryland State Police, which already has an electronic bypass system running at 15 weigh stations, was also excited about expanding that system to include the driver information needed to fulfill a CVSA Level 3 inspection.

"The problem in the industry is there are too many trucks and not enough manpower for inspections," said State Police Capt. Norman Dofflemyer. "With all of the vehicles coming into the weigh station—and we see some intrastate delivery trucks three or four times per day—systems and inspections can get clogged. It's inefficient."

The West Friendship location alone typically sees 2,000 trucks passing over its scales every day during its 14 to 16 hours of operation, averaging anywhere from 8,000 to 10,000 vehicles per week.

With e-inspection technology, "if the carrier or driver has a solid safety record, and is not overweight, we can wave them through at the inspection site," Dofflemyer said. "If we see a borderline case, or poor CSA score, we may inspect driver information and logbooks, plus do a vehicle inspection."