Driver Vehicle Inspection Reporting for Private Fleets: Pitfalls and Opportunities

Executive Summary

As time marches on, many of the influences on our businesses change as well. This change alone is a great reason to frequently review your operations and make sure you are employing the very best practices in every facet of your business operations. In a recent research study conducted by Vanson Bourne trucking professionals reported that only 61% of their companies had conducted any type of process re-engineering effort in the previous 12 months. That leaves 39% of transportation operations as a whole (33% of private fleets and 53% of for-hire operations) that have not made a focused effort to innovate and improve their operational processes.

When you contrast that static approach to business against constantly evolving regulatory requirements, you have an obvious disconnect. For example, let's take a topic like commercial vehicle inspections. All commercial fleets perform them since they are required by the Federal Motor Carrier Safety Administration (FMCSA) Compliance, Safety, Accountability (CSA) initiative[1]. Yet, how many companies execute these inspections and reports in a manner that not only improves the fleet's Vehicle Maintenance BASIC score, but also improves the efficiency of the operation, positively impacting everything from driver performance to customer satisfaction?

Over the last year, the FMCSA has issued nearly five times more imminent-hazard out-of-service orders than it did in fiscal 2011[2]. And small fleets, which can range from one to a few hundred trucks, are seven times more likely to be inspected.

Will Your Private Fleet Be Impacted?

The most likely answer is yes. In the U.S., any vehicle with a gross vehicle weight rating or gross combination weight over 10,000 pounds operating in interstate commerce is required to comply with the safety management system implemented by the FMCSA.

What does that look like?[3]

- Any fleet vehicle required to have an FMCSA ID number on the side of the truck
- Examples of vehicles that likely qualify:
    - Delivery van with dual rear wheels
    - Medium to large DSD bread/food/beverage delivery vans
    - Service vans, such as cable, HVAC
    - Equipment trucks, such as boom trucks to fix cable poles

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[1] This document is for educational purposes only and should not be considered a description of any Federal Motor Carrier Safety Administration (FMCSA) regulatory requirements under Section 4118 in 49 U.S.C. 31151 or any other regulations or law. Nothing in this document should be considered legal advice of any kind, and should not be relied on by the reader for compliance with the FMCSA requirements or any other law. Compliance with any applicable law is the responsibility of the reader. You should consult with your legal department or other attorney regarding compliance.

[2] Commercial Carrier Journal, "Crackdown: FMCSA's putting extra muscle into shutting down truck fleets," June 5, 2013 http://www.ccjdigital.com/crackdown-fmcsas-putting-extra-muscle-into-shutting-down-truck-fleets

[3] http://www.fmcsa.dot.gov/about/other/faq/faqs.aspx# See Question 92.

Companies with small private fleets are focused on their core business, such as fresh bakery goods, building supplies or home delivery. Fleet management is often a secondary concern. But the FMCSA doesn't see it that way. Private fleets are held to the same regulatory requirements as large transportation companies.

Rules of the Road

With the MAP-21 federal funding of highway projects, the FMCSA now has the money to enforce regulations—and it's doing so with a vengeance[4].

Driver Vehicle Inspection Reporting (DVIR)

The regulations mandate motor carriers to produce a daily driver report detailing issues that could affect a vehicle's operational safety. This report includes:

- Pre-trip (396.13): The driver must be satisfied that the vehicle is in safe operating condition, review the last driver inspection report, and if the last inspection report notes any deficiencies, the driver must review and sign to acknowledge that necessary repairs have been completed.
- Post-trip (396.11): Each driver must prepare a written post-trip inspection report at the end of each driving day.
  - The report must list any condition that the driver either found or had reported to him/her that would affect the safe operation or cause a breakdown of the vehicle.
  - If no defect or deficiency is found, the driver must state this.
  - If a defect or deficiency is found or reported, the carrier must ensure that a certification has been made as to any correction and repairs or state those deficiencies that do not require immediate correction. This must be done before dispatching the vehicle again.
  - The pre- and post-trip reports must be completed for each trip, including any mid-route equipment or trailer changes.
  - The driver is required to sign each paper (or electronic) report.
  - Carriers must keep the inspection report and the certification of repairs for at least three months from the date of completion.

Compliance, Safety, Accountability (CSA) initiative

The FMCSA rolled out the CSA initiative in December 2010. It is intended to improve large truck and bus safety and ultimately reduce crashes, injuries and fatalities involving commercial motor vehicles. The CSA did not include any new laws. However, almost every aspect of the U.S. commercial motor freight industry is subject to new, expanded safety reporting and enforcement measures. This includes drivers who operate the equipment, shippers who hire carriers to move freight and those who operate their own private fleets.

The CSA scores for private fleets, carriers and owner-operators are updated monthly. The FMSCA calculates scores based on inspection results, violations and crash data from drivers as well as how recently the issues took place. These CSA scores are calculated from scores for each of the seven Behavioral Analysis Safety Improvement Categories (BASICs):

1. Unsafe Driving
2. Hours of Service (HOS)
3. Driver Fitness
4. Controlled Substances/Alcohol
5. Vehicle Maintenance
6. Hazardous Materials
7. Crash Indicator

Up to 75% of CSA violations fall under the Vehicle Maintenance BASIC[5]. This makes compliance with DVIR inspection processes mandatory without exception.

The Consequences of Non-compliance

Compliance documentation is time-consuming, costly and often inaccurate. In fact, the FMCSA estimates only 5% of DVIRs identify vehicle defects[6]. And this has significant consequences.

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[4] Commercial Carrier Journal, "Crackdown: FMCSA's putting extra muscle into shutting down truck fleets," June 5, 2013 http://www.ccjdigital.com/crackdown-fmcsas-putting-extra-muscle-into-shutting-down-truck-fleets

[5] http://www.rair.com/our-solutions/dvirs/

[6] http://www.automotive-fleet.com/blog/market-trends/story/2013/09/concern-voiced-about-fmcsa-proposal-to-eliminate-submission-of-no-defect-driver-inspection-reports.aspx?prestitial=1

CSA scores are public: they are seen by the entire industry, insurance companies and customers. Although an end customer purchasing goods may not have heard of CSA regulations, shipper customers are keenly aware of CSA scores and may use them in selecting the carriers with which they do business. With respect to private fleets, the National Private Truck Council states that there's a perception among foodservice and retail customers that if a company has a poor CSA score, then it's probably not handling its food products in a safe manner[7].

Perhaps even more significantly, many private fleets don't have dedicated resources to manage reports and compliance. Skipped equipment inspections by rushed drivers or lost DVIR paperwork can create significant issues. On top of that, enforcement agencies tend to look where they think they will find issues—and that's in small, private fleets.

In fiscal 2012, the FMCSA performed 54,559 carrier reviews/investigations. For these audits, companies must have three months of DVIR history on file, or they will be non-compliant[8]. If the FMCSA finds a pattern of violations, it can result in a corrective action plan. If those requirements aren't met, the next step could be a cease-and-desist-operations order.

The Paper Burden

Despite the enormous importance of DVIR compliance, the process of drivers filling out daily reports that must be filed and purged can be cumbersome and costly. As companies evaluate their operations for non-value-add processes to achieve greater operational efficiency, DVIR compliance is a good one to tackle, both for streamlining and cost savings.

Most private fleets use a paper-based process for DVIR requirements. In fact, a recent research study conducted by Vanson Bourne found that 60% of organizations still use paper-based systems. Although companies may find this inefficient, many are unaware of the true costs of these paper reports. But that changes once they see the full process and the resources it consumes.

Regulatory Resources

For further information about the FMCSA regulations, visit these websites:

http://www.fmcsa.dot.gov/rules-regulations/administration/fmcsr/fmcsrruletext.aspx?reg=396.11&keyword=396.11

http://www.fmcsa.dot.gov/rules-regulations/administration/fmcsr/fmcsrruletext.aspx?reg=396.13&keyword=396.13

http://www.fmcsa.dot.gov/rules-regulations/administration/fmcsr/fmcsrruletext.aspx?reg=396.11&guidance=Y

Facilitating DVIR Compliance with Technology

According to a 2013 article in the Commercial Carrier Journal, many small fleets find it cost-effective to invest in tools such as management software, electronic logging and/or driver vehicle inspection report systems to proactively manage compliance[9].

Technology that offers a customizable, in-vehicle software application combined with a web application for the office and maintenance shop can increase operational efficiency, saving time and money. It also enhances compliance by reducing errors associated with manual entry.

[6] http://www.automotive-fleet.com/blog/market-trends/story/2013/09/concern-voiced-about-fmcsa-proposal-to-eliminate-submission-of-no-defect-driver-inspection-reports.aspx?prestitial=1

[7] Truckinginfo, "5 Trends in Private Fleets," April 2013 http://www.truckinginfo.com/article/story/2013/04/5-trends-in-private-fleets.aspx?prestitial=1

[8] Commercial Carrier Journal, "Crackdown: FMCSA's putting extra muscle into shutting down truck fleets," June 5, 2013 http://www.ccjdigital.com/crackdown-fmcsas-putting-extra-muscle-into-shutting-down-truck-fleets

[9] Commercial Carrier Journal, "Crackdown: FMCSA's putting extra muscle into shutting down truck fleets," June 5, 2013 http://www.ccjdigital.com/crackdown-fmcsas-putting-extra-muscle-into-shutting-down-truck-fleets

Lifecycle of a Paper-based Report

- The inspection document: someone must design and layout the document for the printer to print it.
- Someone must create and manage the PO for the forms supplier (or print shop) to print the document each time a resupply is needed.
- Someone must maintain and distribute the inventory of printed forms to each location—or drivers are making very expensive copies on the company copier.
- The driver must remember to get the forms.
- Drivers must fill out forms, including consistent information (i.e., name and truck number) repeatedly.
- Someone must read the DVIR information to find any reports that identify safety defects. Then route these exceptions to maintenance for review.
- A mechanic must evaluate the vehicle and fix defects as appropriate, then sign off on the completed DVIR.
- The next driver operating the equipment must review the previous post-trip and repair documentation and then certify the vehicle is in safe operating condition. This becomes increasingly difficult in tractor slip-seat environments or when a trailer is dropped and hooked by different drivers.
- All DVIRs must be routed and filed for storage for three months.
- Someone must manage and actively purge the printed reports because reports older than three months can be subpoenaed. If an investigation is called and older reports exist, this lengthens the review process and increases the information pool, leading to unnecessary risk.

Calculator

Time required to fill out each form: _____ seconds

Number of drivers on staff: x _____ people

Driver hourly labor rate: x _____ dollars

Driver weekly hours worked: x _____ hours

Hours in a year: x 52 weeks

_____

Total potential annual savings: = _____ dollars

One such technology-based solution is Innovative Software Engineering's (ISE) eFleetSuite DVIR application. It is made to comply with FMCSA pre- and post-trip report regulations and is specifically designed for quick adoption by both fleets and software solution providers. The eFleetSuite application works on a variety of mobile computers from Intermec by Honeywell.

The eFleetSuite application facilitates a completely paperless process. At a major LTL carrier, the eFleetSuite DVIR application has been customized, integrated and deployed fleet-wide. It processes more than 14,000 DVIRs daily and eliminates over 9 million paper forms annually[10].

Let's take this LTL fleet example and compare it to the Lifecycle of a Paper-based Report illustration.

- Prior to automating their vehicle inspection, this LTL fleet had to purchase or print paper DVIR forms.
  - 14,000 forms x 5 days x 52 weeks = 3,640,000 pieces of paper printed per year at a minimum (not accounting for waste)
  - 3,640,000 x $0.01 = $36,400 in material costs
- Someone within that organization needed to get those same forms distributed to the fleet's terminals around the country.

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[10] http://www.ccjdigital.com/sefl-deploys-electronic-inspection-reporting/

- Once the paper forms were distributed, the driver needed to worry about maintaining a convenient supply in his vehicle and had to fill in the form with a fair amount of repetitive information (e.g. name, truck number, etc.) at least once for the post-trip report. This can be more complex if equipment changes are involved.
  - 2.83 minutes x 3,640,000 forms per year= 10.3M minutes[11]
  - $24.44 driver hourly full time equivalent (FTE)[12]/ 60 minutes = $0.4073 per minute for each FTE
  - $0.4073 x 10.3M minutes = $4,195,190 in driver expense filling out manual paper-based DVIR forms.
- With trailers, there was no logical place to leave a piece of paper. Thus, drivers had to see the dispatcher to get the latest DVIR paperwork for the trailer they were dispatched to haul. This was time drivers should have been on the road.
- Once the driver completed his tasks in the truck, he was responsible for turning the paperwork into the office. An office employee would then have the task of routing the form to maintenance or filling it out appropriately.
- Managers could see only what's in their filing cabinets. Significant administrative time was required to locate reports across dispatch and maintenance locations.
- It is not unreasonable to estimate that handling, sorting and distributing the paper DVIR forms could add 10-30 seconds per form increasing the cost.
  - 3,640,000 forms per year x 20 seconds per form = 20k hours year
  - 20K hours / year x $25/hour FTE for office and maintenance administration = $505k in administration costs.

How Technology Automates Reporting

As a paperless solution, ISE's eFleetSuite application eliminates the need and time required for drivers to repeatedly write known information, such as their names and truck numbers.

- Post-Trip: At the end of the trip, the driver is prompted to create a DVIR report for the vehicle and each attached trailer. The driver documents any defects or deficiencies. The data is wirelessly transferred to the web application.
- Repairs: Maintenance personnel use the web application to review defects and deficiencies, enter notes and document repairs.
- Pre-trip: The mobile application retrieves the latest vehicle and trailer information to create a reviewable report. The driver reviews the report, then checks one or more boxes to indicate satisfaction that the vehicle is in safe operating condition.
- Trailers: Drivers can easily access DVIRs for the trailers they are dispatched to haul, saving time previously spent searching for the current paper report.
- Roadside Inspection: When an officer requests DVIR documentation, the driver has access to the original DVIR report as well as maintenance personnel certified repairs and notes.

Achieving Operational Efficiency and DVIR Compliance

Process improvement is not merely about spotting where processes can be made more efficient. It's also about understanding how automation can reduce human intervention as well as decrease the number of "man hours" necessary to complete processes. Automating the DVIR process enables companies to confidently manage regulatory compliance efficiently, accurately and effectively —yet keep their resources focused on their core business. Being able to speed up every day processes even by a minute—or a few seconds—can have a significant impact on overall operational efficiency and costs. In addition, updates for applications like eFleetSuite allow fleets to have access to the latest FMCSA regulations as they evolve.

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[11] http://www.fmcsa.dot.gov/rules-regulations/administration/rulemakings/proposed/Driver-Vehicle-Inspection-Report-NPRM.aspx

[12] American Transportation Research Institute - An Analysis of the Operational Costs of Trucking -2012 Update

Fleets

With automated DVIR reporting, fleet inspections can be managed proactively while eliminating the costs and risks associated with paper-based reports. This enables better maintenance and even improvement of CSA Vehicles Maintenance BASIC scores. In addition, automated DVIR reporting eradicates the cost of paper. The removal of paper alone can be significant savings as it eliminates at least one piece of paper per driver per day. In some cases, the savings can be more if carbon copies are used and/or a driver operates multiple vehicles and/or trailers each day.

Drivers

Using technology like the eFleetSuite application, along with handheld devices from Intermec by Honeywell that drivers may already be using on their routes, enables drivers to follow a compliant process and create consistent, accurate DVIR documentation at appropriate times. In addition, there's also the benefit of a lower risk of equipment being operated without being repaired. During roadside inspections, which can be especially critical in avoiding audits, DVIR reports and results are easy for an officer to see, limiting inspection time.

Furthermore eFleetSuite can be customized to a fleet's specific needs. For example, eFleetSuite can be customized to implement the desired driver workflow with other third-party applications, automatically pre-populating information and ensuring vehicle and trailer DVIRs are not skipped. Customizable defect lists facilitate faster and more consistent documentation, which also increases productivity: less time spent filling out reports means more time on the road or on the work to be done.

Mechanics and Administrative Staff

Immediate notification of vehicle defects through the technology-based DVIR process can result in faster repairs and more uptime. The eFleetSuite web application makes information available to maintenance personnel in seconds—not days. Optionally, eFleetSuite can be integrated with back-office maintenance systems, thus providing all maintenance and DVIR information in a single system. Automated record retention can also save back-office personnel the time to file and purge individual DVIR reports. In addition, with eFleetSuite, clerical errors are virtually eliminated; information is now accurate and legible.

Conclusion

There is no sign that the FMCSA will be slowing down its enforcement of CSA regulations. This continues to put small fleets, especially those whose expertise is not in transportation and logistics, at risk for an audit. The FMCSA will continue to look where it thinks it will find problems—and that tends to be small fleets. However, fleets of all sizes have found that technology-based DVIR solutions facilitate compliance while also reducing the costs incurred with paper-based systems and increasing efficiency so drivers spend more time on the road and less time filling out cumbersome reports.

Fleets have access to advisors who understand these regulations and the importance of compliance as well as expertise in technology and transportation. ISE has leveraged its extensive transportation experience to create the eFleetSuite software package, which helps fleets comply with the FMCSA's vehicle inspection and electronic driver log regulations. eFleetSuite is easy to deploy, facilitates a paperless process, contains intuitive in-vehicle and web interfaces, and allows for fleet customization. In addition, ISE specializes in developing telematics solutions, enterprise mobility applications, safety and compliance applications, and custom software tailored to the unique needs of its clients. Intermec by Honeywell has helped companies in all segments of the transportation and logistics industry, including small and large fleets, innovate and improve their operations with technology for more than 40 years.

About Honeywell

Honeywell Scanning & Mobility (HSM) is a leading manufacturer of high-performance image- and laser-based data collection hardware, including rugged mobile computers and bar code scanners, radio frequency identification solutions, voice-enabled workflow and printing solutions. With the broadest product portfolio in the automatic identification and data collection industry, HSM provides data collection hardware for retail, healthcare, distribution centers, direct store delivery, field service and transportation and logistics companies seeking to improve operations and enhance customer service. Additionally, HSM provides advanced software, service and professional solutions that help customers effectively manage data and assets. HSM products are sold worldwide through a network of distributor and reseller partners. For more information on Honeywell Scanning & Mobility, please visit www.honeywellaidc.com

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