Safety and Maintenance:
WHAT’S RIGHT FOR YOUR FLEET?
For most fleets, safety is always top of mind. But what can organizations do to ensure the highest levels of safety for the motoring public, fleets and drivers? Maintenance is a key factor, and improper fleet maintenance procedures can impact performance, CSA scores and reportable incidents, and overall perception of your brand. This white paper looks at the relationship between maintenance and safety for diverse fleets and offers guidance to help ensure your preventive maintenance plan is aligned with your safety plan.

**THE SAFETY IMPERATIVE**

How important is safety to fleet operators? If it isn’t at the top of the list, it should be. In today’s data-driven world, Federal Motor Carrier Administration’s (FMCSA) Compliance, Safety, Accountability (CSA) scores can be a determining factor when selecting a carrier, and a high CSA score can rule out a carrier altogether.

The safety of the motoring public and truck drivers is paramount. The FMCSA reported 3,598 fatal crashes and 83,000 injury crashes involving trucks in 2015. With the average injury crash costing operators $74,000¹, there are other costs – including goodwill – that can far exceed cash outlays if a carrier is deemed unsafe.

Safety also has a dramatic impact on the bottom line. Carriers and fleets known for their dedication to safety attract better drivers, retain them longer and stand to be top-of-mind when new business opportunities arise, and reduce the chances for negative publicity around their company’s brand.

**THE CHANGING SAFETY LANDSCAPE**

When considering safety and risk factors, insurers know safety is, in part, a numbers game. With over 5.7 million commercial truck and bus drivers in the U.S.² sharing the road with a quarter billion other motorists, accidents can’t be totally eliminated, and many will occur despite the best safety efforts of both the truck driver and carrier. For insurers, fleet safety and a carrier’s CSA rating will affect insurance premiums and, thus, the bottom line.

Perhaps the single biggest impact on fleet insurance is the recent trend of increasingly punitive jury awards resulting from accidents involving commercial vehicles. These can cost operators (and ultimately insurance carriers) tens of millions of dollars, not to mention lead to broad negative media exposure. In an increasingly litigious society, insurance premiums surge as juries hand out big awards, and the minimum $750,000 insurance that the industry demands may leave carriers ill-prepared financially if they are found at fault in an accident.
Some insurance carriers are abandoning the commercial fleet insurance marketplace altogether\(^3\), leaving operators to scramble for new insurance providers or to self-insure when their volume – and safety practices – allow them to.

**PREVENTIVE MAINTENANCE IMPERATIVES**

One of the most crucial factors in safety is preventive fleet maintenance. Vehicles that are out of service not only cost the carrier in lost productivity, an increase in vehicles deemed out of service (OOS) can be a bellwether of improper maintenance practices. In 2015, about 2.3 million roadside vehicle inspections were performed by state and federal safety inspectors nationwide. Those inspections yielded just over 3.8 million violations and found over 650,000 OOS violations\(^4\). Not only did each inspection average at least one violation, a staggering 28 percent of vehicles inspected were deemed not road-worthy.

Where are fleets falling short on maintenance? Of the top 20 infractions, the vast majority were unsurprisingly related to vehicle lighting (i.e., headlamp, brake and signal lamps), with just over a million violations noted, followed by brakes at 477,023, tire tread depth at 157,887, and oil or grease leaks with 155,956 violations. Even vehicles in perfect condition were issued violations – over 130,000 vehicles failed to have a timely periodic inspection on file, and over 60,000 vehicles were cited for insufficient warning devices as part of their emergency equipment. These statistics point to the importance of regularly scheduled preventive maintenance, which is almost always less expensive than post-breakdown (or citation) repairs.

**DRIVER SAFETY**

Of course, vehicle maintenance is only part of the safety equation. The first line of defense in vehicle safety is literally in the hands of well-rested, professional truck drivers. How important is a rested driver? One recent high-profile lawsuit involved a driver who reportedly had not slept for more than 24 hours when the crash occurred.

In 2015, the FMCSA logged nearly 3.26 million driver inspections, which yielded a total of 1.04 million driver violations, including 186,000 OOS driver violations nationwide. The greatest number – 326,000 violations – were attributed to log violations, including logs not current, false reports of driver’s record, or driver failing to retain the previous weeks’ worth of logs. Over 136,000 drivers were cited for hours of service violations with the majority of those for driving beyond 8 hours without rest or beyond 14 hours a day. Many drivers find themselves caught between getting their load delivered and getting the proper rest; however, fatigued drivers contributed greatly to the 629 fatal occupations injuries in 2015 that involved trucks.

Technology helps keep drivers, rigs and, ultimately, motorists safe. Electronic Logging Devices (ELD), slated to become mandatory for most drivers by December 2017, record a driver’s hours of service and duty status, while reducing driver administration time and increasing overall fleet efficiency. Further,
collision-avoidance systems and lane departure systems on commercial vehicles can also help alert truck drivers to an impending accident, take corrective actions and reduce the human toll of rear-end collisions by over 80 percent.5

Onboard video recorders are now also being recommended by the NTSB to help monitor drivers and as a proactive tool to identify and reduce risky driving behavior and distracted or drowsy driving. Cameras also can provide valuable data for evaluating crashes. Emerging smart technology that combines in-lane object recognition with adaptive cruise control and braking and collision mitigation may also help drivers avoid accidents in the first place.

Ongoing driver safety training is also needed. Many carriers have adopted comprehensive driver training systems that provide on-road, classroom, online and video training for drivers and fleet managers alike. Although most drivers will benefit from an e-learning program on safety, others might be better served by in-vehicle, on-road training to help correct bad driving habits.

WHAT’S IN YOUR FLEET?

It is important to remember that safety, maintenance and driving issues apply to more than class 7 and class 8 trucks and buses. Drivers of any class 3-6 vehicle over 10,001 lbs, although not required to have a commercial license, must still operate under the regulations concerning hours of service and medical examinations that are required for big rig drivers, and all vehicles, class 3 and above, are required to stop at state weight and inspection stations.

SAFETY AND MAINTENANCE: ACHIEVING ALIGNMENT

Regulatory and compliance issues should be a key consideration for any fleet operator. To that end, a program of scheduled inspections and preventive maintenance for every vehicle should address both immediate and long-term needs that may change due to new state regulations. Key to maintaining a healthy fleet of vehicles and drivers is data – having the ability to gather and analyze data on vehicle and driver performance can help drive down CSA scores.

THE WELL-CONNECTED FLEET

Why connected vehicles? In a word, insight. Connected fleets give operators visibility into what’s happening, help ensure compliance and drive up efficiency fleetwide.

To that end, connected vehicle offerings like Penske’s connect with virtually any vehicle or telematics service provider, making it simple to share data. Benefits you can reap include:

• Greater insight into performance and vehicle issues
• Faster roadside assistance call triage
• Improved maintenance through remote diagnostics, location data and analytics
• Data-driven fleet management decision-making
• Increased fleet efficiency and regulatory compliance
• Performance gains from tools that help drivers manage required paperwork

Find out how to turn your vehicle data into actionable insights by contacting Penske.
and raise customer and driver satisfaction alike. Mining data can help reduce out-of-service vehicles, identify and analyze which vehicles or power units are causing undue troubles, and establish fleet lifecycle times and policies.

Likewise, align drivers with your safety plan by making them part of the process, from diligently checking DMV records for safety issues during the onboarding process to committing to continuous training and education to help drivers overcome bad habits that can lead to accidents, OOS conditions or worse. Carriers and private fleets should take advantage of technologies that can track driver behavior to develop a driver profile that can flag potential issues before they occur, as well as track vehicle performance to help indicate potential vehicle problems before they balloon, or even disable a vehicle if stolen to prevent accident, injury or loss of cargo.

Operators should take advantage of CSA data to understand what issues – both driver and vehicle-related – should be highlighted as part of maintenance and training procedures. If the greatest number of violations found during inspections relate to headlamps, tires, and brakes, perhaps carriers should be adding an emphasis to these factors both as part of a regular maintenance schedule, as well as when drivers log inspections before and after each trip. Likewise, if drivers are most often cited for log or time of service violations, ensure that periodic training sessions are offered that remind the drivers of the importance of these violations from both their perspective, as well as the cost to the carrier that a higher CSA score entails.

Particular attention should be paid to tire safety, since tire failures represent the most frequent reason for roadside breakdowns. Since tire pressure is related to temperature, care should be taken when vehicles travel from cold to warm climates or operate in high altitude areas where there are wide temperature swings from day to night. Maintenance programs should also include checking the tire pressure gauges themselves, and have provision to recalibrate gauges if need be to ensure accuracy and vehicle and driver safety.

The transportation ecosystem is in a constant state of flux. Regulations change annually, technology advances impact every facet of transportation, including driver comfort and safety, and societal pressures impact the type and amount of insurance that carriers need to protect themselves, their customers, drivers and stockholders as the landscape shifts.

CONCLUSIONS

As premiums rise, preventive maintenance becomes ever more important to a comprehensive safety program for carriers of all size. Fleets must promote their support for motor safety and understand the role of driver safety training and preventive maintenance in an
overall safety program designed to keep CSA scores low and public confidence high.

Developing a maintenance program is not a static thing; as technology advances occur and vehicles become smarter, maintenance procedures must also change to reflect how technology interacts with the vehicles, fleets and drivers to improve efficiency without risking driver health and safety. Carriers should not, however, fall into the trap of relying on technology without relying on common sense. Although technological advances are sure to accelerate in the years to come, training and maintenance will still provide the backbone for a safety program to succeed.

By evolving a maintenance and training program that dovetails with vehicle, technology and driver comfort and safety advances, fleets can help lower their accident profiles and CSA scores while raising their efficiency and profitability by lowering insurance and crash-related expenditures significantly.

Fortunately for fleet operators, help is available to meet safety and maintenance goals. Organizations like Penske can provide expertise in logistics and maintenance to let operators focus on business, rather than worry about when the last oil change occurred or whether drivers are adequately trained in safety procedures.

To find out how Penske can help improve your fleet maintenance practices, contact them at Penske.com

1 Occupational Safety and Health Administration, 2015
4 FMCSA Motor Carrier Management Information System (CMCIS) snapshot, January 29, 2016
5 Use of Forward Collision Avoidance Systems to Prevent and Mitigate Rear-End Crashes, NTSB, May 19, 2015