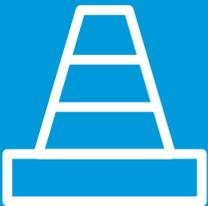**QUICK GUIDE:**

ELECTRONIC DRIVER LOGS

DRIVER & VEHICLE SAFETY

HOS & DVIR COMPLIANCE

AUTOMATED LOGGING

PROVEN RELIABILITY

Trimble.

Introduction

The FMCSA (Federal Motor Carrier Safety Administration) has recently passed new regulations related to commercial motor vehicle drivers introducing requirements for electronic logging devices (ELD).

These rules are already changing the landscape within the commercial motor vehicle industry. From fleet managers, supervisors and dispatchers to drivers and field inspectors on the road, day to day operations of motor vehicle carriers will undergo significant changes.

These changes can create substantial benefits for the organizations, but they will also present challenges.

Organizations that take full advantage of these rules can realize significant benefits including positive changes to their bottom line. Organizations who fail to take advantage leave money on the table and can end up paying hefty fines for non-compliance. Organizations must act quickly in order to remain complaint with the new rules.

In this guide we'll summarize the different rules, their benefits and explain what you need to know to keep your fleet safe and compliant. We'll also help you to understand ELD systems and how to choose the best solution for your organization.

The FMCSA (Federal Motor Carrier Safety Administration) has recently passed new regulations related to commercial motor vehicle drivers introducing requirements for electronic logging devices (ELD).

DID YOU KNOW?...

500K accidents occur every year

5,500 accidents that result in fatality

15% of drivers blame fatigue for the accident

NEW REGULATIONS

Fleets with vehicles over **10,000lbs** must electronically log:

FMCSA Federal Motor Carrier Safety Administration

HOS Hours of Service — 10hrs

DVIR Driver Vehicle Inspection Reporting

$5500 average cost for a HOS violation

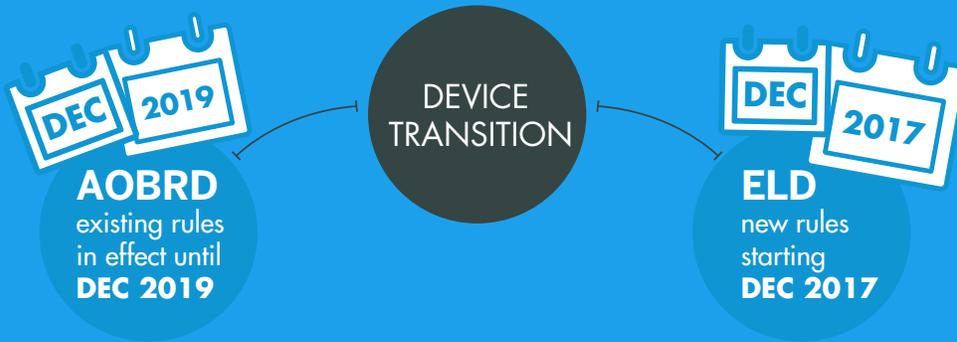Fines for violations can be as much as **$11,000**

HOURS OF SERVICE RULES

In 2012 the U.S. Department of Transportation (DOT) mandated that every driver who operates a commercial motor vehicle for interstate business record their hours of service (HOS), and log the roadworthiness of the vehicle upon usage. HOS records are often referred to as Driver Logs and initially, many drivers and carriers created these records manually using paper logs. This created some issues however as drivers rarely updated these logs in real time, and many of them relied on memory and waited until suitable times to record their logs, making records prone to inaccuracy and loss.

ELECTRONIC LOGGING DEVICE MANDATE

On December 16, 2015, the FMCSA passed the Electronic Logging Device (ELD) mandate to improve compliance with HOS rules. The mandate requires Motor Vehicle Carriers and Drivers to switch from paper logs to ELDs.

The mandate requires that, by December 18, 2017, all drivers must have an electronic system in place to automatically record their driver logs. By December 16, 2019, all drivers must be using an FMCSA-approved ELD.
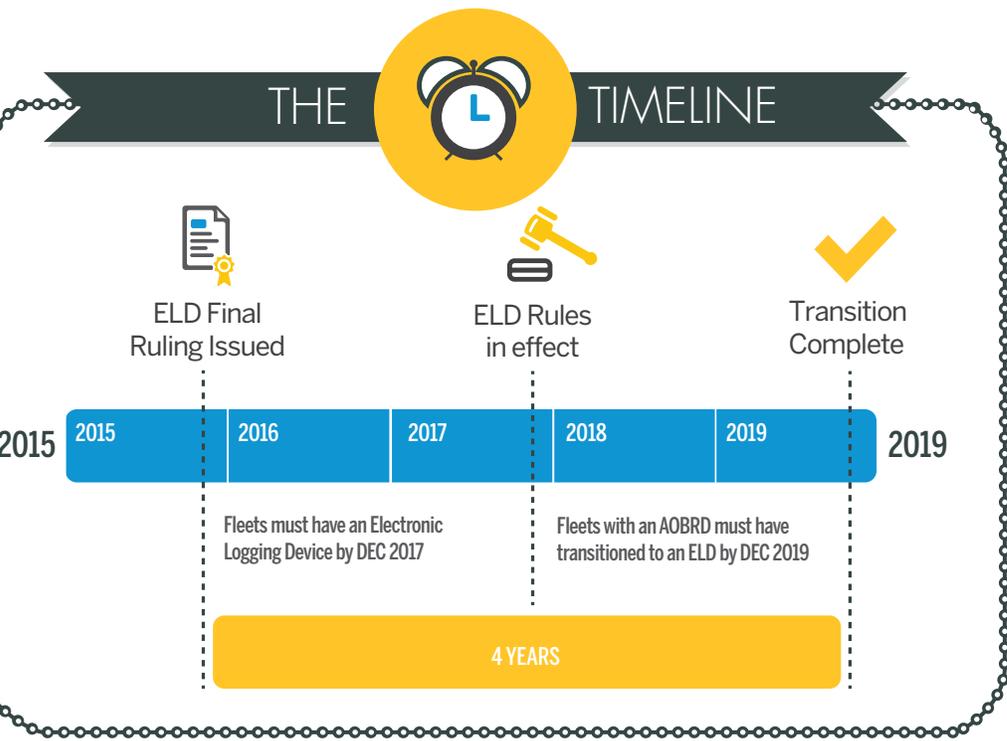
It is important that organizations act now to be compliant by the time the regulations take effect.

DEVICE TRANSITION

DEC 2019

AOBRD
existing rules in effect until **DEC 2019**

DEC 2017

ELD
new rules starting **DEC 2017**

WHAT ARE ELECTRONIC LOGGING DEVICES?

Electronic Logging Devices (ELDs) are devices which record drivers' hours of service electronically and automatically. Through a connection to the vehicle bus, the ELD is able to automatically detect when a driver begins and ends a trip including time spent taking breaks. The ELD uses this information to record the number of hours a driver has been driving. The ELD also includes a tablet device within the vehicle which displays useful information such as available drive time as well as indicating when the driver needs to take a break. Additionally, The ELD transmits HOS data in or near real-time to a cloud-based back office system for accessibility by dispatchers and fleet managers. Thus, an ELD system eliminates the need for Drivers and Carriers to use paper logs for their HOS needs.

THE TIMELINE

ELD Final Ruling Issued

ELD Rules in effect

Transition Complete

2015	2015	2016	2017	2018	2019	2019

Fleets must have an Electronic Logging Device by DEC 2017

Fleets with an AOBRD must have transitioned to an ELD by DEC 2019

4 YEARS

The FMSCA mandates that all ELDs must

► Capture a driver's HOS electronically and automatically

► Be integrally synchronized with a vehicle's engine, capture drive segments and vehicle information

► Pass data to a system where a safety or fleet manager can see e-logs in a near real-time basis

► Make log data easily available to field inspectors during inspections

► Have a visible display to the driver

► Have a visual indicator for vehicle hardware malfunctions

► Address concerns for driver harassment

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THE ELD TIMELINE

For commercial fleets, in industries such as construction and agriculture which operate over multiple sites, the recent changes to the ELD Mandate will mean massive process change and so the Federal Motor Carrier Safety Association (FMCSA) has outlined a staged approach for the transition to ELDs.

Dec 16, 2015	Feb 16, 2016	Dec 18, 2017	Dec 16, 2019
Publication date	Effective Date	Compliance Date	Full Compliance

Phase 1: Awareness & Transition

Phase 2: Phased-in Compliance

Phase 3: Full Compliance

Phase 1: Awareness & Transition

Fleets and drivers subject to the rule can use any of the following for records of duty status (RODS):

▶ Paper logs
▶ Logging software
▶ AOBRDs

Fleet Managers should use this transition period as time to prepare for compliance. It provides a great opportunity to be proactive and ensure that compliance issues are completely understood. If you are currently using paper logs, you need to start evaluating what type of electronic system will be appropriate for your organization. This period is also the perfect opportunity to start to educate your drivers on the changes that will need to be made to the way they work.

Phase 2: Phased-In Compliance

Fleets and drivers subject to the rule can use:

▶ AOBRDs that were installed prior to Dec 18, 2017
▶ Certified, registered ELDs following rule publication in 2015

The FMSCA has provided a phased in period for organizations to roll out an electronic logging solution. They have also provided a provision in the ruling such that organizations that get a head start are provided an additional 2 year period before they need to comply with the final ruling. What this means is that if you implement an AOBRD solution today you will have until December 2019 before you need to upgrade to a fully compliant ELD solution.

Implementing an AOBRD immediately can be extremely beneficial for your drivers - not only is it making them safer on the roads, it will get them used to reporting their duty status electronically. This impact on your drivers should not be understated; it is very important to roll this out carefully so that you get buy in from your drivers and they understand the benefits of logging electronically and what the compliance rules will be.

On the plus side for your business, it will save you an incredible amount of time; electronically logging and submitting your records from an in-cab device is significantly quicker than writing everything down, delivering notes to the office and then being interpreted for analysis. In fact, drivers using ELDs save an estimated 20-40 minutes per day, adding around 50 hours per year to their drive time.

Phase 3: Full Compliance

After Dec 16, 2019, all drivers and carriers subject to the rule must use certified, registered ELDs that comply with requirements of the ELD regulations.

How an ELD works

▶ TELEMATICS DEVICE

ELDs come with a telematics device which connects to the vehicle's internal computer through an interface such as the J-Bus or the OBDII interface. The primary function of the device is to provide vehicle information to the ELD system such as when a driver switches on the vehicle, starts driving, how many miles they drive and when they stop the vehicle. This information is used to calculate drive duration and estimate the available drive time a driver has before he has to take a mandatory break.

The telematics device also includes GPS technology which tracks the vehicle's location, determines vehicle movement and tracks distance traveled.

IN-VEHICLE DISPLAY

An ELD system includes a display in the vehicle usually in the form of a tablet computer. Drivers are required to log into the system through the display at the beginning of their drive and update their status to indicate they are on duty. The available drive time for the driver is then shown on the display. When the driver exhausts their available drive time, the display changes to show that they have to stop and take a break. An alert can also be sent to the back office.

The display is connected to the telematics device either by hard wiring or through Wi-Fi.

CLOUD-BASED BACK OFFICE SYSTEM

An ELD system transmits HOS data to a database stored in the cloud. This data is accessible by Fleet Managers and supervisors through a computer program situated within a web browser. Back office systems can have different capabilities including running reports, sending alerts and displaying driver locations on a map. They enable drivers, dispatchers and supervisors to stay connected in real time.

⬡ Trimble.

BENEFITS TO THE DRIVER

Many drivers rely on memory when filling out logs. With ELDs, drivers will no longer need to worry about recording their drive times - the ELD does this automatically for them. The ELD also gives the driver a clear display indicating

- How long they have driven
- How many hours of drive time they have left
- When they need to take a break

This information is calculated automatically by the ELD and eliminates the need for drivers to spend time making calculations and verifying hours driven.

The convenience also extends to field inspections. Previously, drivers would typically hand over paper logs to a field inspector, but with ELDs, the inspector is able to receive a data transfer of logs which they can quickly verify.

MONITOR ACTIVITY

With ELDs, Fleet supervisors and managers receive the logs of their drivers in real time, and no longer have to wait for drivers to return from trips to hand in their logs. This information is stored in a database and the data can be used to monitor trends across the entire fleet even at different locations.

ELD data is also useful in the event of an audit. Federal regulations require carriers to retain at least six months of logs for all drivers in the organization. ELDs make this easy and hassle free.

IMPROVE SAFETY

ELDs help to keep drivers safe and reduce costly incidents. Driver behavior can be monitored and drivers can be encouraged to support good habits which help to

- Increase fuel efficiency
- Reduce idling time
- Improve utilization

It has been found that electronic logging devices can reduce violations by as much as 35%. In addition an ELD can save as much as 40 minutes per day for each driver; which can result in thousands of dollars a year in reduced costs.

CHOOSING A SOLUTION

The FMCSA has outlined a basic list of functions that all ELDs must provide, the primary function being the automatic recording of HOS logs. However, ELD systems in the market

35%
reduced violations

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today come with lots of value added functions. Understanding these functions can be critical for an organization investing in ELD devices. A good ELD system will not only help with compliance, but also identify other areas in which costs can be saved, thus improving the bottom line.

- **Driver-Vehicle Inspection Reports (DVIR):** The FMCSA mandates that drivers record the roadworthiness of their vehicles before each trip. This requires drivers to go through a check list of inspection points. An ELD allows drivers to perform this inspection checklist through the display, which is then uploaded to the cloud.

- **State Mileage:** For motor carriers that operate in more than one jurisdiction, it is required to file a quarterly fuel tax report detailing fuel use in each state. An ELD system will capture this data and create the reports automatically.

- **Driver Safety:** ELDs have vehicle hardware which can report on driver behavior such as speeding, harsh maneuvers, idling and utilization of the vehicle. Choosing a solution that does this can help monitor driving trends which in turn can help encouraging good driving habits, increasing safety for the driver and other commuters on the road.

- **Vehicle Diagnostics:** An ELD solution can offer real-time and retrospective reporting on fuel, carbon, odometer and fault codes. This allows organizations to be proactive in setting up maintenance plans and helps avoid costly downtimes due to unforeseen vehicle problems.

- **Fuel Efficiency:** By monitoring driver behavior and idle time, an ELD solution can identify trends which help organizations to encourage good driving habits in turn leading to better fuel efficiency in their fleets.
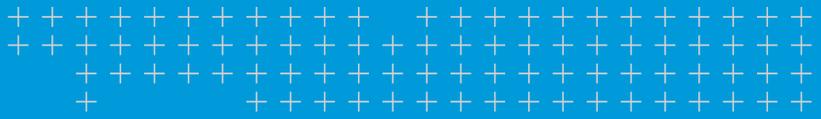
Trimble FieldMaster Logs

Trimble FieldMaster Logs allows drivers to comply with the Hours of Service (HOS) and Driver Vehicle Inspection Reports (DVIR) quickly and easily. An in-cab tablet display allows drivers to easily submit their hours of service which ensures they are compliant with all regulations. In addition, alerts will notify drivers when they are approaching their drive time limits to prevent fines and penalties.

FieldMaster Logs allows you to:

▶ Proactively prevent incidents by ensuring roadworthiness of vehicles and safe driving practices

▶ Comply with FMCSA HOS and DVIR legislation

▶ Enable drivers to easily enter and submit daily logs from tamper-proof in-cab devices

▶ Ensure accuracy and quick data sharing with the back office

Benefits

Safety
Companies have a duty of care towards their drivers, not to mention the fact that it could take just one serious incident to stop a business operating. FieldMaster Logs helps you proactively prevent incidents by ensuring the roadworthiness of your fleet and that safe driving practices are adhered to. In fact, the DOT believes that electronic logging devices will eliminate 1844 accidents a year, saving 26 lives and 562 injuries.

Compliance
The FMCSA mandates that every vehicle over 10,000lbs must use electronic logging devices to record hours of service (HOS) and driver vehicle inspection reports (DVIR). With the average fine for non-compliance at around $5000, FieldMaster Logs will ensure compliance to FMCSA 395.15 and 396.11 and thus prevent hefty fines.

Reliability
Using consumer tablets for HOS and DVIR recording can be problematic; as well as allowing distractions from other applications, you'll be reliant on the drivers charging their devices and keeping them safe. FieldMaster Logs allows drivers to submit daily logs from a dedicated, tamper-proof in-cab device which provides a more robust and secure option than consumer devices. A ruggedized tablet that remains in the vehicle eliminates problems in service, unproductive driver time and complex reprogramming when drivers swap vehicles.

Automation
Manual logging is time consuming and can cause inconsistencies. Relying on driver memory to report hours of service and decide when to stop for a rest is no longer a viable option. FieldMaster Logs automates record keeping, ensuring real-time access to drivers' duty status and driving history for audits and back office analysis. It also keeps drivers productive and reduces the amount of errors often found in paperwork.
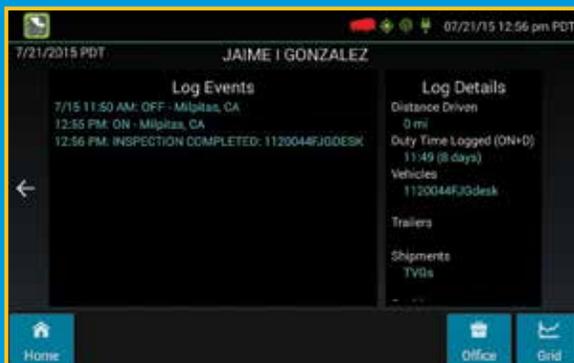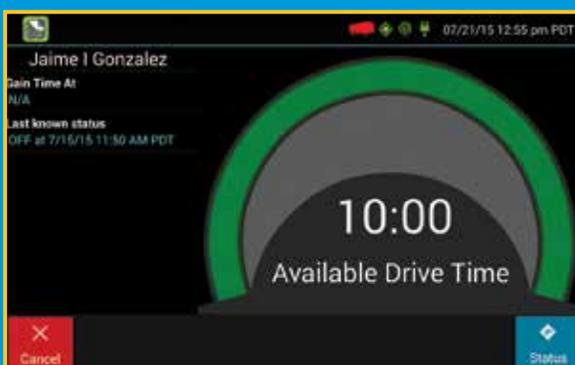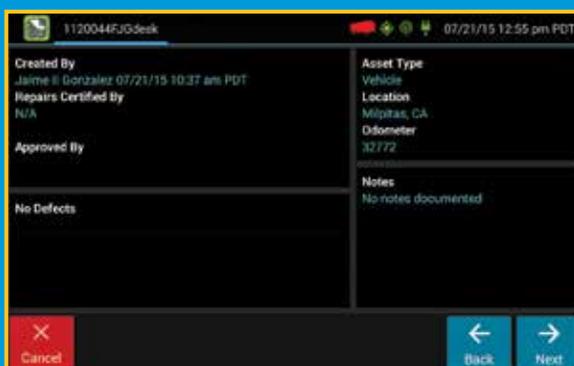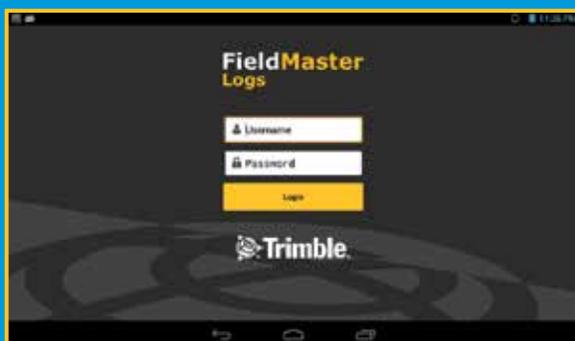
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MORE INFORMATION

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