



Understanding the FMCSA's Final Rule on ELDs

An Overview of Electronic Logging Devices (ELDs) and Compliance for Fleets

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Introduction

In December 2015, the Federal Motor Carrier Safety Administration (FMCSA) released the final ruling requiring the use of electronic logging devices (ELDs) for the commercial truck and bus industries. The final rule was implemented to improve road safety, strengthen compliance, and protect commercial drivers. To assist fleets in complying with the new regulations, Geotab has prepared this overview of the changes in the new regulations, including an electronic logging history and a comparison of the changes in the different rulings.

This paper addresses these important questions:

- What is an ELD?
- Who does the new ELD rule impact?
- What is the timeframe for compliance?
- What should motor carriers do to comply?
- What are the benefits of ELDs?
- How can Geotab help with HOS/DVIR compliance?

What is an ELD?

ELD = **E**lectronic **L**ogging **D**evice

An electronic logging device (ELD) is a device that attaches to a commercial motor vehicle (CMV) to synchronize with the engine and record Hours of Service (HOS).¹

As defined by the Federal Motor Carrier Safety Administration, a commercial motor vehicle (CMV) is a self-propelled or towed motor vehicle used on a highway for interstate commerce, transporting passengers or property, and meeting certain criteria for weight and design or use.²

The ELD facilitates considerably more accurate recording of all driver activity by providing “snapshots” of the vehicle’s location throughout the driver’s day.¹ ELDs automatically record driving time and monitor information such as location, engine hours, vehicle movement, and miles driven.



Who does the new ELD rule impact?

Essentially all CMV carriers that operate across state lines will be impacted.

Any driver who maintains 8 or more days worth of duty status logs, out of 30 days, will require an ELD.

Exemptions:

1. Driveaway-towaway operations are not required to use an ELD, provided the vehicle driven is part of the shipment; and
2. ELDs are not required on CMVs older than model year 2000.
3. Drivers who use paper RODS for not more than 8 days during any 30 day period.

What is the timeframe for compliance?

Motor carriers using paper logs are required to have ELDs installed and in use by December 2017. Fleets using AOBRD devices must be using certified, registered ELDs by December 2019.

ELD Timeline



Phase 1: Awareness and Transition Phase

The Awareness and Transition Phase lasts two years from the publication of the ELD rule (February 16, 2016 to December 18, 2017).⁸

Motor carriers and drivers subject to the rule can use any of the following for Records of Duty Status (RODS):⁸

- Paper logs
- Logging software
- AOBRD (Automatic On Board Recording Device)
- ELDs

Phase 2: Phased-In Compliance Phase

The Phased-In Compliance Phase refers to the two-year period from the Compliance Date to the Full Compliance Phase (four years following the ELD rule publication), December 18, 2017 to December 16, 2019.⁸

Motor carriers and drivers subject to the rule can use:

- AOBRDs that were installed prior to December 18, 2017.
- ELD

Phase 3: Full Compliance Phase

After December 16, 2019, all drivers and carriers subject to the rule must use certified, registered ELDs that comply with requirements of the ELD regulations.⁸

The FMCSA predicts that approximately 3.1 million Commercial Motor Vehicles (CMV) and 3.4 million drivers will be affected by this ruling.⁴

What should motor carriers do to comply?

The ELD ruling from the Federal Motor Carrier Safety Administration (FMCSA) will have a major impact on the industry.

As a motor carrier you will have to think about:

- | | |
|---|--|
| 1 | Cost for new ELDs |
| 2 | Automatic On-Board Recording Device (AOBRD) replacement cost |
| 3 | CMV driver training |
| 4 | Compliance monitoring |

Motor carriers who are affected should begin evaluating and selecting ELDs now so they can have them installed and all the drivers trained before the compliance deadline. The FMCSA provides an “[ELD Checklist for Carriers](#)” on their website which outlines the different actions that carriers should undertake to become compliant.¹⁰

Adopting ELDs can have great benefits for your fleet. ELDs will dramatically cut down on the amount of time spent on paperwork and inspections. Most importantly, using ELDs will enhance driver safety. With the automation and fleet insight provided by ELDs, motor carriers will also see improvements in overall fleet productivity and efficiency.

Benefits of ELDs

Paperwork Savings: More Drive Time, Lower Paper Costs

With ELDs, less time is required for processing paperwork and inspections — meaning more time for driving and taking care of business. Automatic logging minimizes the risk of errors. Less paperwork also adds up to cost savings!

More Drive Time	Drivers no longer have to fill out and submit paper RODS
Less Administration	Office staff no longer have to process paper RODS
Lower Paper Costs	Purchases of paper log books are no longer necessary

Increased Safety, Productivity and Compliance:

ELDs will have a major impact on road safety. The FMCSA estimates that the ELD rule will “save 26 lives and prevent 562 injuries resulting from crashes involving large commercial motor vehicles” each year on average.¹¹ With an ELD solution, fleet managers can see a more complete and accurate picture of their fleet’s activities, making management easier. ELDs increase Hours of Service (HOS) compliance, which prevents driver fatigue. Access to engine fault code information, allows fleets to proactively attend to engine issues early before they turn into costly repairs or vehicle down-time.

Benefits of ELDs: Safety, Productivity & Compliance

 Reduced Fatigue	HOS compliance prevents fatigued drivers from getting behind the wheel
 Automatic Recording	By automatically recording duty status, HOS compliance will increase
 Engine Fault Reporting	Allows for better vehicle maintenance

How can Geotab help with HOS/DVIR compliance?

Geotab Drive is Geotab's FMCSA compliant solution for Hours of Service (HOS), Driver Vehicle Inspection Reporting, and driver identification. The smart driver app syncs data between the Geotab GO device and a tablet to provide numerous functions, such as automatic duty status changes, violation alerts, among others, and complete end-to-end inspection workflow.

Please visit Geotab Drive on the [Geotab Marketplace](http://www.geotab.com/marketplace) (www.geotab.com/marketplace) to learn more. The application can also be found on the [Google Play Store](#) and [Apple iTunes store](#).



Geotab Drive Timeline

2013	2014	2015	Planned In 2016
+ Created Geotab Drive with two features: - DVIR - HOS + Added HOS Support for USA Property 60-hour / 7-day + Added HOS Support for USA Property 70-hour/8-day	+ Co-drivers + Added support for 16-hour exemption + Added Short-Haul Rule support + Added Passenger-Carrying Rule support + Added 30-min break counter	+ Availability report + Made "No HOS ruleset" + Geotab Drive for iOS released in Beta + Canadian HOS rulesets + Add-Ins + Released SDK for HOS/DVIR + California ruleset + Messaging + Editable DVIR Parts and Defects list + Dispatch	+ ELD compliance for new Rules and Regulations + Oil Field rulesets + Intrastate rulesets - Florida - Texas + Windows app + New Add-In Integrations

Conclusion

The newly released rule by the FMCSA sets out new regulations for the use of electronic logging devices (ELDs). This change will have many positive benefits for the transportation industry, including greater overall efficiency, compliance and safety. It is important for motor carriers who are affected to begin evaluating and selecting an ELD solution now so they can meet the deadline for compliance and start taking advantage of the time and cost savings related to ELDs.

We want to hear from you

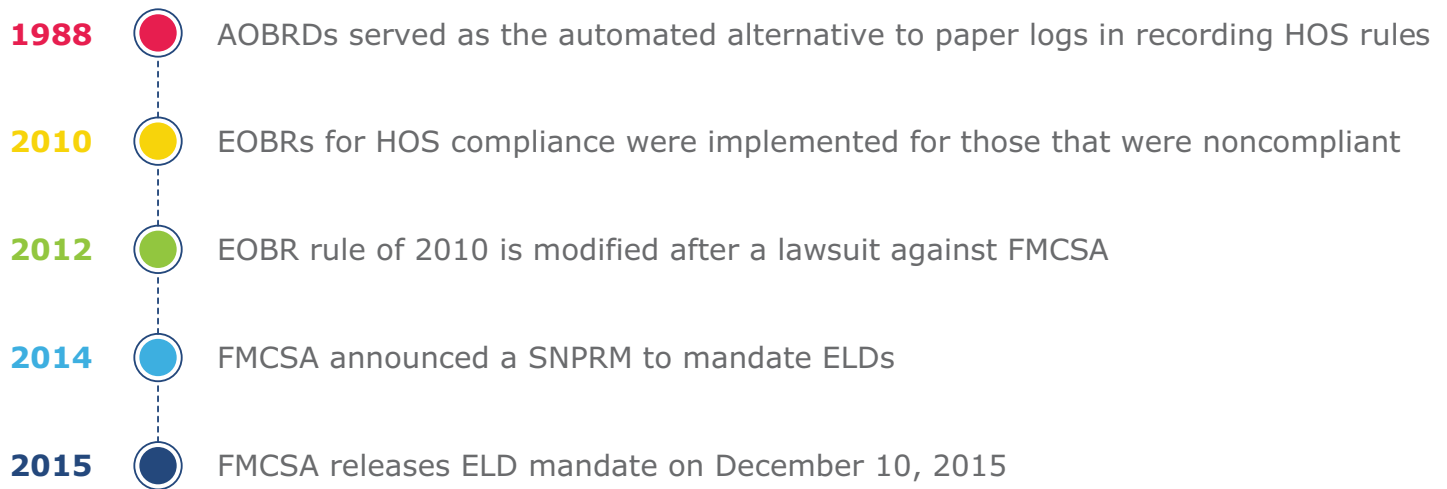
Email testdrive@geotab.com if you have any questions or comments about ELDs and the new regulations. Reach out to us on [Twitter](#) using @GEOTAB and the hashtag #ELD.

Visit our blog at www.geotab.com/blog for the latest insights on the HOS compliance and fleet management.

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Appendix 1: Electronic Logging History

FMCSA: Legislation Timeline



1988

Motor carriers began to use automated HOS recording devices in the mid-1980s to replace paper records. The Federal Highway Administration, the agency at that time responsible for motor carrier safety regulations, published a final rule in 1988 that defined AOBRDs and set forth performance standards for their use: September 30, 1988.⁵

2010

On April 5, 2010, FMCSA published a final rule entitled “Electronic On-Board Recorders for Hours-of-Service Compliance” (EOBRs). Among other changes, the April 2010 final rule:

Prescribed new performance standards for EOBRs installed in commercial motor vehicles (CMVs) manufactured on or after June 4, 2012;

1. Provided for the issuance of remedial directives to carriers that demonstrated noncompliance with Hours of Service rules at a prescribed level during the course of compliance reviews, requiring such carriers to use EOBRs for a 2-year period;
2. Altered the Agency’s safety fitness standard to take into account issuance of a remedial directive when determining a carrier’s fitness; and
3. Modified supporting document requirements and compliance review procedures for those carriers that voluntarily chose to use EOBRs.

The final rule took effect on June 4, 2010.⁶

2012

On May 14, 2012, the FMCSA formally rescinded its final rule requiring EOBR devices that was published on April 5, 2010, and amended September 13, 2010.

In a formal notice published in the [Federal Register](#), the FMCSA wrote: "This action responds to a decision of the Court of Appeals for the Seventh Circuit that vacated the April 2010 final rule."⁷

The FMCSA further noted, "The court found that FMCSA's failure to address the issue of harassment as part of the rulemaking—a factor the agency was required to address under [49 U.S.C. 31137\(a\)](#)—rendered the rulemaking arbitrary and capricious. Although the court's opinion focused on the remedial directive for carriers that demonstrated noncompliance with hours of service rules, the court vacated the entire rule."⁷

2014

On March 12, 2014, the FMCSA published a Supplemental Notice of Proposed Rulemaking (SNPRM) to mandate electronic logging devices.⁷

The development of the Electronic Logging Device mandate was part of the transportation reauthorization bill MAP-21 (Moving Ahead for Progress in the 21st Century) signed in 2012.⁷

The FMCSA published a formal proposal: Supplemental Notice of Proposed Rulemaking (SNPRM) on March 28, 2014, and asked for the public to make comments and suggestions. The comment period ended on June 26, 2014.⁷

2015

The White House Office of Management and Budget (OMB) received the rules from the Federal Motor Carrier Safety Administration on July 30 — the last step before official publication.⁷

FMCSA released the ELD mandate on December 10, 2015.

Appendix 2: Comparison of Functions & Features Defined By Rulings

1988 AOBRD Rule³

Integral Synchronization	Integral synchronization required, but term not defined in the FMCSRs.
Recording Location Information	Required at each change of duty status. Manual or automated.
Graph Grid Display	Not required — “time and sequence of duty status changes.”
HOS Driver Advisory Messages	Not addressed.
Device “Default” Duty Status	Not addressed.
Clock Time Drift	Not addressed.
Communication Methods	Not addressed — focused on interface between AOBRD support systems and printers.
Resistance to Tampering	AOBRD and support systems must be, to the maximum extent practicable, tamperproof.
Identification of Sensor Failures & Edited Data	Must identify sensor failures and edited data.

Integral Synchronization	Integral synchronization required, defined to specify signal source internal to the CMV.
Recording Location Information	Require automated entry at each change of duty status and at 60-minute intervals while CMV in motion.
Graph Grid Display	Not required on EOBR, digital file to generate graph grid on enforcement official's portable computer.
HOS Driver Advisory Messages	Requires notification at least 30 minutes before driver reaches 24-hour and 7/8 day driving and on-duty limits.
Device "Default" Duty Status	On-duty not driving when the vehicle is stationary (not moving and the engine is off) 5 minutes or more.
Clock Time Drift	Absolute deviation from the time base coordinated to UTC shall not exceed 10 minutes at any time.
Communication Methods	Wired: USB 2.0 implementing Mass Storage Class 08H for driverless operation. Wireless: IEEE 802.11g, CMRS.
Resistance to Tampering	Must not permit alteration or erasure of the original information collected concerning the driver's Hours of Service, or alteration of the source data streams used to provide that information.
Identification of Sensor Failures & Edited Data	The device/system must identify sensor failures and edited and annotated data when downloaded or reproduced in printed form.

Integral Synchronization	Integral synchronization interfacing with the CMV engine ECM, to automatically capture engine power status, vehicle motion status, miles driven, engine hours (CMVs older than model year 2000 exempted).
Recording Location Information	Require automated entry at: • each change of duty status • 60-minute intervals when CMV is in motion • engine-on and engine-off instances • beginning and end of personal use and yard moves
Graph Grid Display	An ELD must be able to present a graph grid of driver's daily duty status changes either on a display or on a printout.
HOS Driver Advisory Messages	HOS limits notification not required. "Unassigned driving times/miles" warning provided upon login.
Device "Default" Duty Status	On-duty not driving, when CMV has not been in-motion for 5 consecutive minutes, and driver has not responded to an ELD prompt within 1 minute. No other non-driver-initiated status change is allowed.
Clock Time Drift	ELD time must be synchronized to UTC, absolute deviation must not exceed 10 minutes at any point in time.
Communication Methods	1. Telematics: As a minimum, the ELD must transfer data via both wireless Web services and wireless email. 2. "Local Transfer": As a minimum, the ELD must transfer data via both USB 2.0 and Bluetooth. Both types of ELDs must be capable of displaying a standardized ELD data set to authorized safety officials via display or printout.
Resistance to Tampering	ELD must not permit alteration or erasure of the original information collected concerning the driver's ELD records or alteration of the source data streams used to provide that information. ELD must support data integrity check functions.
Identification of Sensor Failures & Edited Data	ELD must have the capability to monitor its compliance (engine connectivity, timing, positioning, etc.) for detectable malfunctions and data inconsistencies. ELD must record these occurrences.

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About Geotab

Geotab is a leading global provider of advanced, end-to-end telematics technology that helps businesses manage vehicles by extracting accurate, actionable intelligence from real-time and historical trips data. Collecting over 600 million data points daily, Geotab makes benchmarking data accessible to improve productivity, optimize fleets, enhance safety and achieve stronger regulatory compliance.

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This document reflects Geotab's understanding and interpretation of the ELD legislation at the time of writing. It is not legal advice and should not be relied upon as such. Planned functionality for Geotab Drive reflects Geotab's intentions at the time of writing, actual implemented functionality may differ.

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