ELECTRONIC LOGGING DEVICES (ELDs)
KEY DISCUSSION POINTS
NEW INDUSTRY MANDATE TO ELIMINATE PAPER LOGS
History

In 1998, Werner Enterprises became the first carrier to implement electronic logs, replacing traditional paper logbooks used by drivers to record work hours and activities. In 2004, after six years of testing, Werner was the first and only carrier granted exemption from running paper logbooks.

The electronic log system, connected via satellite through the onboard system and Global Positioning Systems (GPS), helps drivers use their time efficiently. The system enables load planners, fleet managers and drivers to pre-plan load assignments to maximize productivity within the legal driving hours of service limits.

The Mandate

The most recent highway reauthorization legislation, Moving Ahead for Progress in the 21st Century Act (MAP-21), mandated the Federal Motor Carrier Safety Administration (FMCSA) complete a rulemaking to require the use of electronic logging devices (ELDs) to monitor hours of service compliance.

Such a mandate is logical and appropriate. Previous FMCSA research has shown a strong correlation between compliance with the hours of service regulations (in place at the time, 2010) and safety outcomes. For this reason, the call for a mandate had broad support from the industry, law enforcement and consumer advocacy groups.
## ELDs at Werner

### Werner Taking Action

As one of the first adopters of ELDs, Werner is a strong advocate for their use in the industry and the impact they will have.

### at Werner...

- **$40M** Spent on safety

### In 2015...

- **$6M** Spent on crash prevention technology (forward collision technology and lane departure devices)

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**At Werner, we have experienced a 22% decrease in preventable DOT reportable crashes from 2007-2014.**

**WERNER 2004**

Werner is the first carrier granted exemption from paper logbooks.
2012
July: President Obama signs the Surface Transportation Act of 2012 mandating the use of electronic logging devices for hours of service logging

2013
August: FMCSA sends the proposal mandating ELDs to the Office of Management and Budget to review to ensure consistency with policies and the law

2014
March 28: Rules are published in the Federal Register kicking off a 60-day public comment period, which is extended through the end of July. After the public comment period, FMCSA adjusts the technical specifications/rules

2015
December: Final ELD rules announced after repeated delays

2017
December: The date that ELDs are required for those still using paper logs

2019
December: Those using legacy on-board systems (automatic on-board recording devices or AOBRDs) must be equipped with ELDs

“This regulation will change the trucking industry – for the better – forever. An already safe and efficient industry will get more so with the aid of this proven technology.” –ATA President and CEO Bill Graves

Sources: Rand McNally, Commercial Carrier Journal
### Rules, Regulations and Requirements of ELDs

#### Rules
- Automatically record a commercial driver's hours of service (HOS)
- Automatically log the record of duty status (RODS)
- Devices are a combination electronic, electromechanical or mechanical and must be capable of recording and reporting RODS status information automatically
- **49 CFR 395.15** The device must be integrated into the operation of the commercial motor vehicle (CMV) in which it is installed

#### Regulations
- Must be certified and registered with the FMCSA and be DOT certified
- Each ELD model must have a unique registration number that can be found on its display or via printout
- Manufacturers are responsible for registering their ELDs with the FMCSA and certifying that they meet the technical specifications set forth in the ELD rule
- New ELD mandate specifies new requirements for ELD hardware and requires all commercial vehicles have an ELD installed to replace current paper log systems

#### Minimum Requirements
- Engine hours
- Road speed
- Miles driven
- Date and time of day

#### Exceptions to the ELD Mandate
- Drivers who use paper logs for less than 8 days during a 30 day period
- Drivers who conduct drive-away/tow-away operations where the vehicle is the product being delivered
- Drivers of vehicles manufactured before model year 2000
- (due to vehicle connectivity concerns; changed from original rule)
- Drivers who operate using the logbook timecard exception (i.e. short-haul 100/150 – air mile drivers)
ELDs

An ELD Must

- Connect to the truck’s engine to record motion
- Allow the driver to log in and select on-duty, off-duty or on-duty not driving (drive segments must be automatically selected based on drive segments)
- Graphically display a record of duty status so a driver can quickly see hours in a day
- Provide data in a format that’s standardized and can be transmitted to law enforcement in a number of prescribed ways (wireless Web services, USB/Bluetooth 2.0)
- Be provider certified that the device meets the proper specifications
- Be listed on an FMCSA website

Additional Information

- Location of the tractor when a duty status is changed
- Date and time of events and changes in duty status
- Total miles driven each day
- Truck and trailer ID information
- Motor carrier information including carrier name and address
- 24-hour period starting time
- Name of co-driver (if any)
- Summary of hours in each duty status for last 24 hours
- Shipping document numbers and/or name of shipper and cargo
- Transfer data roadside via Bluetooth device, wireless Web service and/or email

Information and Data Provided by ELDs
Benefits

Safety

- Maintaining accurate HOS records can help minimize driver fatigue and reduce potential accidents
- A recent DOT study using data from 11 carriers of varying sizes who have installed ELDs in their trucks found that crashes decreased by 11%
- ELDs can help reduce truck speed by alerting the driver and the fleet manager with current speed, speed is the biggest factor in 1/3 of crashes (some fleets reported a 90% speed reduction)

Communication and Efficiency

- ELDs can help alert fleet owners and managers if unsafe and wasteful driving is occurring during a trip
- Can monitor unproductive idling time
- Optimize route planning and driver’s hours to current loads

Compliance

- One of the original reasons for creating ELDs was to improve HOS compliance
- EHSR-equipped trucks had 53% less driving-related HOS violations, saving both drivers and fleets money
Exempt Status
Exempt from using ELDs because they meet one of the short-haul exemptions in 395.1 (e).

Required To Use ELDs

- Any driver required to keep records of duty status
  (approx. 3.1 million drivers)
- Drivers who keep RODS for more than 8 days in any 30 day period
- Users of rental equipment (no reference to short-term rental)
- Drivers who fall under short-haul regulation, no RODS required

Short-haul drivers not required to complete logs today
The Components of Cost

When EOBRs and AOBRDs first appeared over 20 years ago, it was common for fleets to pay $2,000+ per device, the same does not hold true today.

**Compliance**
- In preparation for the ELD mandate, the FMCSA examined similar HOS logging devices to set a benchmark for what fleets can expect to pay annually.
- The cost of non-compliance outweighs the cost of compliance.

**Technology**
- Integration of smartphone technology has allowed for a drastic reduction in ELD cost.
- According to the FMCSA, ELDs will save the trucking industry an average of $3.4B annually through accident reduction and paperwork reduction.
- Even with technology enhancements it is still important to do a price evaluation as there can be hidden fees.

**Fleet Size**
- Initial cost to install ELDs in a large fleet will be high.
- Pricing on ELDs can be negotiable if there are a large number of ELDs needed.
- With the learning curve will come training for drivers, dispatchers and enforcement personnel.
- Parking concerns for units that must stop for required breaks.
## 5 Price Factors to Consider When Evaluating ELDs

<table>
<thead>
<tr>
<th>Price Factor</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Contract Length</strong></td>
<td>Most providers require users to commit to a contract of varying lengths.</td>
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<tr>
<td><strong>Upfront Hardware Cost</strong></td>
<td>Some companies charge a baseline fee for the ELD hardware on top of installation, training and monthly costs. However, many providers offer hardware for free because their systems leverage a driver’s smartphone, which can greatly save on the bottom line.</td>
</tr>
<tr>
<td><strong>Monthly Fees</strong></td>
<td>Every provider charges a monthly service fee, which can range anywhere from $20-$100 per month. A high monthly fee in addition to hardware and installation costs can be a substantial investment.</td>
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<tr>
<td><strong>Installation Fees</strong></td>
<td>Installation fees often account for the majority of the hidden costs. Some companies charge over $1,000 and require professional installation. Not only does this add to the cost of the ELD but it also means waiting months before you actually get the device installed.</td>
</tr>
<tr>
<td><strong>Training Costs and Hidden Fees</strong></td>
<td>All ELD systems require minimal training, they’re intuitive and drivers quickly learn them. However, legacy providers charge extra for training because older systems tend to have a larger learning curve.</td>
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### Managing ELDs

<table>
<thead>
<tr>
<th>What if there is an ELD failure?</th>
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<tbody>
<tr>
<td>- Properly record the failure of the device</td>
</tr>
<tr>
<td>- Reconstruct the HOS logs for the current day and the previous seven days or back to the</td>
</tr>
<tr>
<td>point where records are available from the ELD</td>
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<tr>
<td>- Switch to manual handwritten logs until the ELD device is repaired or replaced</td>
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<tr>
<td>- ELD must provide visual or audible indication of malfunction</td>
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<tr>
<th>Do drivers have control over their log entries?</th>
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<tr>
<td>- Drivers can make edits and annotations to their electronic logs but they cannot overwrite</td>
</tr>
<tr>
<td>or erase the original record</td>
</tr>
<tr>
<td>- The employer or dispatcher will be able to request and edit or annotate but the driver</td>
</tr>
<tr>
<td>must approve the changes</td>
</tr>
<tr>
<td>- The driver is responsible for the electronic log</td>
</tr>
</tbody>
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<tr>
<th>How can the driver rest in the sleeper berth with an ELD on?</th>
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<tr>
<td>- There are a number of provisions to guard against harassment of drivers, it requires</td>
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<tr>
<td>ELDs to either automatically mute or allow a driver to turn off or mute the volume on the</td>
</tr>
<tr>
<td>ELD when they have logged into the sleeper berth status</td>
</tr>
<tr>
<td>- The rule prohibits carriers from using information from the ELD to pressure drivers into</td>
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<tr>
<td>violating the law</td>
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Is there a new driving status?

The rule allows authorized use of a commercial motor vehicle for personal conveyance; it will be recorded as off-duty time. Also, the rule created a category defined as “Yard Moves,” which records vehicles used in a closed facility with restricted access as on-duty, not driving. (This is very important because the ELD senses motion and starts a drive status which will need to be accounted for).

A driver must have in the cab:

- Manual
  - A user manual that explains how to operate the ELD

- Instructions
  - Instruction on how to transmit data

- Logs
  - Blank paper logs

Source: Zonar Systems
### AOBRDs vs. ELDs

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<th><strong>AOBRD</strong></th>
<th><strong>Vs.</strong></th>
<th><strong>ELD</strong></th>
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<tr>
<td>Gets data from the vehicle</td>
<td><strong>Get</strong>s data from the vehicle (ECM for model 2000 or newer)</td>
<td></td>
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<tr>
<td>Manual or automatic locations for duty changes</td>
<td>Automatic “data capture,” which includes location for duty changes</td>
<td></td>
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<tr>
<td>No location fixes when operating</td>
<td>Data capture once per hour when in operation</td>
<td></td>
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<tr>
<td>No grid-graph requirement</td>
<td>Grid-graph required</td>
<td></td>
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<tr>
<td>No required “prompts”</td>
<td>Driver prompted for entries</td>
<td></td>
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<tr>
<td>Only “default” required is driving</td>
<td>Default to driving and on-duty when stopping driving</td>
<td></td>
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<tr>
<td>Display only, enforcement officer must request records from carrier</td>
<td>Device must provide records to law enforcement during inspections</td>
<td></td>
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