TruxBox ELD User manual
Version 02.18.002

Device: TruxBox ELD TT1.01

# Table of Contents

# How it works

1. Create an account by signing up at www.truxtrax.com
   - Enter your company information.
   - Add your first vehicle, driver, and trailer (optional) to complete the registration process.

   After you complete your registration you may continue to add as many vehicles, drivers and trailers in your dashboard as needed.
   - Each vehicle you create will have its **own unique PIN number** once that you click on SAVE.
   - PIN numbers are for vehicles. So when a driver jumps into a vehicle **they will need to log into to the mobile app using that vehicle PIN.**
   - You need to **add all your drivers that will be driving** your vehicles so that they can open logbook in their name from the mobile app.

2. Order ELD Devices by visiting www.truxtrax.com/shop
   - You will need to order one ELD device per vehicle to be fully FMCSA compliant under the ELD mandate.
   - Our ELD devices are designed to be "plug n' Play" and can be easily installed.
   - Our ELD devices sync via Bluetooth(BLE) to the TruxTrax mobile app
   - DO NOT pair the ELD device directly to your smart phone or tablet

3. Then download the TruxTrax app from the **App Store®** or **Google play®** for each mobile device you require. TruxTrax is a BYOD platform; which means you use our mobile on your own smartphone or tablet.
   - Each vehicle is required to have a smartphone or tablet for the driver(s) to use
   - Our mobile app will use less then 1g of data per month.

## Additional information:

- Please keep a copy of this user manual in each vehicle. It is available for download at www.truxtrax.com/support
- Please keep a copy of the ELD Data Diagnostics/Malfunction Management sheet in each vehicle. It is available for download at www.truxtrax.com/support
- Drivers are required to have blank drivers' records of duty status forms with graph-grids and duty status with throughout their trip in the event of an unlikely technological barrier preventing them from using the mobile application and ELD.

# Creating an account

- Visit www.truxtrax.com and click **Sign in/Sign up**, and then click on **Register**. Or download the TruxTrax app from the **App Store®** or **Google play®**

- Create an account by entering your company or individual contact information. You will be asked to create a vehicle and trailer as well at the time of registration however you may skip these steps. You will be required to enter the information for at least one driver.

# Your Dashboard

## Menu

The menu is located the upper right corner of the dashboard and contains 3 options

- Settings
  - o Set the default time zone for your dashboard and your mobile application(s)
  - o Set the default units of measurement for distance, fuel and temperature for your dashboard and your mobile application(s)
  - o Set your default USA driving cycle, Canadian driving cycle, and data push intervals for your dashboard and your mobile application(s)
- Profile
  - o Manage your email(username) and password for your account
  - o Manage your company contact information
  - o Manage your company DOT, IFTA and IRP numbers
- Account
  - o Manage your billing information
  - o Manage your subscriptions
  - o Manage your order history
  - o Access to the support centre
  - o Access to the online ELD store

## En-route

This section allows you to track your vehicles location and route in real-time.

- Click on a vehicle from your vehicle list or zoom in to the map to locate a vehicle.
- By clicking on the vehicle icon on the map you may obtain and edit their trip information, send the driver an instant message, show the route detail and mileage details.
  - o **Trip info** will allow you to view general trip information, fuel, expenses, and state mileage.
  - o **Message** will allow you to send a direct message to the vehicles drivers
  - o **Show route** will show you the route the vehicle has driven today. By select a previous day from the calendar on the bottom right of the screen, you will be able to see historical routes.
  - o **Distance** will allow you to obtain directions between two locations and obtain the state mileage between those two locations.

## Chat

This section allows to message one driver or the entire fleet at the same time. Drivers' access and reply to these messages via the mobile app in the messages section. This application support photos and videos.

## Alerts

This section is used to program an alert for when a driver arrives at a certain destination, has covered a certain distance or a date for a vehicle inspection, maintenance, load delivery. A "Geo fence" attribute can be used to alert you of certain events. Events can be based on location, distance or date.

- Click on the **+Add** button in the header of the ALERTS section page.
- Select Location, Distance, or Date.
  - o Location:
    - Name your Alert
    - Select a vehicle or vehicles to which this alert should apply

- Zoom in to a location on the map to pin point a location
- Use your mouse and click on the location to increase or reduce your blue zone
- The blue zone is the geo-fenced area which will trigger the alert
  - Distance
    - Name your Alert
    - Select a vehicle or vehicles to which this alert should apply
    - Select the distance unit of measurement (MI or KM)
    - Enter to amount of distance to pass to trigger the alert
  - Date
    - Name your Alert
    - Select a vehicle or vehicles to which this alert should apply
    - Enter the date and time of which the alert should occur
    - Select the frequency of the alert

## Drivers

General tab

This section is where you add, edit and delete driver profiles. These functions are located in the header of the screen. The drivers that you enter in this section will appear in the mobile app when selecting a driver for Logbook 1 or Logbook 2

The minimum requirement for driver information is their first and last names. Many other information fields are available to you to have a complete driver profile.

You may also assign individual PIN numbers to drivers. Driver will use this PIN number when opening a logbook after having logged into the app with the vehicle PIN number.

Logbook tab

This section allows you to view and edit the select drivers' electronic logbook.

- Click on **Export to pdf** from the header of the screen to generate a printable version of the drivers log
- Click on **Edit** from the header of the screen to edit the drivers logbook
- Drivers will receive a notification that their logbook was edited with an option to accept or reject the modification

## Vehicles

This section is where you add, edit and delete vehicle profiles. These functions are located in the header of the screen. The minimum requirement for vehicle information is the ID, Fuel type and style. Many other information fields are available to you to have a complete vehicle profile.

- Inside each vehicle profile page is a unique **PIN** number that is needed to log in to the mobile app.
- A vehicle **PIN** number may only be used on one smartphone or tablet at a time. Drivers must log completely out of the app to be able to use this **PIN** number on a different device.
- The **Unlink** button is used to free the PIN number from a smartphone or tablet that may be still currently logged in.

## Trailers

This section is where you add, edit and delete trailer profiles. These functions are located in the header of the screen. This section is not obligatory and can be used if desired.

## History

This section is used to generate Trip, Fuel, and Mileage reports as well as provide historical data on routes taken by a specific vehicle.

This data reflected in this section is dependent on the Trip tools function of the mobile app. Therefor the driver must start and finish trips, add fuel and expenses for the data to be complete.

- Select the date range and vehicle filters from the left hand side of the screen for the data period that you wish to see for each vehicles trip.
- Then navigate through the tabs that appear on the right side of the screen for the summary, route, state mileage, fuel, and expenses reports that you wish to query.

- Drivers may use the app to take pictures of receipts for expenses and fuel inside the trip tools section. These pictures will be filed in the documents tab

If you do not see any trip dates to choose from on the left hand side of the screen, this means the drivers have not employed the trip tool function on the mobile app

## Reports

This section is used to generate fleet wide reports on IFTA, Mileage and Fuel. This data reflected in this section is dependent on the Trip tools function of the mobile app. Therefor the driver must start and finish trips, add fuel and expenses for the data to be complete.

- Select the date range and vehicle filters from the left hand side of the screen for the data period that you wish to run a report on.
- You may run reports for one, many or all vehicles for mileage, fuel and IFTA
- Navigate through the tabs that appear on top of the screen for the mileage, fuel, and IFTA reports that you wish to run.

# TruxTrax Mobile Application

## Logging in

The first screen on the mobile app is the login page. Drivers need to log into the app using the PIN number for the vehicle they are driving.

- **PIN** numbers for each vehicle are generated every time a new vehicle is created in the **Vehicles** section of the Dashboard
- Once a new vehicle is created, the **PIN** number for that vehicle is now visible in the vehicle profile
- Make sure that your drivers have the correct **PIN** number for the Vehicle they will be driving
- A vehicle **PIN** number may only be used on one smartphone or tablet at a time. Drivers must log completely out of the app to be able to use this **PIN** number on a different device.

## Connect ELD device

This screen contains the first step to connecting a TruxBox ELD device to your vehicle and mobile application.

- If you have a TruxBox ELD device, please follow the steps on screen and click **CONNECT**
- If you do not have a TruxBox ELD device please tap on **SKIP**

If you have a TruxBox ELD device, this is the process to connect it successfully.

1. Plug your ELD device into the diagnostic port of your vehicle. This port requires a 9 pin or 16 pin adaptor and is usually located under the dashboard either on the right or left hand side of the driver's side of the vehicle,
2. Make sure your Bluetooth is ON in your smartphone or tablet on which you are using the mobile application. DO NOT attempt to pair the ELD device directly to your smartphone or tablet.
3. Turn the ignition key of your vehicle into the on position without cranking the engine.
4. Tap on CONNECT from this screen.
5. Tap on the ELD device shown to you to connect.
6. Confirm or correct your vehicles VIN number.
7. Confirm your vehicles odometer. If the odometer reading is inaccurate, please tap on confirm regardless. You can enter a manual odometer reading inside your logbook.
8. Confirm your engine hours. If the engine hours reading is inaccurate, please tap on confirm regardless. You can enter manually your engine hours reading inside your logbook.

Once you have completed this process your ELD device will be successfully connected and will have a solid green light on the ELD. You may continue to use the TruxTrax mobile app in full compliance.

## Main driver screen

This is the main screen that is designed to provide drivers with a quick access to the functions available to them. This screen contains the following features:

- HOS dials for ease of access to duty hours
- Quick access buttons to Logbooks, Shipment info, Trip tools, Messages and ELD connection status
- Red triangle alerts for compliance issues
- Blue circle alerts for items that need your attention like messages or notifications.

To begin using the app, you must first open a logbook and select the active driver

1. Tap on **LOGBOOK 1** to select a driver and open this logbook for the selected driver.
2. Tap on **LOGBOOK 2** if there is a co-driver.
3. The driver selected for **LOGBOOK 1** will be the active driver by default. If there is a co-driver selected for LOGBOOK 2, you can switch who is the active driver by tap on the **ACTIVE DRIVER** button.

The main dial on the screen represents the current status for the current driver.

- Tap on the **DUTY STATUS** button below the main dial to select your desired status.
- **DRIVING** status will show the driving time as a countdown to illustrate how much time of driving is available before the next off duty time is required.
- **ON, OFF, SB, YM and PC** status's will count upwards to illustrate how much time has elapsed in that status.

The 3 right side dials countdown driving, shift and cycle time that is available to you.

An on screen tutorial will appear the first time a driver logs into to the app to show the driver the steps on how to get started.

## Logbook

### Opening a logbook

Two Logbook buttons (LOGBOOK 1 & LOGBOOK) are made available to drivers of the vehicle. In the case of team driving, one (1) smartphone or tablet can be used and each driver has their own respective logbook. For singles driving simply use 1 logbook.

1. Tap on **LOGBOOK 1** to select a driver and open this logbook for the selected driver.
2. Tap on **LOGBOOK 2** if there is a co-driver.

If your company administrator has entered individual PIN number for drivers, the driver will be required to enter their PIN number when they open a log book.

### Duty status

The duty buttons directly beneath the graph can be used to set the current status of the driver instead of using the quick access button to change duty status on the main screen.

When a driver begins and ends his daily shift he is to put his status as ON DUTY by tapping ON from the logbook page or selecting ON DUTY from the main screen. Use this status to complete any pre-trip inspection.

If an ELD device is NOT in use, the driver must manually change all duty status's as they occur.

If an ELD device is in use, the ELD will automatically change the duty status to DRIVING once the vehicle begins moving more than 5pmh.

The driver must change his status manually for every other status such as:

- When starting a shift and completing a pre-trip inspection – change status to ON (on duty)
- When stopping the vehicle to fuel up – change status to ON (on duty)
- When stopping the vehicle at the end of shift for a post trip inspection – Change to ON (on duty)
- When stopping the vehicle to go on a break – change status to OFF (off duty)
- When stopping the vehicle at the end of your shift – change status to OFF (off duty) or SB (sleeper berth)
- When moving your vehicle around a shipping yard – change status to YM (yard moves)
- When using your vehicle for personal use – change status to PC (personal conveyance)

For more information regarding Hours of Service rules and Duty Status please refer to the following

USA: https://www.fmcsa.dot.gov/regulations/hours-of-service

Canada: http://laws-lois.justice.gc.ca/eng/regulations/SOR-2005-313/

**Editing a duty status**

Editing a logbook can be done by the driver for his own logbook. Please note that **all manual changes to the duty status will be logged** and **all original duty statuses will be marked as modified** and included in the ELD file upon a roadside inspection. Original duty status record may never be deleted as required by law.

- To simply change a duty status without changing its length (ex: change ON Duty to OFF Duty)
    o Tap on the duty status you wish to modify from the event list below the logbook graph.
    o On this screen tap on the status you wish to change it to.
    o Enter an annotation as to why you made this change.
    o Click save.

- To make the length of a duty status shorter you must make the duty status which occurred after to start earlier.

    *Example:*
    *You were ON Duty for 30 Minutes from 12:00 to 12:30 and then DRIVING for 2 hours from 12:30 to 02:30.*
    *You then realized that you were actually only on duty for 15 minutes and started driving at 12:15.*
    *So instead of shrinking the ON Duty status, you must make the DRIVING status start earlier.*

    o Tap on the DRIVING duty status from the event list below the logbook graph.
    o Set the start time on this status to start at 12:15.
    o Enter an annotation as to why you made this change.
    o Click save.

- To make the length of a duty status longer (ex: Change ON Duty status from 15min to 30min)
    o Tap on the duty status you wish to modify from the event list below the logbook graph.
    o Set the end time to your desired later time
    o Enter an annotation as to why you made this change.
    o Click save.

    NOTE: This action will make the duty status which occurred after the status you modified, shorter by the amount of time you added to the modified status.

**Editing your logbook**

There is important information for your logbook that must be completed in order to have a compliant logbook report when you are inspected at roadside.

- Tap on the menu button in the upper right corner of the logbook page (3 white dots)
- Tap on **Edit Logbook**
    o Adjust your HOS cycle
    o Modify/complete driver information
    o Modify/complete vehicle information
    o Modify/complete your start and end of day odometer and engine hours readings
- Tap on **Save**

If any important information is missing from this section, a red warning triangle will appear at the top of the logbook page.

**Certification of records**

A drivers' logbook must be certified at the end of each shift at a minimum. However a driver must certify his logbook before presenting his records of duty to status to an official at a roadside inspection.

The red warning triangle will always appear at the top of the drivers' logbook to remind the driver to certify his logbook.

- Tap on the menu button in the upper right corner of the logbook page (3 white dots).
- Tap on certification of records.
    - Or tap directly on the red warning triangle.
- Tap on AGREE if you are ready to sign off your logbook.

Once you certifying your logbook, the red warning triangle will disappear. However moment that there is a change to the logbook after certification (ex: a new duty status), the red warning triangle will appear again to remind you to certify your logbook.

**New status**

This function will allow you to enter a new status in your logbook in a time slot that is occupied by another status.

*Example:*
*The time is now 6pm. Your logbook has on ON Duty status from 1:00pm to 3:00pm. You realized that you have forgotten to enter your 30 min break at 2:00pm in your logbook.*

- Tap on the menu button in the upper right corner of the logbook page (3 white dots).
- Tap on new status
    - Tap on OFF (off duty)
    - Set the start time to 2:00pm
    - Set the End time to 2:30pm
    - Enter an annotation as to why you made this change.
    - Click save.

This new OFF Duty status has now been created and is reflected on your graph and logbook events.

**New Inspection**

This function allows you to create pre-trip and post-trip inspections while you are ON DUTY.

- Tap on the menu button in the upper right corner of the logbook page (3 white dots).
- Tap on new status
    - Set the time and location
    - Set your odometer and engine hours
    - Specify if it is pre-trip or post trip inspection
    - Enter vehicle information and select any defects from the list
    - Enter trailer information and select any defects from the list
    - Tap on Sign & Save
    - Certify your inspection (Tap on Agree or Not ready)

This pre-trip or post-trip inspection will appear as a green circle on your logbook graph and, this event will appear in the DVIR section of your logbook.

**Roadside inspection**

Drivers' will be required to prepare their logbook for a roadside inspection upon request by an official. An official may ask the driver show them their logs or to transfer their logs via email or web services.

If an official requests that the driver show them their logs:

- Tap on the menu button in the upper right corner of the logbook page (3 white dots).
- Tap on roadside inspection
    - Tap on the **DISPLAY** tab
    - Select the date range as requested (today, +7days or +14days)
    - Tap **OPEN PDF**

The PDF that opens up will reflect all of the required compliance data for the selected date range. This PDF can be saved to the drivers' device for future reference, to be printed or to be emailed to a company representative.

<u>If an official requests that the driver transfers their log via email or web services:</u>

- Tap on the menu button in the upper right corner of the logbook page (3 white dots).
- Tap on roadside inspection
    - Tap on the **TRANSFER** tab
    - Select Email or Web services
        - If Email is selected, the official is to provide a reference number for the subject line
        - If Web services is selected you may add a reference number in the comments
    - Click Send

The TruxTrax application is connected to the FMCSA web services gateway and the inspection official will receive your logbook file in the correct and compliant format.

**HOS Recap**

The function shows you a representation of your Hours of service by illustrating your break time, available driving time, available shift and driving time. As well as a list of your accumulated daily ON DUTY time.

Tap on the menu button in the upper right corner of the logbook page (3 white dots) and then tap on HOS recap to access this section

**Driver profile**

This function allows you to edit your driver profile directly from the mobile application.

- Tap on the menu button in the upper right corner of the logbook page (3 white dots).
- Tap on Driver profile
    - Edit your driver information
    - Click save

If any important information is missing from this section, a red warning triangle will appear at the top of the logbook page.

**Close logbook**

The close logbook function is used for when you wish to close your logbook for an extended period of time, such as a couple of days OFF DUTY or when you need to completely sign out of the app to let another driver log in using this vehicle PIN Number

- Tap on the menu button in the upper right corner of the logbook page (3 white dots).
- Tap on Close logbook

Once you close your logbook you will be able to sign out of the app completely. Be sure that when you close your logbook, that your last recorded duty status is NOT the DRIVING status.

# Shipment info

This section if for you to manage your shipment info. The driver can update this information as much that is needed. Information that is gathered in this section is mandatory for compliance such as:

- Trailers
- Departure & Destination
- Shipper
- Shipping document number
- Commodity type
- Seal number

Mandatory fields are indicated by the blue circle icon on the shipment info screen.

# Trip tools

This section is an optional feature that is used to calculate mileage by State/Province, Fuel and Expenses to generate trip and IFTA reports for your convenience. There is no set rule for how you wish to organise your trips. This is entirely up to the user.

A driver can start a trip when they leave the home terminal and stop the trip when they return, or start and stop trips for every delivery and pick up they do. Trips can also be paused if there is some downtime between loads.

- Tap on **TRIP TOOLS** from the home screen and tap **START**
- On this screen you will see your total distance and state mileage calculation, as well as fuel and expense costs
- You may add mileage, fuel, add expenses, notes, edit your trip, pause your trip and stop your trip.
- When adding fuel or expenses, there is an option to take a picture of the receipt which will be pushed to your dashboard in the **HISTORY** section under the **DOCUMENTS** tab

## ELD

This section shows you the status of your ELD connection. This "read-only" section contains 3 tabs

- **General**: which shows your RPM's, Speed, Odometer, Engine hours and VIN
- **Unidentified driver:** shows duty status events that were recorded by the ELD when no logbook was opened by a driver; or the ELD captured event which was rejected by the driver. These events cannot be deleted as required by law.
- **Malfunctions:** shows you ELD data diagnostic or malfunction events. These events cannot be deleted as required by law. However certain events need to be cleared by the driver to assure the ELD is working correctly. Please see section **ELD DATA DIAGNOSTICS / MALFUNCTION MANAGEMENT** of this document

This section will show 3 types of icons on the main screen.

- Green check mark circle which indicates you ELD is connected successfully
- A red X circle indicates that there is no ELD device connected
- A red warning triangle indicates that there is a data diagnostic event or malfunction or unidentified driver status that needs your attention. Tap on the **MALFUNCTIONS** tab and you will see the data diagnostic event, malfunction or unidentified driver status. Please see section **ELD DATA DIAGNOSTICS / MALFUNCTION MANAGEMENT** of this document

Note that the ELD Data diagnostic/ Malfunction Management only englobes events regarding the ELD device itself and not the mobile device.

If your ELD device gives you a message stating **FAILED TO CONNECT** and LED light on the ELD box is blinking red and green, please **UNPLUG your ELD device** from the diagnostic port and re-do the connection steps

1. Plug your ELD device into the diagnostic port of your vehicle. This port requires a 9 pin or 16 pin adaptor and is usually located under the dashboard either on the right or left hand side of the driver's side of the vehicle,
2. Make sure your Bluetooth is ON in your smartphone or tablet on which you are using the mobile application. DO NOT attempt to pair the ELD device directly to your smartphone or tablet.
3. Turn the ignition key of your vehicle into the on position without cranking the engine.
4. Tap on CONNECT from this screen.
5. Tap on the ELD device shown to you to connect.
6. Confirm or correct your vehicles VIN number.
7. Confirm your vehicles odometer. If the odometer reading is inaccurate, please tap on confirm regardless. You can enter a manual odometer reading inside your logbook.
8. Confirm your engine hours. If the engine hours reading is inaccurate, please tap on confirm regardless. You can enter manually your engine hours reading inside your logbook.

Once you have completed this process your ELD device will be successfully connected and will have a solid green light on the ELD. You may continue to use the TruxTrax mobile app in full compliance.

## Messages

This section contains 2 tabs

- **Chat**: which allows the driver and dispatch to communicate messages and pictures
- **Notifications:** which pushes important messages from TruxTrax to the driver regarding updates and service issues

## Settings

Located in the upper right corner of the main screen in the form of an icon which resembles a gear, are the settings for your app.

- Adjust your settings for Mi. vs KM for mileage, fuel volume and cost.
- Adjust your notifications settings for sounds and what type of alert
- Sign out, sharing and sending feedback features

# ELD data diagnostics / Malfunction management

TruxTrax provides the ELD Data Diagnostics/Malfunction Management sheet and User Manual for drivers which is available for download from the support centre at www.truxtrax.com/support. TruxTrax recommends that each driver has a printed version of the ELD Data Diagnostics/Malfunction Management sheet and User Manual which they can present to an inspection officer during a roadside inspection and for trouble shooting case of an ELD malfunction or any assistance that is needed.

A motor carrier must ensure that its drivers possess onboard a commercial motor vehicle an ELD information packet containing the user manual for the driver describing how to operate the ELD; An instruction sheet for the driver describing ELD malfunction reporting requirements and recordkeeping procedures during ELD malfunctions; and a supply of blank driver's records of duty status graph-grids sufficient to record the driver's duty status and other related information for a minimum of 8 days.

## Data Diagnostics

An ELD must have the capability to monitor its compliance with the technical requirements. It must detect and record events related to malfunctions and data inconsistencies. (Subpart B, section 4.6)

Data Diagnostic Events: These events are when an ELD indicates there is a data inconsistency. The driver must follow the recommendations by the ELD provider to resolve the inconsistency, if it occurs. [Section 49 CFR 395.34(c)]

**Power data diagnostic code 1**

An ELD must monitor the Data it receives from the engine ECM or alternative sources, and data record history to identify instances when it may not have complied with the power requirements

Cause

- ELD not fully functional within one minute of the engine turning on
- Wiring or power source fault

Response

Drivers must check that their logs are correct by reviewing them on the mobile application. Then, they can resolve the diagnostic event by turning of the Truck engine and restarting. The driver must notify the carrier and TruxTrax by following the "hard malfunction" process if these events become a regular occurrence.

**Engine synchronization diagnostic code 2**

An ELD is required to establish a link to the engine ECM, and must record an engine synchronization data diagnostics event, when it no longer can acquire values for the ELD parameters required for records within five seconds.

Cause

- Wiring or connection fault

Response

Drivers must notify the carrier as soon as possible and arrange for the ECM link to be restored. Once the ECM link is restored, drivers must thoroughly review their logs and edit, as necessary, to ensure they are correct.

Then, they can resolve the diagnostic event by turning of the Truck engine and restarting. The driver must notify the carrier and TruxTrax by following the "hard malfunction" process if these events become a regular occurrence.

**Missing required data elements data diagnostic code 3**

An ELD must monitor the completeness of the ELD event record information in relation to the required data elements for each event type, and must record a missing data element and data diagnostics event for the driver, if any required field is missing at the time of recording.

Cause

- Temporary or permanent loss of GPS
- Intermittent or disconnected link to the vehicle ECM

Response

Drivers can resolve this data diagnostic by manually entering the missing data associated with their records along with an explanation.  The driver must notify the carrier and TruxTrax by following the "hard malfunction" process if these events become a regular occurrence.

**Data transfer data diagnostic code 4**

An ELD must implement in-service monitoring functions to verify that the data transfer mechanism(s) are continuing to function properly. An ELD must verify this functionality at least once every seven days.

Cause

- ELD fails to communicate records to TruxTrax for seven continuous days

Response

Unless driving in an area with known cellular coverage issues, drivers should notify their carrier immediately. This fault auto-resolves, if the device begins to communicate successfully again. The driver must notify the carrier and TruxTrax by following the "hard malfunction" process if these events become a regular occurrence.

**Unidentified driving records data diagnostic code 5**

If more than 30 minutes of driving in a 24-hour period shows unidentified driver on the ELD, the ELD must detect and record an unidentified driving record data diagnostic event, and the data diagnostic indicator must be turned on for all drivers logged in to that ELD for the current 24-hour period and the following seven days.

Cause

- More than 30 minutes combined vehicle use without a logged-in driver

Response

Drivers must review the unidentified journeys recorded on the ELD and accept any periods of drive time recorded, while they were driving and not logged in to the ELD system.

## Malfunctions management

Malfunction events are when the ELD detects technical compliance issues. The driver must: (1) notify the motor carrier within 24 hours, (2) reconstruct the record of duty status for the current 24 hours and the last seven days on graph - grid paper logs that comply with Section 49 CFR 395.8. Keep paper logs until the ELD is serviced and brought back into compliance. [Section 395.34(a)]

**Power compliance code P**

An ELD must monitor the data it receives from the engine ECM or alternative sources, and data record history to identify instances when it might not have complied with the power requirements.

Cause

- More than 30 minutes of driving time lost in a 24-hour period

Response

Drivers should review and correct their logs, and notify their carrier of the fault. Once the fault has been corrected, the malfunction is cleared by explaining the fault and resolution in the ELogbook notes section.

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**Engine synchronization code E**

An ELD must set an engine synchronization compliance malfunction, if connectivity to any of the required data sources is lost for more than 30 minutes during a 24-hour period aggregated across all driver profiles.

Cause

- More than 30 minutes without ECM engine synchronization over a 24-hour period

Response

Drivers must notify their carrier as soon as possible and arrange for the ECM link to be restored. Once the ECM link is restored, drivers must thoroughly review their logs and edit, as necessary, to ensure they are correct. Then, they can resolve the diagnostic event by turning of the Truck engine and restarting. The driver must notify the carrier and TruxTrax by following the "hard malfunction" process if these events become a regular occurrence.

**Timing compliance code T**

The ELD must periodically cross-check its time with an external UTC source, and must record a timing compliance malfunction when it can no longer meet the underlying timing requirement of less than 10 minutes' time deviation.

Cause

- Vehicle has been out of service for sufficient time that the internal clock is no longer accurate, and the ELD has not yet synchronised its time

Response

Once the internal clock has been corrected, drivers are prompted to review their logs before resolving the malfunction. Then, they can resolve the diagnostic event by turning of the Truck engine and restarting. The driver must notify the carrier and TruxTrax by following the "hard malfunction" process if these events become a regular occurrence.

**Positioning compliance code L**

An ELD must monitor elapsed time during periods when the ELD fails to acquire a valid position measurement within five miles of the CMV's movement. When such elapsed time exceeds a cumulative 60 minutes over a 24-hour period, the ELD must set and record a positioning compliance malfunction.

Cause

- More than 60 minutes without a valid GPS fix in a 24-hour period

This malfunction might appear during a temporary loss of a valid GPS fix, but it auto-resolves once GPS is restored. The driver must notify the carrier and TruxTrax by following the "hard malfunction" process if these events become a regular occurrence.

**Data recording compliance R**

An ELD must monitor its storage capacity and integrity and must detect a data recording compliance malfunction if it can no longer record or retain required events, or retrieve recorded logs that are not otherwise cataloged remotely by the motor carrier.

Cause

- Hardware fault

Response

The driver must notify the carrier and TruxTrax by following the "hard malfunction" process.

**Data Transfer compliance code S**

After an ELD records a data transfer data diagnostic event, the ELD must increase the frequency of the monitoring function to check at least once every 24-hour period. If the ELD stays in the unconfirmed data transfer mode following the next three consecutive monitoring checks, the ELD must detect a data transfer compliance malfunction.

Cause

•Failure to communicate for three days following a data transfer data diagnostic event

Response

Unless driving in an area with known cellular coverage issues, the driver must notify the carrier and TruxTrax by following the "hard malfunction" process if these events become a regular occurrence. This fault auto-resolves, when the device begins to communicate successfully.

## ELD hard malfunction process

If the TruxTrax ELD (TruxBox) is experiencing a hard malfunction whereby the driver is unable to resolve an event or the events are recurring repeatedly the driver/carrier should:

- Contact TruxTrax support at support@truxtrax.com
- Take note of the malfunction and provide a written description to your fleet manage within 24 hours
- Keep a paper log or use the TruxTrax mobile app ELogbook feature for that day and until the ELD is repaired or replaced. In the event of an inspection, you may display the previous 7-14 days from the mobile app.

**Important information concerning malfunctions**

If a motor carrier receives or discovers information concerning the malfunction of an ELD, the motor carrier must take actions to correct the malfunction of the ELD within 8 days of discovery of the condition or driver's notification to the motor carrier, whichever occurs first.

In the event of an ELD malfunction, TruxTrax will send a new ELD device upon notification from the owner-operator or fleet manager.

If a motor carrier requires a time extension, they must notify the FMCSA Division Administrator for the State of the motor carrier's principal place of business within 5 days after a driver notifies the motor carrier. (Section 395.34(2))

CONTACT INFORMATION
Questions or comments, just let us know.
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SUPPORT CENTER
www.truxtrax.com/support/

TruxBox ELD User manual: version 04.17.001
**Device:** TruxBox ELD TT1.01