Electronic Logging Device User Guide

Revision 1.0
2/27/23

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Electronic Logging Device

User Guide, Revision 1.0

Current Update: 2/27/23

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1 Introduction

Clever Devices' Electronic Logging Device (ELD) solution logs vehicle operators' hours of duty in compliance with U.S. Department of Transportation requirements. It makes use of the IVN Vehicle Logic Unit and Transit Control Head (TCH) already installed on your transit agency's vehicles. Just like messaging, navigation, and other functions, the ELD is built into the CleverWare application controlled through the TCH.

The ELD automatically detects and records duty status changes as the operator performs everyday tasks on the vehicle, such as logging in to the TCH and driving. This saves the operator the trouble of manually recording their hours of duty. However, the operator can still make manual changes and edit past logs, if necessary. When the operator logs out of the TCH, ELD data is uploaded to transit agency servers.

This user guide explains how to operate the ELD and is intended to be kept on all vehicles that use it. The guide describes how to perform the following functions, among others:

- Log duty status changes with all the required information
- View today's log and the previous seven logs
- Edit logs ad hoc
- Certify logs
- Present the last eight logs to a law enforcement officer during a roadside inspection
- Send the last eight logs to Federal Motor Carrier Safety Administration (FMCSA) servers or to an email address
- Claim unidentified driving records
- Respond to ELD diagnostic events and malfunctions
- Keep track of remaining on-duty time

Note: This is intended to be a generic user guide that describes all of the functionality offered by the ELD solution. Because every installation is customized for the transit agency, some of the features described in this guide may not be available in all installations, nor may the appearance of the user interface shown in this guide exactly match that of all installations. Contact Clever Devices for information on functionality described here that is not in the current installation.

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2 Logging In

2.1 Odometer Value Entry

When you log in to the TCH, the logging device records your starting odometer value. If your vehicle is equipped with Clever Devices' Automatic Vehicle Monitoring (AVM) solution, the IVN will automatically register the current odometer value, and the popup window shown in Figure 2.1 will not appear. Otherwise, you will be prompted to enter a **Start Odometer** value on the TCH screen (Figure 2.1).

Figure 2.1 — Start Odometer Popup

In this case, tap the text field to display a numeric keypad (Figure 2.2). Enter the correct odometer measurement and then press the green arrow button on the keypad to confirm your input.

Figure 2.2 — Odometer Entry Keypad

On the **Start Odometer** popup, press the green check mark button to save the odometer value (Figure 2.3).

Figure 2.3 — Save Odometer Value

2.2 New Duty Status Popup

Any time you change your duty status, a popup window asks you to confirm the time at which the change occurred, the start location, and the end location. Some configurations also require you to specify a duty action. The popup allows you to add additional comments.

When you log in, your duty status is automatically changed from **Off Duty** to **On Duty**, and the popup shown in Figure 2.4 is displayed.

Figure 2.4 — On Duty Time Started Popup

The **Start Time** is automatically taken from the IVN's clock. If the GPS is working correctly, the **Start Location** field is also automatically filled in with a city and state determined by your latitude and longitude coordinates. The **End Location** matches the **Start Location** until your duty status changes again, at which point it is automatically updated. If necessary, you can edit any of these values by tapping its text field and typing a new value.

The **Duty Action** field is set to **None** by default. To select an action, tap the field and choose from a list of options. Figure 2.5 shows one example of a list of duty actions.

The following bullet points explain the meaning of each duty action:

- **None** - The default option. The operator is not performing an action that requires specification.
- **Yard Moves** - The operator is moving the vehicle around the yard. Some transit agencies count this time as driving time, while others count it as on-duty time.
- **Authorized Personal Use** - The operator has been authorized to drive the vehicle for personal use. This option is not applicable to public transit.

Figure 2.5 — Sample Duty Action List

If any value in the **New Duty Status** popup is invalid, its text field is highlighted in red, as shown in Figure 2.6. The start time is invalid if it occurs in the future. A location is invalid if it contains fewer than five characters. You cannot change your duty status until all values are valid.

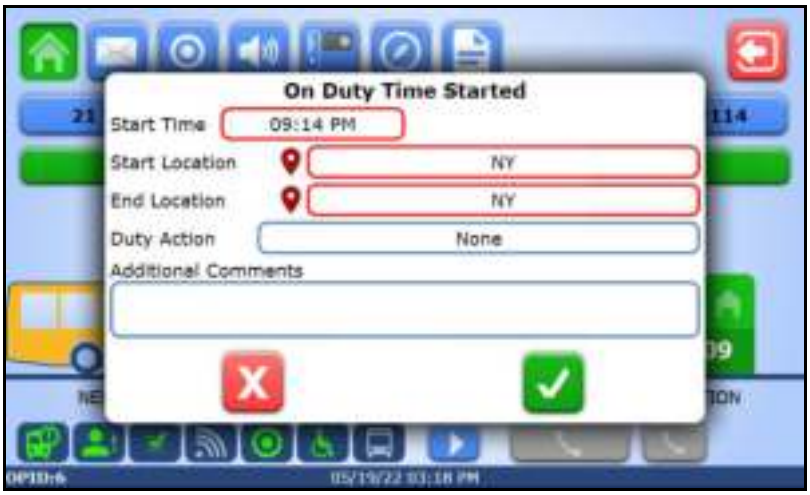

Figure 2.6 — Invalid Values in the New Duty Status Popup

When all fields contain the correct values, press the green check mark button to confirm your **On Duty** status. The popup window closes, and the **Driver Logbook** screen is automatically displayed (Figure 2.7). For details about this screen, see Section 3.2 (page 8) and Section 3.3 (page 10).

Alternatively, pressing the red **X** button cancels the duty status change and closes the popup window.

Figure 2.7 — Driver Logbook Screen

3 Driver Logbook: Today's Log

3.1 Accessing the Logbook from the Main Screen

To open the current day's log from the **Main** screen, press the **Forms** button  , highlighted in Figure 3.1.

Figure 3.1 — Forms Button on the Main Screen

On the **Forms** screen, press the **Driver Logbook** button  , highlighted in Figure 3.2.

Figure 3.2 — Driver Logbook Button on the Forms Screen

The **Driver Logbook** screen opens, showing the current day's log (Figure 3.4).

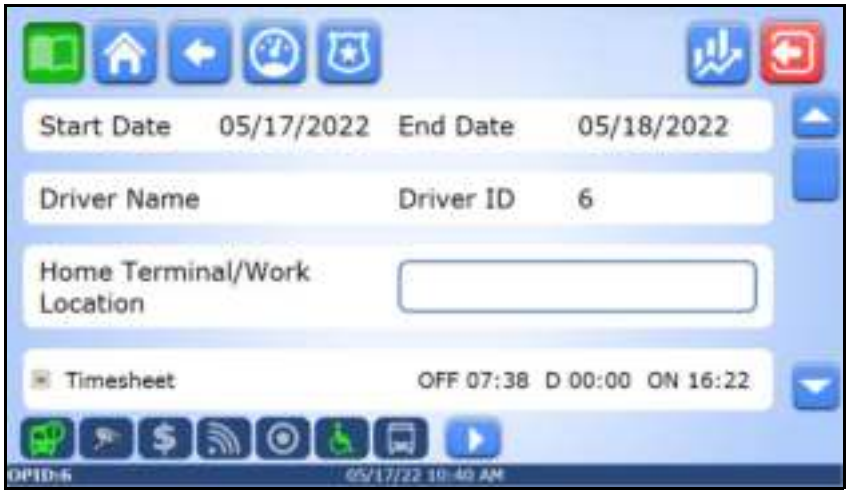

Figure 3.3 — Driver Logbook Screen

3.2 Components of the Driver Logbook Screen

The **Driver Logbook** screen contains at least seven pieces of information, which are listed below. Each item in the list corresponds to a number label in Figure 3.4.

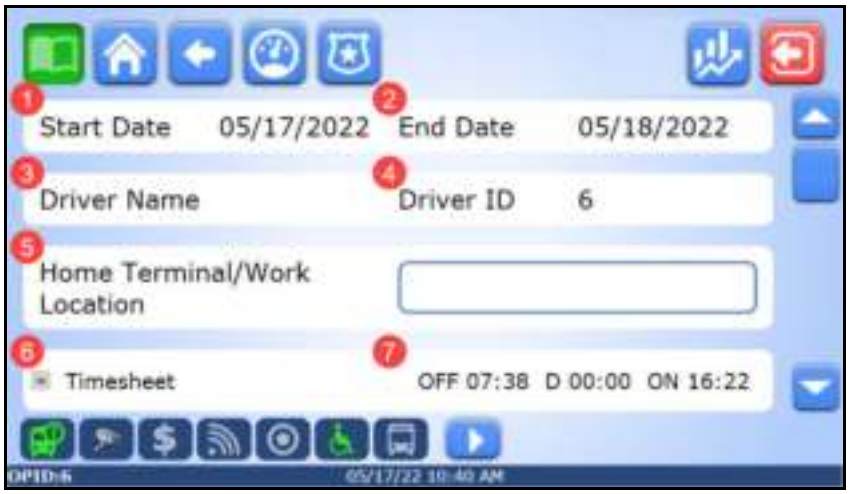

Figure 3.4 — Components of the Driver Logbook Screen

1. **Start Date** - The day that begins the current log, in MM/DD/YYYY format. Note that each logging period does not necessarily begin at 12:00 AM.
2. **End Date** - The day that ends the current log.
3. **Driver Name** - The name of the operator who has logged in.
4. **Driver ID** - The ID of the operator who has logged in.

5. **Home Terminal/Work Location** - The location of the vehicle at the beginning of your current work. This field is automatically filled, but you can change it manually by tapping it and selecting a location from the list that appears. Figure 3.5 shows one example of such a list. The **Other** option allows you to type a custom location with an alphanumeric keypad.

Figure 3.5 — Sample Home Terminal/Work Location List

6. **Timesheet** - A graphical representation of the current day's log. By default, the timesheet is hidden until you click the arrow button. For more details about the timesheet, refer to Section 3.3.
7. **Duty Status Timers** - These timers show the amount of time the driver has logged for each duty status. The times always add up to 24 hours even if the logging period has not ended. The four possible duty statuses are abbreviated in the following ways:
   - ⇨ **OFF** - Off duty
   - ⇨ **D** - Driving
   - ⇨ **ON** - On duty
   - ⇨ **SB** - Sleeper berth (not used for public transit)

3.3 Timesheet

The timesheet provides an easy way to visualize the current day's log and allows you to change your duty status and edit the log as needed. Press the arrow button highlighted in Figure 3.6 to reveal the timesheet. (Press it again to hide the timesheet.)

Figure 3.6 — Expand Timesheet Button

The timesheet consists of a colored bar that represents each duty status with a different color (Figure 3.7). Marks above this bar correspond to the 24 hours of the logging period. The bar always extends to the end of the period even if it has not ended. This is because the device cannot predict duty status changes that have not yet occurred.

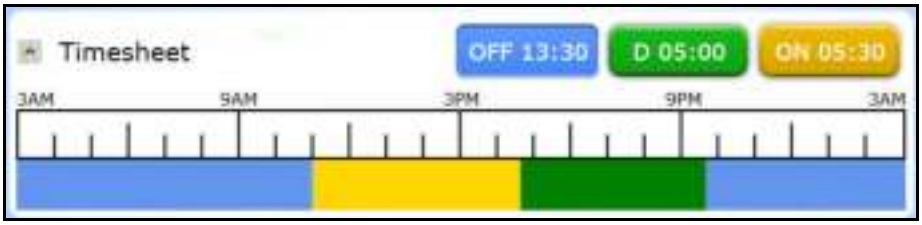

Figure 3.7 — Expanded Timesheet

The four duty statuses are represented by the following colors:

- Off duty - Blue
- Driving - Green
- On duty - Yellow
- Sleeper Berth - Red

In Figure 3.7, the timesheet shows that the operator logged in at 11 A.M., remained on duty until about 4:40 P.M., and then drove until about 9:40 P.M., at which time they logged out.

3.3.1 Duty Status Changes

Duty status changes are usually made automatically, but the timesheet allows you to make them manually, if necessary.

3.3.1.1 Automatic Duty Status Changes

The following events trigger automatic changes to your duty status:

- Logging in to the TCH changes your status from **Off Duty** to **On Duty**. A popup window asks you to confirm the change (Figure 3.8).

Figure 3.8 — Confirm On Duty Status Popup

- Starting to drive changes your status to **Driving**. A popup window prompts you to confirm the change (Figure 3.9).

Figure 3.9 — Confirm Driving Status Popup

- Stopping the vehicle for a configured amount of time changes your status from **Driving** to **On Duty**. After a few minutes of no vehicle movement, a popup asks you to indicate whether you are still driving or not (Figure 3.10).

Figure 3.10 — Stationary Vehicle Popup

If you press the green check mark button ✓, your duty status will remain **Driving**, and the popup will not reappear until you start and stop driving again. If you press the blue **X** button X or wait a few minutes, your duty status is automatically changed to **On Duty**, and a popup informs you of this change (Figure 3.11). Press the green check mark button ✓ to close the popup.

Figure 3.11 — "Status Changed to On Duty" Popup

- Logging out of the TCH changes your status to **Off Duty**.

3.3.1.2 Manual Duty Status Changes

When you expand the timesheet, the duty status timers turn into buttons that you can press to change your duty status. These buttons are shown highlighted in Figure 3.12. The button that corresponds to the current duty status is displayed as if pushed inward and cannot be pressed. In Figure 3.12, this is the **Off Duty** button.

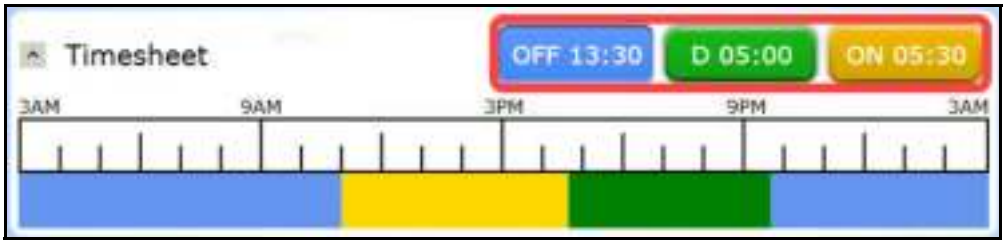

Figure 3.12 — Duty Status Change Buttons

When you press one of these buttons, the **New Duty Status** popup window appears. Figure 3.13 shows the popup that appears when you press the **On Duty** button. For details about the **New Duty Status** popup window, see Section 2.2 on page 4.

Figure 3.13 — On Duty Time Started Popup

After you confirm the duty status change by pressing the green check mark button  , the section of the timesheet that stretches from the current time to the end of the logging period takes on the color of your new duty status.

3.3.2 Editing the Timesheet

There are two ways to edit the current day's log. One way, described here, is to tap the section of the timesheet that you want to edit. The other way is described in Section 3.4.6.1 (page 22) and is accessed from the **Stats** view.

Note: Logbook edits that would decrease the amount of driving time are not permitted.

Follow these steps to edit the timesheet:

1. On the **Driver Logbook** screen, expand the timesheet.
2. Tap the timesheet near the section that you want to edit. A zoomed-in version of the timesheet appears directly below it, as shown in Figure 3.14.

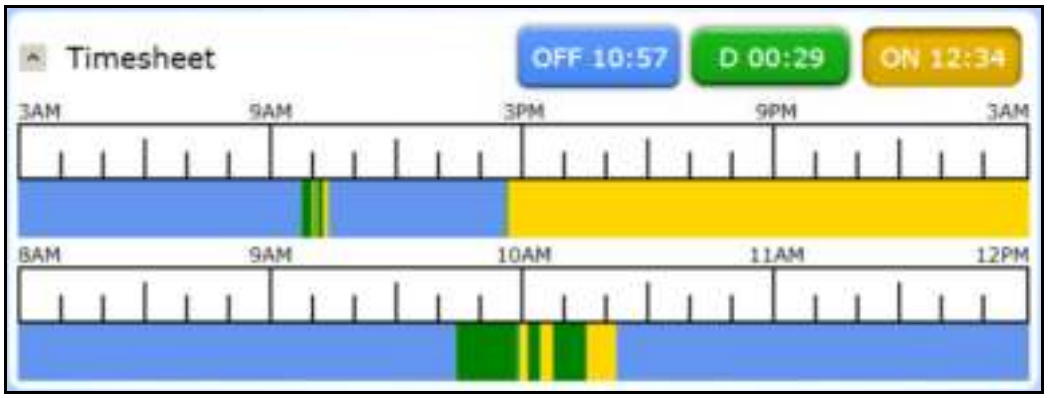

Figure 3.14 — Timesheet Section Magnified

3. On the zoomed-in version of the timesheet, tap the section that you want to edit. A popup window appears (Figure 3.15). It is similar to the **New Duty Status** popup described in Section 2.2 on page 4, but it contains an added field for the **End Time**.

Figure 3.15 — Edit Duty Status Popup

4. Edit any of the fields in the popup by tapping it to display a keypad on which you can type a new value. For example, tapping the **End Time** field displays the keypad shown in Figure 3.16. To change the **End Time** from **10:22 AM** to **01:30 PM**, you would press the **0**, **1**, **3**, and **0** keys in that order and then press the **PM** button. Lastly, you would press the green arrow button to submit the new value.

Figure 3.16 — End Time Keypad

Note: Fields containing invalid values are highlighted in red. Remember that you cannot make any edits that decrease the amount of time you have logged as driving time. You can change a start or end time so that it occurs after the current time, but such a change will not be saved to the log until that time has elapsed. The location fields must contain at least five characters.

5. When all fields contain the correct values, press the green check mark button to save your changes. The timesheet updates itself accordingly.

3.3.3 Saving the Log

The log is automatically saved when you log out of the TCH, but you can save it manually by scrolling below the timesheet and pressing the green arrow button, shown highlighted in Figure 3.17. You are then prompted to certify your log.

Figure 3.17 — Save Log Button

3.4 Stats View

The **Stats** view allows you to keep track of your logged hours of service and provides more detailed log information than is displayed on the **Driver Logbook** screen. It also offers another way to edit the log.

To access the **Stats** view, press the **Stats** button near the top right corner of the **Driver Logbook** screen. This button is highlighted in Figure 3.18.

Figure 3.18 — Stats Button on the Driver Logbook Screen

The same button appears on the **Forms** screen and the **Mileage** view.

3.4.1 Hours of Service Dials

At the top of the **Stats** view is a row of dials, most of which measure the number of hours you have spent driving or on duty (Figure 3.19). The center of each dial contains a time in HH:MM format that measures the value stated in the dial's label. The colored part of each dial corresponds to this value. When this value approaches the maximum legal time limit for its dial, the color changes from blue to yellow, as a warning. When this value reaches or exceeds the limit, the color changes to red, indicating that you must not continue driving or being on duty. For example, Figure 3.19 shows that the operator has exceeded the maximum limit of on-duty time over the last seven days.

Figure 3.19 — Four Hours of Service Dials

The device can be configured to display up to six different dials here:

- **Hours Driving Today** - The whole dial represents 24 hours. The colored part represents the amount of time that you have driven during the current logging period.
- **Hours On Duty Today** - The whole dial represents 24 hours. The colored part represents the amount of time that you have been driving or on duty during the current logging period.
- **Hours On Duty Last 7 Days** - The whole dial represents 60 hours, the maximum amount of time that you can be driving or on duty in a seven-day period. The colored part represents the actual amount of time that you have been driving or on duty during the past seven days, including the current day.
- **Hours On Duty Last 8 Days (70-hour limit)** - The whole dial represents 70 hours, the maximum amount of time that you can be driving or on duty in an eight-day period. The colored part represents the actual amount of time that you have been driving or on duty during the past eight days, including the current day.
- **Hours On Duty Last 8 Days (80-hour limit)** - The whole dial represents 80 hours, the maximum amount of time that you can be driving or on duty in an eight-day period. The colored part represents the actual amount of time you have been driving or on duty during the past eight days, including the current day.
- **Hours Available Tomorrow** - The whole dial represents 24 hours. The colored part represents the difference between 80 hours and the amount of time you have been driving or on duty during the last seven days, including today. This dial is always blue.

3.4.2 Adverse Driving Conditions Button

If it is configured, the **Adverse driving conditions** toggle button appears after the dials. This button allows you to extend both the 10-hour daily driving time limit and the 15-hour daily on-duty time limit by two hours when you encounter adverse driving conditions.

Figure 3.20 — Adverse Driving Conditions Button, Toggled Off (Left) and On (Right)

When you press the **Adverse driving conditions** button to toggle it on, the button's icon changes from a plus sign [+] to a minus sign [−], and the **Hours Driving Today** and **Hours On Duty Today** dials adjust to add the two hours. A popup confirms the extension (Figure 3.21). Press the green check mark button [✓] to close the popup.

Figure 3.21 — Adverse Driving Enabled Popup

When you press the **Adverse driving conditions** button again to toggle it off, these effects are reversed, and a popup confirms this (Figure 3.22).

Figure 3.22 — Adverse Driving Disabled Popup

3.4.3 FMCSA-Compliant Line Graph

Below the hours of service dials, a line graph represents the amount of time you have spent in each duty status during the current logging period (Figure 3.23). Each row of the graph corresponds to a different duty status. The line on the graph measures the amount of time you have spent in each status. It extends only to the current time. The line is dashed and yellow during times when you indicated that you were performing a special duty action, such as **Yard Moves** or **Authorized Personal Use**. During all other times, the line is solid and blue. The right side of the graph also displays the amount of time you have spent in each status, in HH:MM format. Lastly, the time at the bottom right displays the total amount of time logged so far during the current logging period.

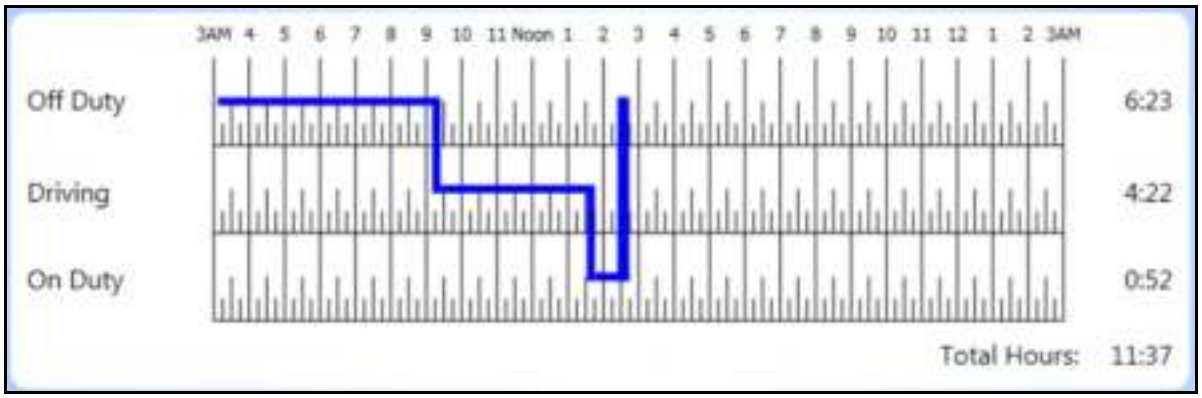

Figure 3.23 — Line Graph

3.4.4 Driver and Log Information

Below the line graph, various information about the driver and logging period is listed (Figure 3.24).

Date: May 23, 2022 - May 24, 2022
24-hour Starting Time: 3AM **Time Zone:** Eastern Daylight Time
Driver Name: Jack Crouse
Driver ID: 6 **Driver License #:** A1234567
Driver License State: CA **Total Miles:** 40
Total Engine Hours: 0 **Vehicle ID:** 3019
VIN #: TESTV595835C03018 **Exempt Driver Status:** No
Today's Date: May 24, 2022
Current Location: 4.05 mi. E San Jose CA
Unidentified Driving Records: No
ELD Malfunction Indicators: Yes
Driver's Data Diagnostic Status: Yes

Figure 3.24 — Driver Information

- **Date** - The date(s) spanned by the current logging period.
- **24-hour Starting Time** - The time at which the current logging period began.
- **Time Zone** - The time zone determines the current time registered by the device.
- **Driver Name** - The name of the operator currently logged in.
- **Driver ID** - The operator's ID, as determined by the transit agency.
- **Driver License #** - The operator's driver license number.
- **Driver License State** - The state that issued the operator's driver license.
- **Total Miles** - The total number of miles registered by the odometer.
- **Total Engine Hours** - The total number of hours during which the vehicle's engine has been running.
- **Vehicle ID** - The vehicle's ID, determined by the transit agency.
- **VIN #** - The vehicle's Vehicle Identification Number.
- **Exempt Driver Status** - If the logged-in operator is not required to keep a driver logbook, this field says **Yes**. If the operator is required to keep a logbook, it says **No**.
- **Today's Date**
- **Current Location** - The current location registered by the GPS, stated as a number of miles away from the nearest city.
- **Unidentified Driving Records** - If an operator drove the vehicle without logging in, the ELD saves an unidentified driving record that is associated with the vehicle. If any such records exist for your vehicle, this field says **Yes**. If not, it says **No**. (To view these records, refer to Section 5.3, starting on page 39.)
- **ELD Malfunction Indicators** - If the ELD registers a malfunction, this field says **Yes**. If not, it says **No**. (Refer to Chapter 6, starting on page 5, for information about ELD malfunctions.)
- **Driver's Data Diagnostic Status** - If the ELD registers a driver's data diagnostic status, this field says **Yes**. If not, it says **No**. (Refer to Chapter 6, starting on page 43, for information about diagnostic statuses.)

3.4.5 ELD Information

The next panel in the **Stats** view provides four pieces of information about the ELD:

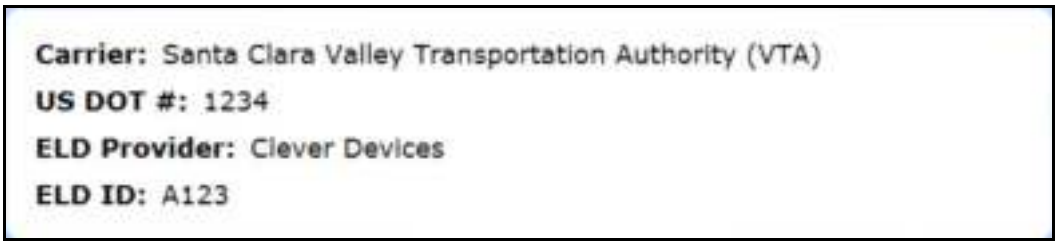

Figure 3.25 — ELD Information

- **Carrier** - The transit agency that uses the ELD.
- **US DOT #** - The number assigned to the transit agency by the US Department of Transportation.
- **ELD Provider** - The company providing the ELD to the transit agency.
- **ELD ID** - The ID assigned to the ELD by the FMCSA.

3.4.6 Logbook Entries

All the entries in the current log are listed at the bottom of the **Stats** view (Figure 3.26). Every time your duty status changes, a new panel is added to the bottom of this list.

Figure 3.26 — Logbook Entries in Stats View

Each entry in this list indicates the duty status, the duration of that status, the starting location, and the total distance traveled during that time. As mentioned in Section 3.3 (page 10), the color of the panel corresponds to the duty status.

3.4.6.1 Editing the Log in the Stats View

Section 3.3.2 (page 14) describes how to use the timesheet to edit entries in the current log. You can also edit the log in the **Stats** view by tapping the colored panel of the entry that you want to edit. A popup window appears, as in Figure 3.27. In this popup, tap fields and adjust their values as desired. For more details on changing these values, see steps 4 and 5 in Section 3.3.2, starting on page 15. You can edit multiple entries before you confirm your changes.

Note: Remember that you cannot decrease the amount of driving time that has been logged. Fields containing invalid values are highlighted in red.

Figure 3.27 — Edit Log Entry Popup

Press the green check mark button to confirm your changes. After you edit your log, the top row of buttons is replaced with a blue **Back** button and a green **Submit** button (Figure 3.28).

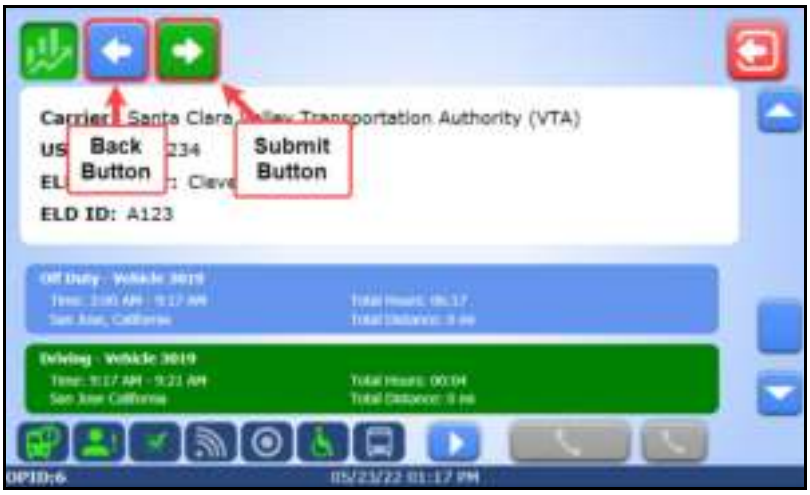

Figure 3.28 — Back and Submit Buttons in the Stats View

Press the **Submit** button to open the **Logbook Certification** popup window (Figure 3.29). Before you can press the green check mark button to certify your changes, you must scroll all the way to the bottom of the popup. When you complete the certification, the **Driver Logbook** screen opens.

Figure 3.29 — Logbook Certification Popup

Otherwise, press the **Back** button to discard your changes. The popup window shown in Figure 3.30 asks you to confirm the deletion. Press the green check mark button to discard your changes, or press the blue **X** button to close the popup and keep your changes.

Figure 3.30 — Discard Changes Confirmation Popup

Note: If your edits leave any gaps of time between two entries, the popup shown in Figure 3.31 appears when you press the **Submit** button . Press the green check mark button to close the popup. The two entries on either side of the gap are highlighted in red, as shown in Figure 3.32. You can certify your edits only when your log contains no gaps.

Figure 3.31 — Logbook Gaps Error Message

Figure 3.32 — Highlighted Entries Separated by a Gap of Time

3.5 Mileage View

The **Mileage** view allows you to review the distance you have driven during the current logging period. To access the **Mileage** view from the **Driver Logbook** screen, press the top-row speedometer button highlighted in Figure 3.33.

Figure 3.33 — Mileage View Button on Driver Logbook Screen

For each vehicle that you drove during the current logging period, the **Mileage** view shows the odometer readings from when you logged in (**Start Odometer**) and logged out (**End Odometer**). Based on these values, it calculates and displays the mileage driven. It can display these values for up to four different vehicles. The mileage you have driven across all vehicles is summed and displayed in the bottom right corner as the **Total Mileage**. Figure 3.34 shows an example with four vehicles.

Figure 3.34 — Mileage View Showing Values for Four Different Vehicles

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4 Roadside Inspection View

If a law enforcement officer requests to review your electronic logbook, the **Roadside Inspection** view provides all the information that they might need. It also allows you to send the last eight days of logs to FMCSA servers or to an email address of your choice.

To access the **Roadside Inspection** view, tap the badge button on the top row of the **Driver Logbook** screen (Figure 4.1).

Figure 4.1 — Badge Button on Driver Logbook Screen

4.1 Components of the Roadside Inspection View

The information provided in the **Roadside Inspection** view is mostly identical to that given in the **Stats** view. The top of the screen, shown in Figure 4.2, lists the date(s) of the logging period whose information is currently displayed. Below that is a panel with driver and ELD information, described in Section 3.4.4 (page 19) and Section 3.4.5 (page 21). Next, an FMCSA-compliant line graph displays the same information as the one in the **Stats** view. For details about the line graph, see Section 3.4.3 (page 19).

Figure 4.2 — Top of Roadside Inspection View

Unlike the **Stats** view, the **Roadside Inspection** view does not contain a list of editable logbook entries at its bottom. Instead, it has a table of events recorded by the ELD (Figure 4.3). Events are recorded for all duty status changes, logbook edits, data diagnostic events, and malfunctions. For each event, the time, location, odometer measurement, total engine running time, event type, and origin (automatic or driver input) are listed. Above the events, the date and vehicle ID are stated.

Time	Location	Odometer	Engine Hours	Event Type	Origin
05/23/22	VehicleId: 3019				
3:00 AM	4.05 mi. E San Jose CA	40	0.0	MalfunctionCleared	Auto
3:30 AM	4.05 mi. E San Jose CA	40	0.0	MalfunctionDetected	Auto
4:00 AM	4.05 mi. E San Jose CA	40	0.0	MalfunctionDetected	Auto
8:36 AM	4.05 mi. E San Jose CA	40	0.0	DiagnosticCleared	Auto
9:18 AM	4.05 mi. E San Jose CA	40	0.0	OffDuty	Driver
9:18 AM	4.05 mi. E San Jose CA	40	0.0	Driving (Inactive)	Driver
9:21 AM	4.05 mi. E San Jose CA	40	0.0	Driving	Auto
9:21 AM	4.05 mi. E San Jose CA	40	0.0	ODND (Inactive)	Auto

Figure 4.3 — Example Table of Events

The **Roadside Inspection** view can display information about the current logging period and any of the previous seven logging periods. Use the up and down arrow buttons / at the top of the screen to scroll through these eight pages of information. When you reach either end of the page list, the appropriate button is grayed out.

4.2 Unidentified Driving Records

When an operator drives a vehicle without logging in to the TCH, the ELD saves an unidentified driving record. On the **Roadside Inspection** screen, pressing the **Unidentified Driving Records** button opens the **Unidentified Driving Records** screen. This button is highlighted in Figure 4.4.

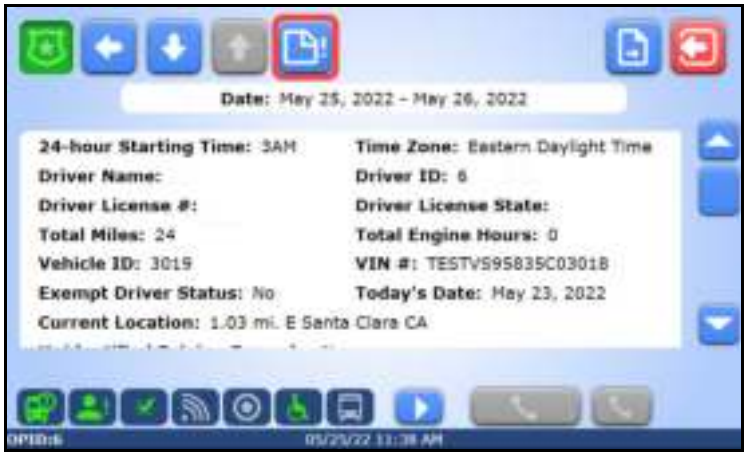


Figure 4.4 — Unidentified Driving Records Button on Roadside Inspection Screen

The **Unidentified Driving Records** screen is shown in Figure 4.5. Each record is listed below its date in a green rectangle that provides information about the time and distance over which the vehicle was driven.

Figure 4.5 — Unidentified Driving Records Screen

Below the green rectangles, a table of events lists information about all instances of unidentified driving in the last eight days. Each row of this table corresponds to one unidentified record. The starting time, distance, location, odometer measurement, total engine running time, event type (always **Driving**), and event origin (always **Auto**) of each record is provided, as shown in Figure 4.6.

Time	Location	Odometer	Engine Hours	Event Type	Origin
05/18/22	VehicleId: 3019				
3:44 PM	1.70 mi. N Mountain View CA	0	0.0	Driving	Auto
05/25/22	VehicleId: 3019				
12:47 PM	1.67 mi. N Mountain View CA	24	0.0	Driving	Auto

Figure 4.6 — Table of Events

4.3 Online Transfer of ELD Data

You can send the last eight days of logs, including the current one, to FMCSA servers or to an email address of your choice. To open the **ELD Transfer** screen, tap the **File Transfer** button in the top right corner of the **Roadside Inspection** view. This button is highlighted in Figure 4.7.

Figure 4.7 — File Transfer Button in Roadside Inspection View

The **ELD Transfer** screen opens, as in Figure 4.8. Two methods of file transfer can be selected: **Web Service** and **Email**.

- **Web Service** uploads the log data directly to FMCSA servers.
- **Email** allows to you specify an email address to which the data is sent. Leaving the **Email Address** field blank causes the data to be sent to FMCSA servers via email.

By default, **Web Service** is selected. To change the method of file transfer, tap the field that contains the text **Web Service** or **Email**. This field is shown highlighted in red in Figure 4.8.

Figure 4.8 — ELD Transfer Screen, Web Service Selected

Tapping this field opens a popup menu (Figure 4.9). Tap the button of the method you want to use. Tapping the red **X** button closes the menu without making a change.

Figure 4.9 — File Transfer Method Options

Both options provide a field for entering an **Output File Comment**. This comment helps to identify the ELD data and associate it with the correct vehicle. The inspecting law enforcement officer may provide a code for you to put in this field. If so, tap the **Output File Comment** field and use the alphanumeric keypad that pops up to enter the code (Figure 4.10). Press the green arrow button when you have finished typing your comment.

Figure 4.10 — Output File Comment Keypad

If you select **Email** as the method of file transfer, an **Email Address** field appears below the **Output File Comment** field, as shown in Figure 4.11. To specify the recipient of the data, tap this field and use the keypad to type an email address. If your input is invalid, the field will be highlighted in red. If the field is left blank, the data will be sent by default to the email address of FMCSA servers.

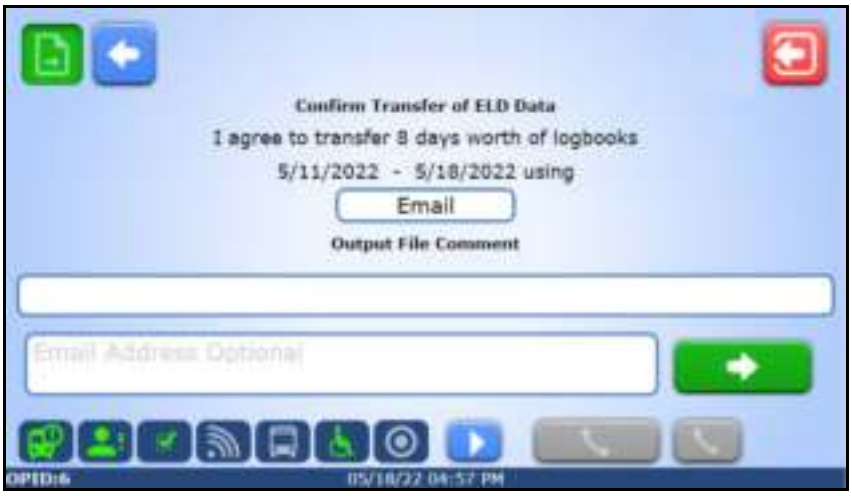
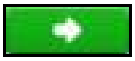


Figure 4.11 — ELD Transfer Screen, Email Selected

When you are ready to transfer ELD data, press the green arrow button  . A popup indicates that the transfer request has been stored (Figure 4.12).

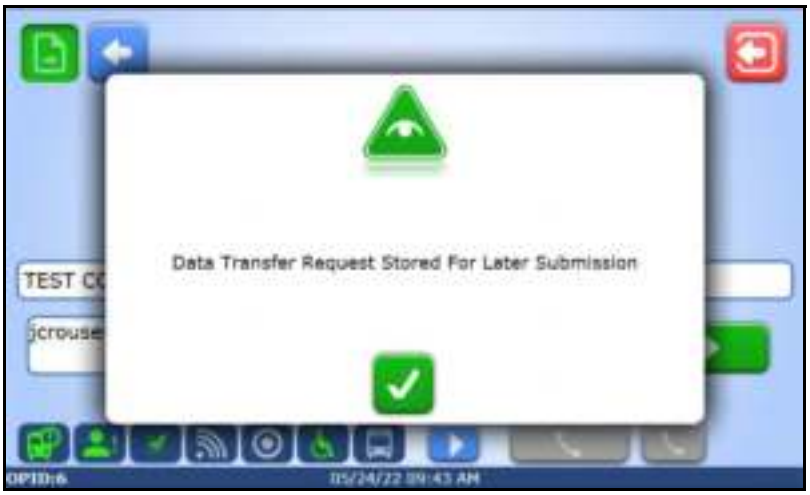


Figure 4.12 — ELD Data Transfer Request Stored

If the data transfer succeeds, the notification shown in Figure 4.13 pops up.

Figure 4.13 — Data Transfer Request Submitted Popup

4.3.1 Printing a Hard Copy of Logbook Data

The following instructions describe one way to print your logbook data:

1. Send your ELD data to your email address.
2. Open the email and save the attached ELD data file.
3. Upload the file to the FMCSA's eRODS webpage: https://eld.fmcsa.dot.gov/eRODS. Click **View ELD File**.
4. Print the resulting webpage.

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5 Driver Logbook History

When you log in to the TCH, the IVN downloads your records from the current logging period and, typically, the last seven logging periods. To view these records, tap the **Forms** button on the **Main** screen. This button is highlighted in Figure 5.1.

Figure 5.1 — Forms Button on Main Screen

On the **Forms** screen, tap the **Daily Driver Logbook History** button, highlighted in Figure 5.2.

Figure 5.2 — Daily Driver Logbook History Button on Forms Screen

The **Daily Driver Logbook History** screen opens (Figure 5.3).

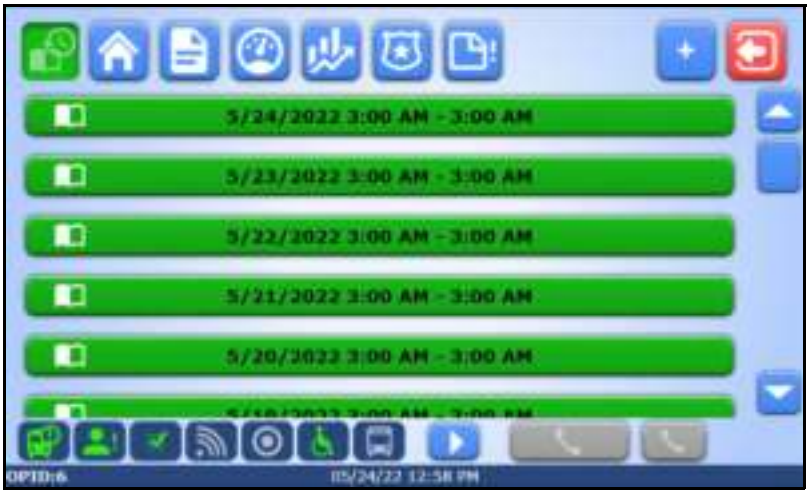

Figure 5.3 — Daily Driver Logbook History Screen

5.1 Viewing Previous Logs

For every logging record saved on the IVN, a green button that displays the start date of its logging period appears on the **Daily Driver Logbook History** screen. Tap any of these buttons to open the **Stats** view of the corresponding record. See Section 3.4 (page 16) for details about the **Stats** view.

5.2 Editing Previous Logs

There are two ways to edit past logs:

1. **Adding logbook entries ad hoc** - Click the plus sign button [+] in the top right corner of the **Daily Driver Logbook History** screen.

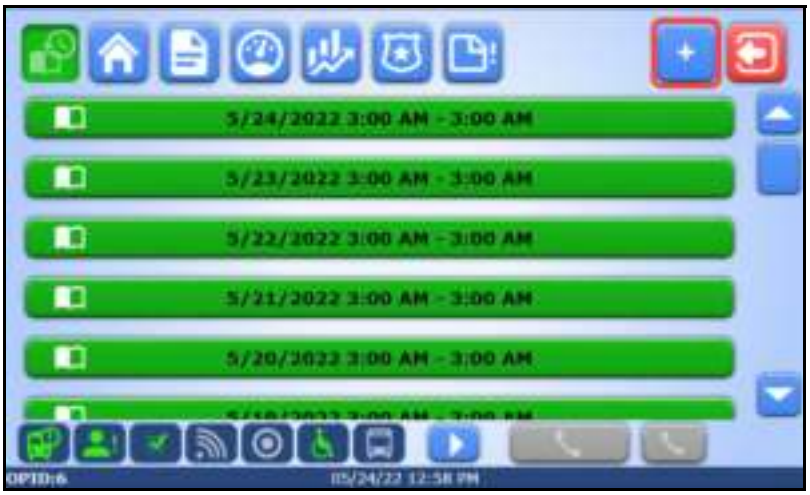

Figure 5.4 — Plus Sign Button on Daily Driver Logbook History Screen

In the menu that pops up (Figure 5.5), indicate whether you are adding driving time or on-duty time.

Figure 5.5 — Ad Hoc Duty Status Popup

The **Ad Hoc Edit** form opens (Figure 5.6). You must fill all the fields on this form before you submit it. Unlike the **Comments** field in the **New Duty Status** popup, this **Comments** field is mandatory; you must provide a reason for the ad hoc edit. Fields containing invalid values are highlighted in red.

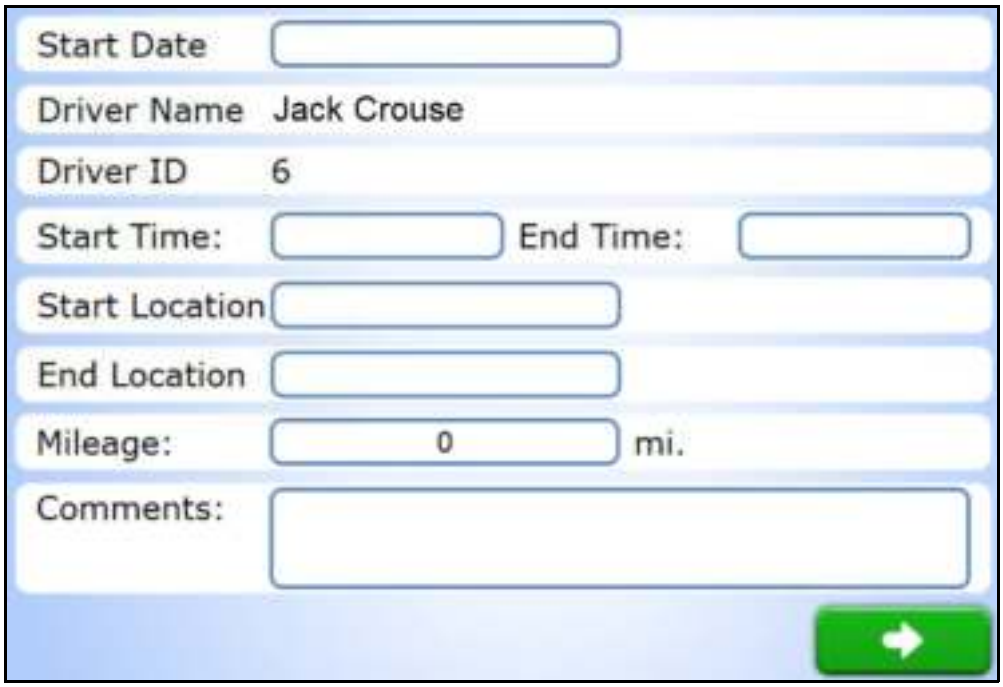

Figure 5.6 — Ad Hoc Edit Form

Once you have provided all the required information, press the green arrow button . A popup asks you to certify the ad hoc entry (Figure 5.7). Press the green check mark button to confirm your entry and open the **Daily Driver Logbook History** screen. Press the blue **X** button to go back to the **Ad Hoc Edit** form.

Figure 5.7 — Certification Popup

On the **Daily Driver Logbook History** screen, the button that corresponds to the logging period with the ad hoc entry appears yellow, as in Figure 5.8. Ad hoc edits overwrite existing logbook entries.

Figure 5.8 — Logbook History Button Indicating Ad Hoc Entry

2. **Editing past logbook entries** - Open any of the past records in the **Daily Driver Logbook History** screen, scroll down to the log entries (Figure 5.9), tap the entry you want to edit, and follow the editing procedure described in Section 3.4.6.1 (page 22). After you certify your changes, the **Forms** screen opens.

Figure 5.9 — Example Log Entries

5.3 Claiming Unidentified Driving Records

When an operator drives a vehicle without logging in to the TCH, the ELD saves an unidentified driving record for eight days afterward. If the operator returns to that vehicle and logs in to the TCH, they can claim the unidentified record as their own, adding it to their logbook as driving time.

Note: Unidentified driving records can be claimed only on the vehicle on which they were generated.

To claim an unidentified driving record, go to the **Daily Driving Logbook History** screen and press the button  shown highlighted in Figure 5.10.

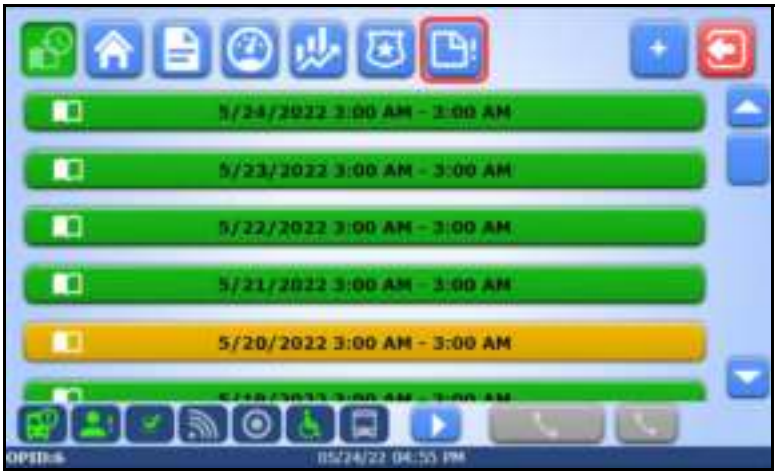

Figure 5.10 — Unidentified Driving Records Button on Daily Driving Logbook History Screen

The **Unidentified Driving Records** screen opens (Figure 5.11). Each record is listed below its date and provides information about the time and distance over which the vehicle was driven.

Figure 5.11 — Unidentified Driving Records Screen

Click the green check mark button of the record that you want to claim. A popup asks you to confirm your claim (Figure 5.12). Press the green check mark button to confirm the claim or press the blue **X** button to cancel it.

Figure 5.12 — Unidentified Driving Record Claim Confirmation Popup

When you claim an unidentified record, its check mark button disappears, and the top row of the screen is replaced with the **Back** button and the **Submit** button (Figure 5.13). You can claim multiple records before you certify your changes.

Figure 5.13 — Back and Submit Buttons on Unidentified Driving Records Screen

When you are ready to certify your changes, press the **Submit** button and then press the green check mark button on the certification popup(s) (Figure 5.14). The certified records are added to your logbook. Alternatively, pressing the **Back** button cancels your changes.

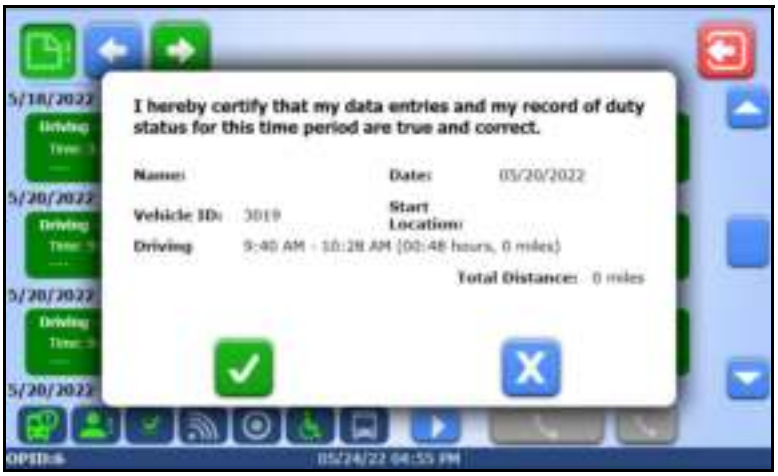

Figure 5.14 — Certification Popup

5.4 Merging Duplicate Logs

If the ELD is configured to detect multiple logs recorded in a single logging period, you are prompted by a popup window to manage them the next time you log in (Figure 5.15). Press the green check mark button ✓ to open the log that has overlapping entries. You can then remove the overlaps by deleting duplicate entries.

Figure 5.15 — Manage Multiple Logbooks Popup

On the **Daily Driver Logbook History** screen, logs that are found to have duplicate entries display a warning icon ⚠, as shown in Figure 5.16. When you open the log, you can correct it by scrolling down to the list of entries and deleting duplicates.

Figure 5.16 — Duplicate Log Icon

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6 Data Diagnostic Events and Malfunctions

The ELD is designed to detect system malfunctions and alert the operator when such malfunctions occur. When the system registers a malfunction, the following actions must be performed:

- Within 24 hours, notify dispatch or your supervisor of the malfunction.
- Make sure that you have an accurate record of duty status for the current day and for the previous seven days. This record can either be saved to the ELD or be written on FMCSA-compliant paper forms. If data is missing from the ELD, reconstruct it in writing.
- If the ELD is unable to log your record of duty status, maintain the record on paper until the malfunction is corrected.
- The transit agency must correct the malfunction or replace the ELD within eight days, unless the FMCSA grants an extension.

The table of events on the **Roadside Inspection** screen records diagnostic events and malfunctions. This table is described in Section 4.1 on page 50.

In addition to malfunctions, the ELD detects data diagnostic events, which occur when the ELD fails to receive expected data. These events can indicate potential ELD malfunctions, so you should notify your supervisor of them when they occur. Neither data diagnostic events nor malfunctions can be cleared manually; they are automatically cleared when the ELD functions normally again.

6.1 TCH Indicators

Green icons on the bottom row of the TCH screen indicate that a data diagnostic event or malfunction has occurred. This row of icons is highlighted in Figure 6.1. You may need to press the blue arrow button  to view all the icons.

Figure 6.1 — Bottom Row of Icons on TCH Screen

The malfunction indicator looks like a vehicle with an exclamation mark in its top right corner (Figure 6.2, left). The data diagnostic event indicator looks like a person with an exclamation mark (Figure 6.2, right).

Figure 6.2 — ELD Data Diagnostic Event Indicator

6.2 Data Diagnostic Event Codes

Table 7-1: ELD Data Diagnostic Events

Data Diagnostic Event	Description	Condition for Clearing
Power Data Diagnostic Event	CleverWare (the software that contains the ELD) does not start up and become fully functional within five minutes.	CleverWare starts up and functions correctly.
Engine Synchronization Data Diagnostic Event	The AVM module is enabled but inactive for five minutes. (While the AVM module is inactive, the ELD cannot receive engine data from the vehicle's CAN/ J1708 network.)	CleverWare is able to communicate with the vehicle's CAN/ J1708 network.
Missing Required Data Elements Diagnostic Event	The ELD does not receive location data from the GPS, and the operator does not manually enter location information before driving the vehicle. This diagnostic status is also recorded when the ELD does not receive other required information, such as the date, time, odometer mileage, and engine hours, when needed.	The operator manually edits the logbook to add the missing information.
Unidentified Driving Records Data Diagnostic Event	The ELD records more than 30 minutes of unidentified driving time within a 24-hour period.	Either the unidentified driving records are claimed by operators or seven days pass after the last unidentified record was saved.

Data Diagnostic Event	Description	Condition for Clearing
Data Transfer Data Diagnostic Event	The ELD fails to transfer data to the driver logbook server.	The ELD's connection to the server is restored.

6.3 Malfunction Codes

Table 7-2: ELD Malfunctions

Malfunction	Description	Condition for Clearing
Power Compliance Malfunction	CleverWare fails to run for 30 minutes after power is turned on. (If this occurs, try rebooting the IVN.)	CleverWare runs normally when power is turned on.
Engine Synchronization Compliance Malfunction	The AVM module was enabled but inactive for over 30 minutes during a 24-hour period.	The ELD receives engine data over the vehicle's CAN/J1708 network.
Timing Compliance Malfunction	The IVN has no connection to the DCC; its clock is out of sync by more than 10 minutes.	The IVN's connection to the DCC is restored.
Positioning Compliance Malfunction	The ELD is not receiving valid GPS coordinates.	The ELD receives GPS data.
Data Recording Compliance Malfunction	The IVN is not reading or writing necessary ELD information in its database.	The IVN reads or writes ELD information in its database again.
Data Transfer Compliance Malfunction	The IVN fails to send ELD data to FMCSA servers via the web service for three consecutive days.	The IVN is able to send ELD data to the servers.
Other Malfunction	The IVN crashes while an operator is logged in.	The IVN is rebooted successfully.

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7 Logging Out

Log out of the TCH by pressing the red button in the top right corner of the screen (Figure 7.1).

Figure 7.1 — Logout Button Highlighted

If the AVM module is inactive for whatever reason, you must manually enter the odometer mileage in a popup window (Figure 7.2). Tap the text field and use the keypad to type the odometer value. Press the green check mark button to submit the value.

Figure 7.2 — End Odometer Popup

Then, if you have already changed your duty status to **Off Duty** and certified your log, you can continue logging out as usual. Otherwise, your duty status is automatically changed to **Off Duty**, and you must certify your log in a popup window like the one shown in Figure 7.3. Scroll to the bottom of the text, making sure that the log data is correct, and press the green check mark button  to certify your log.

Figure 7.3 — Logout Certification Popup

Appendix A – Button List

The following table shows and describes all of the ELD buttons that can be displayed in the top row of the TCH screen.

Table A-1: TCH Buttons

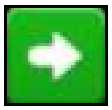
Button	Name and Description
	**Home** - Opens the **Main** screen.
	**Forms** - Opens the **Forms** screen, from which you can access the logbook.
	**Back** - Opens the previous screen. When you are editing your log in the **Stats** view or claiming unidentified driving records, pressing this button cancels your changes.
	**Submit** - Confirms your changes when you are editing your log in the **Stats** view or claiming unidentified driving records. When you press this button, you are prompted to certify your logbook updates.
	**Today's Logbook** - Opens the **Driver Logbook** screen for the current logging period. Refer to Section 3.2, starting on page 8, for information about this screen.
	**Mileage** - Opens the **Mileage** view, described in Section 3.5, starting on page 25.
	**Roadside Inspection** - Opens the **Roadside Inspection** screen, described in Chapter 4, starting on page 27.
	**Stats** - Opens the **Stats** view, described in Section 3.4, starting on page 16.

Table A-1: TCH Buttons

Button	Name and Description
	**Scroll Up and Down** - These buttons allow you to view different days' logs on the **Roadside Inspection** screen.
	**Unidentified Driving Records** - Pressing this button on the **Roadside Inspection** screen provides a list of unidentified driving records (see Section 4.2, page 28, for more details). Pressing it on the **Daily Driver Logbook History** screen allows you not only to view but also to claim these records and add them to your log (Section 5.3, page 39).
	**ELD Data Transfer** - Opens the **ELD Transfer** screen, from which your logs can be sent to FMCSA servers or to an email address. Refer to Section 4.3, starting on page 30, for information about this screen.
	**Logbook History** - Opens the **Daily Driver Logbook History** screen. Refer to Chapter 5, starting on page 35, for information about this screen.
	**Ad Hoc Edit** - Allows you to add a **Driving** or **On Duty** logbook entry to a previous log. Refer to Section 5.2, starting on page 36, for information about ad hoc edits.

Note: The green icon in the top left corner of the screen indicates the current screen. For example, this icon  shows that the **Main** screen is open.

Appendix B – Revision History

Version	Revision	Date	Author	Comments
1.0	**1.0**	2/27/2023	J. Crouse	First version of the document.

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