

FROTCOM[®]
INTELLIGENT FLEETS

ELECTRONIC
LOGGING DEVICE
ELD

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As of December 18, 2017, carriers and drivers of commercial motor vehicles (CMVs) subject to the ELD mandate are required to adopt electronic logging devices (ELDs).

The ELD will automatically record a driver's on-duty and off-duty time, allowing drivers to spend less time preparing logs and more time doing what they do best: driving.

The intended result is a decrease in the frequency of fatigued driving by CMV drivers, reducing crashes, injuries, and fatalities involving large trucks and buses on our highways.

Carriers who install automatic on-board recording devices (AOBRDs) prior to December 18 will be able to use those devices until December 16, 2019, after which point they must upgrade or switch to ELDs.



The main features/functions of the ELD are:

- ✓ Provides separate accounts for drivers and administrative (non-driver) ELD users;
- ✓ Must automatically sense Motion Status, Vehicle Miles, Engine Hours, CMV Position and CMV VIN;
- ✓ Automatically records all driving times at intervals of 60 minutes. Records date, time, location, engine hours, vehicle miles, and driver identification;
- ✓ Records location with an accuracy of one mile radius during on duty driving periods;
- ✓ Reduces location accuracy to a 10 mile radius when the vehicle is used for authorized personal use
- ✓ Is synchronized with UTC (Coordinated Universal Time);
- ✓ Retains data for the current 24 hour period and the previous 7 consecutive days;
- ✓ Prevents tampering - does not allow anyone to alter or erase information originally collected;
- ✓ Requires driver to review unidentified driver records, and either acknowledge assignment of this driving time or indicate that the records do not belong to the driver;

- ✓ Allows a driver to obtain a copy of their ELD records on demand, either through a printout or electronic file;
- ✓ Supports one of two options for electronic data transfer: Telematic type (using wireless web services or email) or Local transfer type (using USB 2.0 or Bluetooth);
- ✓ Displays all required standardized data to authorized safety officials on demand through a screen display or printout that includes three elements: a daily header, graph grid showing driving duty status changes and detailed daily log data. The graph grid, if printed, must be at least 6 inches by 1.5 inches;
- ✓ Requires driver certification and annotation (written explanation) for any edit to the records that are made by the driver or any other ELD user;
- ✓ Requires certification of driver records at the end of each 24 hour period;
- ✓ ELD provider furnishes user's manual, instructions for handling malfunctions and record-keeping during malfunctions, and instructions for transferring ELD hours of service records to safety officials;
- ✓ Volume control or mute option for any audio feature.

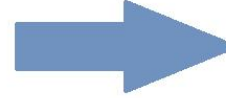
Frotcom provides a module integrated with the ELD specifications and demands.

The Commercial Motor Vehicle (CMV)'s engine is connected to a tablet running our application to record data (location, engine hours, miles, power status, motion and vehicle identification data).

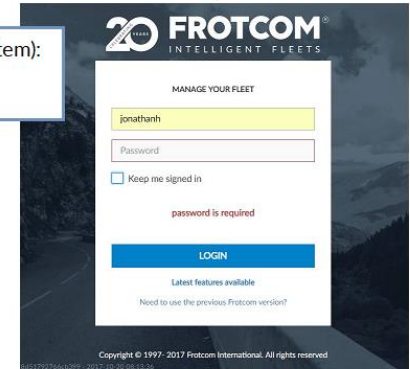
These data is used to comply with the Hours of Service (HOS) rules, replacing paper logbooks and Automatic On-board Recording Device (AOBRD) systems. The information is then synchronized with Frotcom Web and is available to the carrier fleet managements.



Geographic location information (GNIS);
 Engine hours;
 Vehicle miles;
 Power status;
 Motion status;
 Vehicle identification data (VIN).



Frotcom Web (carrier system):
 Reports, configuration,
 synchronization etc.



THE ELD MENU ON FROTCOM WEB

This feature shows on Frotcom Web the same information recorded and shown on the Frotcom ELD app, as well as all the information for the past 6 months (for internal control and eventual inspection by officers that may request the logbook from all the carrier's drivers).

The screenshot displays the Frotcom Web interface. At the top, there is a navigation bar with a red 'TF' logo, a hamburger menu icon, and several menu items: MAP, GRAPHS, SUMMARY, MORE, APPS, and a settings gear icon. Below this, there are three tabs: SEARCH, NEAREST VEHICLES, and DIRECTIONS. The 'VEHICLES' tab is active, showing a list of vehicle types and their IDs. A search bar and a 'FLEET' button are also visible. On the right side, a vertical menu is open, listing various features: ALARMS, INTERACT, DRIVING BEHAVIOUR MANAGEMENT, CRM, DASHBOARD, ROUTES, FROTCOM TV, JOBS, NOTEBOOK, REPORTS, and ELD. The 'ELD' option is highlighted with a red rectangular border. The background of the interface shows a map of Europe and Africa.

SEARCH NEAREST VEHICLES DIRECTIONS

VEHICLES PLACES ADDRESSES

NOW ?

Search FLEET

- ▲ All Terrain vehicle
 - 06-ee-99
- ▲ ATV
 - 03-SS-33
- ▲ Car
 - 06-TT-33
 - 1000000000000000
 - 357852030519428
 - 5000000000000004
 - 8000000000000100
 - DARAVOLTA INDIA
 - Kit Cape Verde
 - Mambo2 VERDE
 - UK Secureseal

ALARMS

INTERACT

DRIVING BEHAVIOUR MANAGEMENT

CRM

DASHBOARD

ROUTES

FROTCOM TV

JOBS

NOTEBOOK

REPORTS

ELD

ELECTRONIC LOGGING DEVICES

LOGBOOKS **EVENTS** -1 +1

DATE	DRIVER	HOURS WORKED	DISTANCE	VIOLATIONS	CERTIFIED
October 13	joaquim t	05:26	0,0 km	No violations	
October 11	joaquim t	03:45	0,0 km	No violations	
October 10	joaquim t	11:37	0,0 km	No violations	✓
October 9	joaquim t	15:00	0,0 km	No violations	

This sub menu shows all the logbooks received from all vehicles through Frotcom ELD app.

In this list you can see:

- Logbook Date;
- Driver;
- Total of hours worked;
- Distance;
- Information if any violation occurred;
- If it is a certified logbook or a open logbook.

In the submenu **Events** you can look for all the **Malfunctions and Diagnostics** events that happened with the vehicles of your fleet, with the possibility to filter them by Name, Date and type of event:

ELECTRONIC LOGGING DEVICES

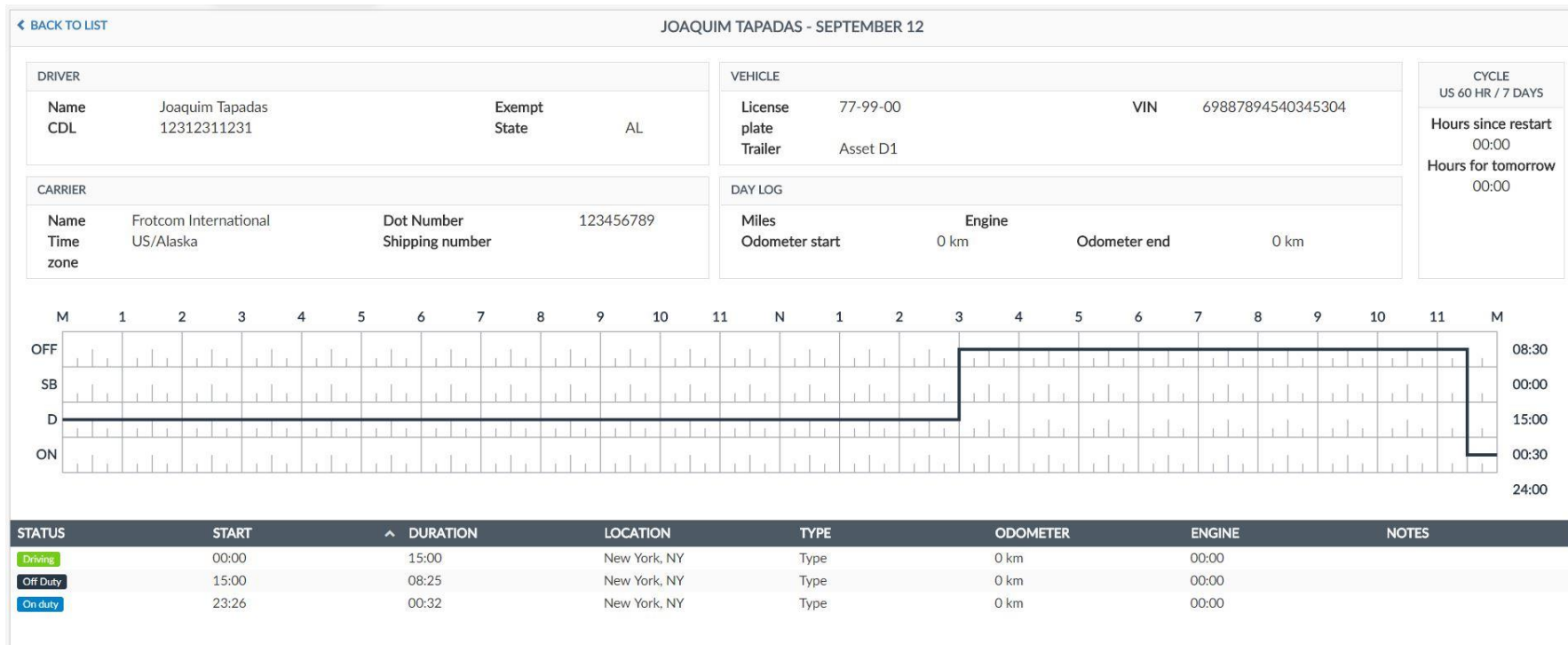
LOGBOOKS **EVENTS**

📅 LAST 30 DAYS ▾ -1 +1

MALFUNCTIONS AND DIAGNOSTICS ▾

DATE	▼ DRIVER	VEHICLE	CLEARED DATE	TERMINAL	CODE	TYPE	DESCRIPTION
Today, 09:47	Filipe Pires	F C4MaxV2 2		us_teste	1	Diagnostics	
Today, 09:43	Filipe Pires	F C4MaxV2 2		us_teste		Diagnostics	
Today, 09:18	Filipe Pires	F C4MaxV2 2		us_teste	2	Diagnostics	
Yesterday, 20:36	Filipe Pires	F C4MaxV2 2		us_teste	1	Diagnostics	
Yesterday, 20:35	Filipe Pires	F C4MaxV2 2		us_teste		Diagnostics	

You can see the details of the logbook click on one date from the list:



To be able to manage your fleet with ELD, some additional information on your account is required.

Note that a user can see these options only if they have permission for ELD.

You must go to **Administration > Account > Profile** and enter the information about the **Carrier** and **Home Terminal Name**.

CARRIER			
Dot Number	123456789		
Main office address	Lisbon	ZIP code	55555-5555
State	ARIZONA ▾		
Cycle rule available	ALL ▾		
Exceptions available	NO EXCEPTION ▾		
Cargo type	ALL ▾		
Drivers can use Personal conveyance	<input type="checkbox"/> NO	Drivers can use Yard moves	<input type="checkbox"/> NO

FIELD	DESCRIPTION
Dot Number	Department of Transportation number
Main office address ZIP code State	Address information
Cycle rule available	Cycle rule applied for the fleet (currently there are two rules available: 70hrs/8days and 60hrs/7days).
Exceptions available	No exceptions are available at the moment
Cargo type	Type of cargo available
Drivers can use Personal conveyance	Choose if the drivers can use the vehicle for personal purposes
Drivers can use Yard moves	Choose if the drivers are allowed to register Yard moves (on duty, yet not driving

HOME TERMINAL NAME	ADDRESS	STATE	TIME ZONE		
Armazém de Portugal	Av. de portugal	NV	US/Alaska	EDIT	DELETE
Armazém de Espanha	Av. de Espanha	AZ	Africa/Algiers	EDIT	DELETE
					ADD

You can use the the **ADD** button to add the following information for the Home Terminal:

- Name
- Address
- State
- Timezone

You can also use the **EDIT** and **DELETE** buttons to change information of the already added Home Terminals.

To be able to manage your fleet with ELD, some additional information on your drivers profiles is required:

Note that a user can see these options only if they have permission for ELD.

You must go to **Administration > Drivers**, select your driver from the list or click on **Add New** to add a new driver.

On the left menu, select **ELD**:

The screenshot shows a web interface for configuring a driver's profile. The driver's name is JOHN SMITH. On the left, a navigation menu lists various sections: GENERAL, PROFESSIONAL, DRIVING LICENSE, EMERGENCY, MOBILE TERMINAL, PERSONAL INFO, WHITELISTS, and ELD. The ELD section is highlighted with a red border. The main content area is titled "ELD SETTINGS" and includes a "SAVE" button. The settings are organized into rows with labels and input fields:

Field	Value / Action	Field	Value / Action
First name	Click to add	Last name	Click to add
Commercial Driver's License	Click to add	State	[Dropdown menu]
Cycle rule available	[Dropdown menu]		
Exceptions available	[Dropdown menu]		
Drivers can use Personal conveyance	[NO]	Yard moves	[NO]
Cargo type	[Dropdown menu]		
Home terminal	[Dropdown menu]		

Below the ELD settings is a "SIGNATURE" section with a "Change signature" link.

FIELD	DESCRIPTION
First name Last name	Same as in the driver's license
Commercial driver's license state	Information regarding the driver's license
Cycle rule available	The cycle rule applied to this driver
Exceptions available	No exceptions are available at the moment
Drivers can use Personal conveyance	Additional option for this driver (shows availability based on the Account settings)
Cargo type	Cargo of transportation of this driver
Home terminal	Home terminal
Signature	Driver's signature (driver can change the signature on their device)

The required information to ELD is:

- License Plate;
- Assets ;
- Vehicle Identification Number (VIN).

FROTCOM ELD APP

The Electronic Logging Device module on Frotcom provides a clean and user friendly interface for you to track, manage and share the information of your Hours of Service with the carrier and/or with Federal Motor Carrier Safety Administration's (FMCSA) authorities.

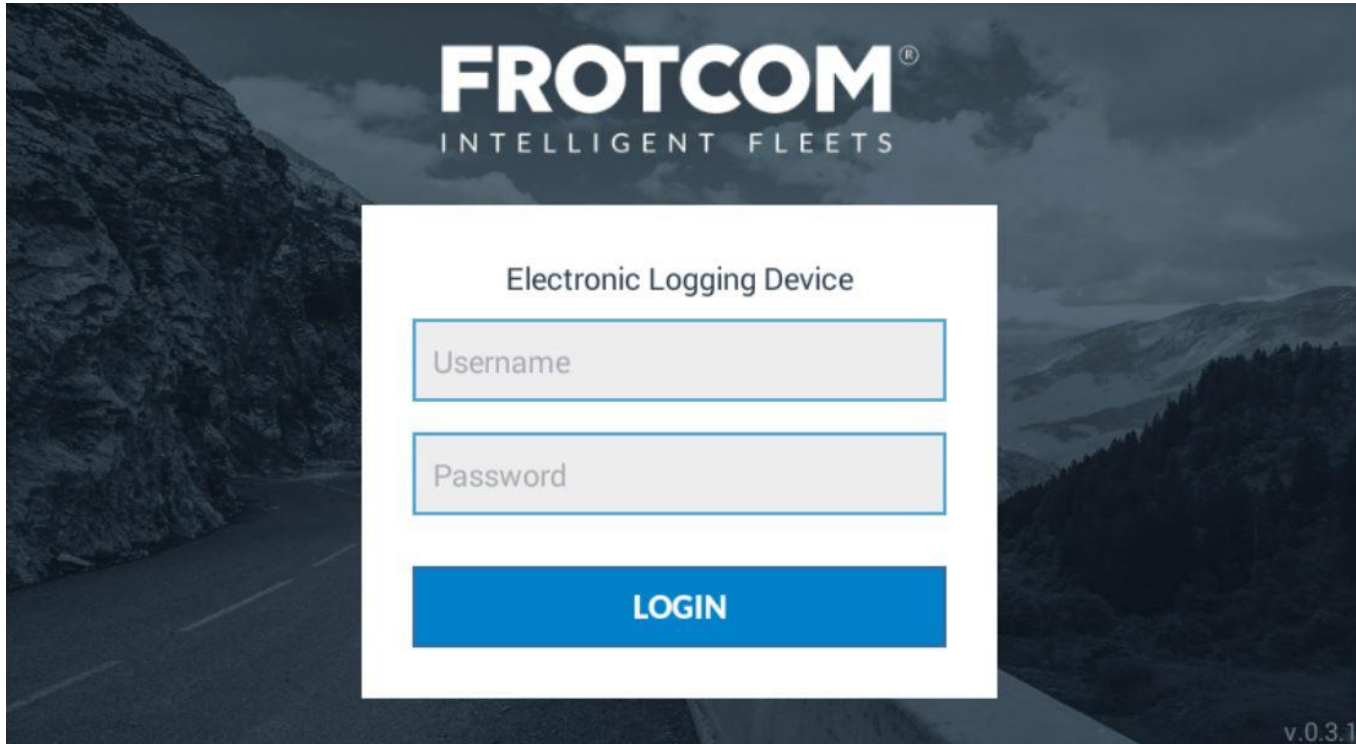
This icon is displayed on the desktop of your device/tablet. Tap it to open the Frotcom application and proceed with the login.

Tip: While using the system, any text in blue can be tapped on in order to add/change the value.

Desktop icon:



When you launch the application you will see the login page.



If it's the first login, you will be asked to confirm your and your vehicle's information. To confirm, tap **Confirm**:

Confirm your information

Driver Info

Name:	Jon Doe	Timezone:	US/Alaska
License N.:	123456789	License State:	AK

Vehicle

License Plate:	01-01-JH	VIN:	05099093138893011
Odometer:	0.000000		
Trailer:	None		

CONFIRM

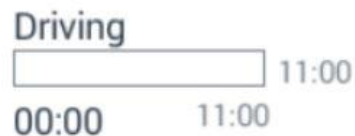
After the login, you will see the main screen of the application:



When you tap **Remaining time** the following panel will be shown:

The screenshot displays the FROTCOM mobile application interface. At the top, there is a dark blue header with a white back arrow on the left, the FROTCOM logo (FROTCOM® INTELLIGENT FLEETS) in the center, and the user name "Jon Doe" next to a blue circular profile picture on the right. Below the header, there are four horizontal progress bars representing different time periods: "Break Required" (00:00 to 08:00), "Driving" (00:00 to 11:00), "Shift" (00:00 to 14:00), and "Cycle" (00:00 to 70:00). The "Break Required" bar is currently empty. In the center of the screen, a white box with a black border displays "RESTING FOR 00:00" and "REQUIRED TO STOP AT 9:03 AM". To the right of this box, there are four buttons arranged in a 2x2 grid: "DRIVING" (white with blue border), "OFF DUTY" (solid blue), "ON DUTY (NOT DRIVING)" (white with blue border), and "SLEEPER BERTH" (white with blue border).

On the top of the panel you can see four different bars/clocks with your Hours of Service (HoS):



Break required

Shows for how long time you are able to drive before a mandatory break

Driving

Shows for how long time you have been driving

Shift

Shows the total of work time on the current shift (day)

Cycle

Shows the total of work time on the current cycle (based on the driver's cycle)

When you start driving (ignition on and vehicle moving) the system will automatically set your status as Driving. For the other status (Off duty, On duty not driving and Sleeper berth) you can set by tapping the respective options on the bottom right of the panel.

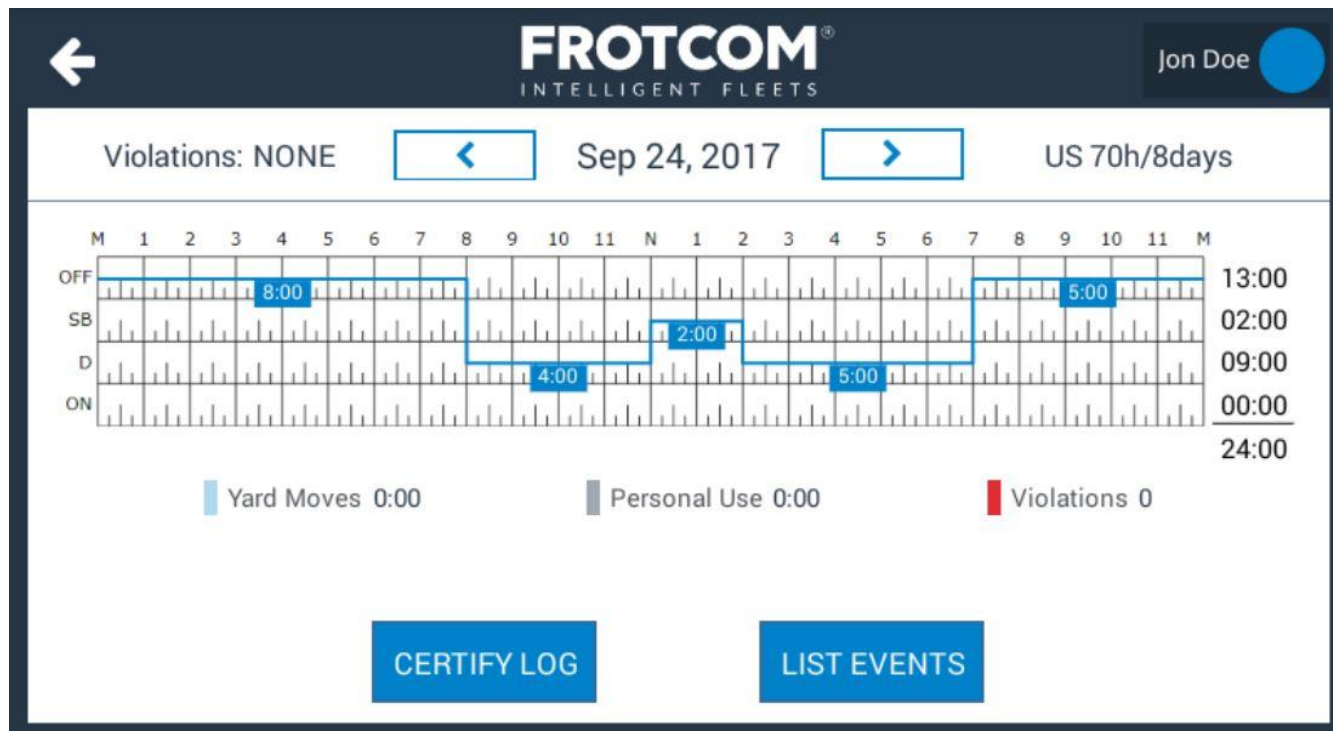


Once you are driving, you will be able to see the clocks and information regarding your next break, but you will be unable to select other events while the car is moving.

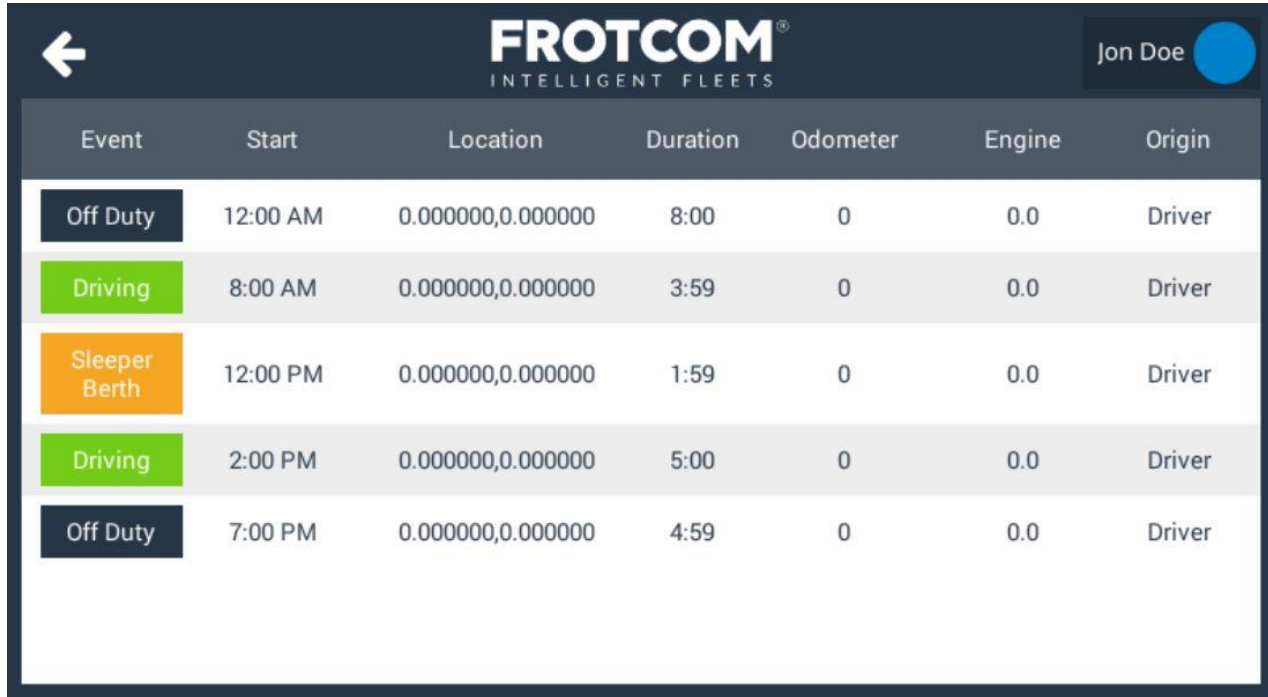
Notes:

- *The time shown on the device is always based on the time zone defined for the home terminal.*
- *To be able change your status, the ignition must be switched off and the vehicle must not drive for 1 minute.*

When you access this option you will see a graph with your daily logbook, based on your statuses on **Remaining time**:



If you want to see the details about your shift, you can click on List Events:




Event	Start	Location	Duration	Odometer	Engine	Origin
Off Duty	12:00 AM	0.000000,0.000000	8:00	0	0.0	Driver
Driving	8:00 AM	0.000000,0.000000	3:59	0	0.0	Driver
Sleeper Berth	12:00 PM	0.000000,0.000000	1:59	0	0.0	Driver
Driving	2:00 PM	0.000000,0.000000	5:00	0	0.0	Driver
Off Duty	7:00 PM	0.000000,0.000000	4:59	0	0.0	Driver

Clicking on **Certify Log** will lead you to the following panel, where you can sign and agree with the information shown on the graph. This information will then be available to your fleet manager:

← FROTCOM®
INTELLIGENT FLEETS Jon Doe

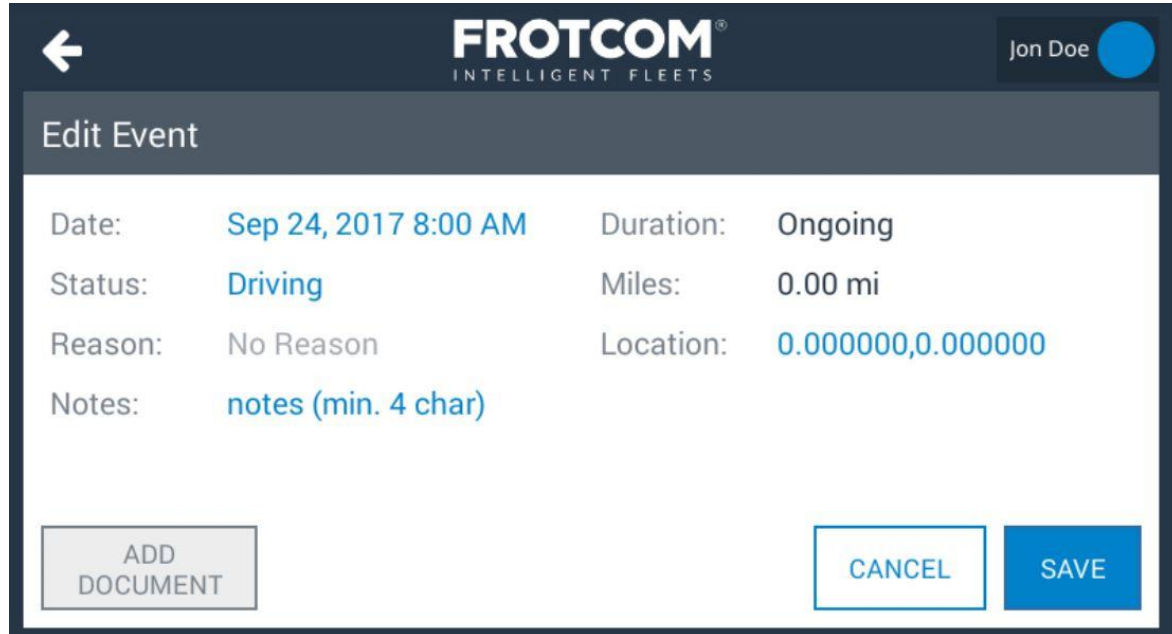
September 24, 2017

I hereby certify that my data entries and my record of duty status for this 24-hour period are true and correct.



NOT READY AGREE

If you find any incorrect information on the graph, or for any reason you want to change/adjust a value, you can simply tap on the graph and edit or create the events as you wish. You can also add documents to the event (e.g. receipts):



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INTELLIGENT FLEETS

Jon Doe

Edit Event

Date:	Sep 24, 2017 8:00 AM	Duration:	Ongoing
Status:	Driving	Miles:	0.00 mi
Reason:	No Reason	Location:	0.000000,0.000000
Notes:	notes (min. 4 char)		

ADD DOCUMENT

CANCEL SAVE

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FROTCOM ELD

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