Coretex DRIVE

Driver In-cab Guide
ELD Data Diagnostics/Malfunctions

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CORETEX DRIVE (CORETEX DRIVE V1.7+/CORETEX 360 V19.1)

Dealing with Data Diagnostics Events and Malfunctions

A   Overview

This is a quick reference guide for drivers wanting details of data diagnostic and malfunction events with the ELD functionality in **Coretex DRIVE**.

> ℹ️ For full details of using **Coretex DRIVE** and ELD refer to *Coretex DRIVE: ELD Driver Guide*.

An ELD connection between your **Coretex DRIVE** mobile device and the vehicle's TMU must be able to monitor full compliance with requirements defined by the *Federal Motor Carrier Safety Administration* (FMCSA).

TMU in vehicle

It will ensure that all events relating to data inconsistencies and malfunctions are detected, recorded and submitted.

> ℹ️ Refer to Subpart B, Section 4.6 of the FMCSA regulations.

B   Data Diagnostic Events

These events are when your ELD detects a data inconsistency such that you are triggered to follow the recommendations of the ELD provider (i.e. Coretex) to resolve the inconsistency.

> ℹ️ Refer to Section 49 CFR 395.34(c) of the FMCSA regulations.

C   Data Diagnostic Codes

1 - Power data diagnostic
2 - Engine synchronization data diagnostic
3 - Missing required data elements data diagnostic
4 - Data transfer data diagnostic
5 - Unidentified driving records data diagnostic

Code	Event Description
1	**Power data diagnostic** ELD is not fully functional within one minute of turning the engine on, or within one min. of selecting a vehicle in **Coretex DRIVE**.
	Causes
	• ELD was unable to connect to vehicle within 60 seconds
	• The vehicle has ignition off and the TMU is in *Sleep mode*
	• Bluetooth is not enabled or *Airplane mode* is enabled
	Troubleshooting
	• verify correct vehicle is selected and ignition shows ON
	• verify Bluetooth is enabled
	• tap the *Dashboard Menu > Diagnostics* and verify the TMU is configured AND connected
	• on the *Diagnostic* screen, verify ignition shows ON

Corrective Action

- if starting your day in the office (not at the vehicle), it is recommended that you SKIP vehicle selection at *Sign In* and select the vehicle only once you are at the vehicle
- if at the vehicle and still not connected, verify that Bluetooth is enabled and *Airplane mode* is disabled
- restart the mobile device and unselect any selected vehicle. Save, then reselect vehicle.
- if the error persists, contact Coretex Support (Coretex will verify the ELD and the TMU configuration)

Code	Event Description
2	**Engine synchronization data diagnostic**

An ELD is required to establish a link to the engine ECM, and must record an *engine synchronization diagnostic* event (when it loses that link for more than five seconds).

Causes

- TMU is not correctly configured to read ECM data
- there is an ECM malfunction

Troubleshooting

- tap the *Dashboard Menu > Diagnostics* and verify the TMU is configured AND connected
- on the *Diagnostic* screen, verify ignition shows ON and Odometer is displayed

Corrective Action

If the error persists, contact Coretex Support. There may be a Bluetooth issue, or a wiring/configuration issue related to the TMU/ECM connection.

Code	Event Description
3	**Missing required data elements data diagnostic**

An ELD must monitor the completeness of the ELD event record information in relation to the required data elements for each event type. It must record a *missing required data element data diagnostic* event for you (if any required fields are missing at the time of recording).

Causes

- GPS antenna failure
- ELD *Sign In* attempt while in a building and unable to get a GPS lock
- TMU recorded a status event while the vehicle was selected but is unable to read the **Odometer** or **Engine Hours**

Troubleshooting

Go to *ELD Menu > View Logs* and verify that recent events show a **Location**, an **Engine Hours** and an **Odometer** value.

Corrective Action

- tap on the card to navigate to event with missing data (the event will be highlighted in a different color)
- tap on the event to add the missing information and resolve the event

Code	Event Description
4	**Data transfer data diagnostic**

The ELD will automatically test the data transfer mechanism every seven days. A data transfer data diagnostic event is triggered when the automatic test fails.

Causes

- poor or no cellular coverage when on a trip
- *Airplane mode* is enabled

Troubleshooting

- verify the cellular signal is available
- verify that *Airplane mode* is disabled

Corrective Action

- enable Bluetooth
- disable *Airplane mode*
- restart the mobile device
- Sign out and Sign in
- if the error persists contact Coretex Support

Code	Event Description
5	**Unidentified driving records data diagnostic**

If more than 30 mins. of driving in a 24 hour period shows as 'unidentified driver' on the ELD, it must detect and record an *unidentified driving record data diagnostic* event.

The data diagnostic indicator must be turned on for all drivers logged into that ELD for the current 24 hour period and the following seven days.

Causes

- vehicle was used by driver without the driver signing into **Coretex DRIVE**
- Bluetooth connection failed
- **Coretex DRIVE** app failed

Troubleshooting

Always sign in and select the vehicle in **Coretex DRIVE** before using the vehicle.

Corrective Action

- tap on the **Unidentified Driver** card to review
- accept all records that belong to you

The information card will clear when all records have been either accepted by yourself, or rejected (outstanding unidentified driving records will automatically be rejected after you *Sign Out*).

1 Malfunction Events

Malfunction events are when the ELD detects technical compliance issues.

You must:

- notify the motor carrier within 24 hours
- if the malfunction persists, reconstruct a paper record duty status for the current 24 hours and the last seven days
- keep paper logs until the ELD unit is serviced and brought back into compliance

> The motor carrier MUST repair, replace, or service the ELD unit within eight days.

> Refer to Section 49 CFR 395.34(c) of the FMCSA regulations.

2 Malfunction Codes

P - Power compliance
E - Engine synchronization compliance
T - Timing compliance
L - Positioning compliance
R - Data recording compliance
S - Data transfer compliance

Code	Malfunction description
P	**Power compliance**

An ELD must monitor the data it receives from the engine ECM and set a *power compliance malfunction* event to identify instances when it may not have complied with the power requirements.

Cause
- more than 30 mins of driving time lost in a 24 hour period

Troubleshooting
Before leaving the yard, ensure the TMU is connected by:
- tapping *Dashboard Menu > Diagnostics* and verify the TMU is configured AND connected

Corrective Action
Contact Coretex Support. The TMU is likely to be offline or was unplugged for service.

E	**Engine synchronization compliance**

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

Causes
- TMU not correctly configured to read ECM data
- vehicle does not support CAN protocols

Troubleshooting
- tap the *Dashboard Menu > Diagnostics* and verify that the TMU is configured AND connected.
- on the *Diagnostic* screen, verify that Ignition shows ON and that Odometer is displayed

Corrective Action
- verify *Airplane mode* is disabled
- verify Bluetooth is enabled
- restart the mobile device
- if the error persists, contact Coretex Support

Code	Malfunction description
T	**Timing compliance**

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 of time deviation.

Causes
- mobile device is not set to automatic time synchronization
- GPS signal is unavailable

Troubleshooting
- always set the mobile device to use automatic time synchronization
- tap the *Dashboard Menu > Diagnostics* and verify that the TMU is configured AND connected
- on the Diagnostic screen, valid Latitude and Longitude co-ordinates are displayed for Position (indicating GPS signal)

Corrective Action
- go to the mobile device's Android Settings and ensure that date/time is set to automatic time synchronization
- if the error persists, contact Coretex Support

Code	Malfunction description
L	**Positioning compliance**

An ELD must monitor elapsed time during periods when the ELD fails to acquire a valid position measurement within five miles of the vehicle's movement (when such elapsed time exceeds a cumulative 60 mins over a 24 hour period, the ELD must set and record a *Positioning compliance* malfunction).

Cause

Antenna failure

Troubleshooting

- tap on *Dashboard Menu > Diagnostics* from the **Coretex DRIVE** dashboard and verify *Position* shows valid *Latitude/Longitude* co-ordinates

Corrective Action

Replace the antenna or contact Coretex Support.

Code	Malfunction description
R	**Data recording compliance**

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
- retrieve recorded logs that are not otherwise cataloged remotely by the motor carrier

Causes

Memory or ELD performance issues

Troubleshooting

Contact Coretex Support

Corrective Action

Contact Coretex Support

Code	Malfunction description
S	**Data transfer compliance**

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 and record a *data transfer compliance* malfunction. This fault auto-resolves when the mobile device begins to communicate successfully.

Causes

- poor or no cellular coverage when on a trip
- Airplane mode is enabled

Troubleshooting

Verify that:
- cellular signal is available
- Airplane mode is disabled

Corrective Action

- disable *Airplane mode*
- restart mobile device
- if the error persists, contact Coretex Support

Need help?

Local in-country support is available within Australia, New Zealand and North America:

Please visit coretex.com for Support and Contact details.