



Feature Sheet

**Troubleshooting Data Diagnostics and
Compliance Malfunctions**

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Background and Purpose

This document describes the specific Data Diagnostic and Malfunction conditions that are detected and recorded by the device, and provides troubleshooting steps and best practices to avoid them.

FMCSA regulations require an ELD to:

- Monitor its operation for compliance with technical and data consistency requirements.
- Display a Data Diagnostic Status Indicator and record Data Diagnostic events indicating the detection and clearing of certain diagnostic conditions.
- Display a Malfunction Status Indicator and record Malfunction events indicating the detection and clearing of certain malfunction conditions.

US 49 CFR Part 395 Subpart B Section 395.34 describes required motor carrier and driver behavior in the presence of Data Diagnostic and Malfunction conditions. Refer to US 49 CFR Part 395 Subpart B Appendix A Section 4.6. for the regulatory context and definition for each Data Diagnostic and Compliance Malfunction.

General Behavior

When the device detects the presence of a Data Diagnostic condition:

- The Data Diagnostic Status Indicator will be displayed as a warning icon in the eFleetSuite action bar, next to the date and time.
- A Data Diagnostic Detected event is recorded by the device, including an indication of the specific diagnostic condition. The event may appear on the Unidentified Driver's log, accessed by running the host Unidentified Driver Report.

When the Data Diagnostic condition is no longer detected:

- The Data Diagnostic indicator will no longer be displayed.
- A Data Diagnostic Cleared event is recorded by the device, including an indication of the specific diagnostic condition. The event may appear on the Unidentified Driver's log and may not appear on the same driver's log as the Data Diagnostic Detected event.

When the device detects the presence of a Malfunction condition:

- The Malfunction Indicator is displayed as a pop-up over all active screens. This pop-up can be moved around the screen but cannot be dismissed while the malfunction is active.
- A Malfunction Detected event is recorded by the device, including an indication of the specific malfunction condition. The event may appear on the Unidentified Driver's log.

When the Malfunction condition is no longer detected:

- The Malfunction Indicator no longer will be displayed.
- A Malfunction Cleared event is recorded by the device, including an indication of the specific malfunction condition. The event may appear on the Unidentified Driver's log and may not appear on the same driver's log as the corresponding "Detected" event.

Data Diagnostic Indicator



The Data Diagnostic Indicator will be displayed in the eFleetSuite taskbar any time a Data Diagnostic is active. The device is required to display a visual indicator to the driver to indicate the existence of an active Data Diagnostic event. For regulatory context, refer to US 49 CFR Part 395 Subpart B Appendix A Section 4.6.3.

Malfunction Indicator



Timing compliance
Paper logs may be required as back up
Check manual for instructions

The Malfunction Indicator is a critical part of ELD compliance. If the device is powered, a driver must be able to tell whether there is an active malfunction by looking at the device, without going through screens, buttons, or menus. For regulatory context, refer to US 49 CFR Part 395 Subpart B Appendix A Section 4.6.2.

Active malfunctions will be displayed on the device as a pop-up in front of all other screens. This pop-up can be moved around the screen but cannot be dismissed while the malfunction is active.

Per US 49 CFR Part 395.34(a), the driver is required to keep paper logs while a malfunction is active, in addition to using the device if possible.

General Malfunction FAQ

Why do I need to use paper logs when I have the device installed?

Per §395.34(a)(2), when the device is in malfunction state, a driver must “Reconstruct the record of duty status for the current 24-hour period and the previous 7 consecutive days and record the records of duty status on graph-grid paper logs that comply with §395.8, unless the driver already possesses the records, or the records are retrievable from the ELD”.

Can I use my device for undocked or No Vehicle Mode operation when this malfunction is active?

The device may not be used as an ELD (for Hours of Service recordkeeping) while a malfunction is active. Non-ELD functions such as DVIR may still be possible.

Why is the malfunction still active? I switched my device to another vehicle that is functioning properly.

A malfunction will persist on a device regardless of which vehicle the device is connected to.

Data Diagnostics

1 – Power Data Diagnostic

Definition

A Power Data Diagnostic occurs whenever the device detects that it was not powered on while the engine was running. This Data Diagnostic commonly detects and clears upon engine start.

Related Malfunction - Power Compliance Malfunction

Any period during which the vehicle is driven without the device fully operational accumulates towards detecting a Power Compliance Malfunction.

Possible Causes

- The Engine was started while the device was off, and the device took more than 60 seconds to power up after turning the engine on.
- The engine was run, or the vehicle driven while the device was off or undocked/disconnected.

Troubleshooting and Best Practices

- Manually power on the device and allow it to boot up before turning the engine on. This ensures that it is ready to record as soon as the engine starts.
- Do not turn off or disconnect the device if the engine is on. If the engine is on, then the device must remain powered on and docked/connected until the engine has been turned off.
- If the device appears to be docked/connected, but is still recording Power Data Diagnostic events, make sure that all cables to the device are securely connected.
- If a Power Data Diagnostic is detected but does not clear right away after ensuring the device is powered on and fully functional, try turning the engine off and then back on again.

Clearing procedure

A Power Data Diagnostic will clear when the device is powered on, is docked/connected, detects engine on, and is receiving valid odometer, engine hours, and road speed.

FAQ - Power Data Diagnostic

I did not see this Data Diagnostic when I powered on the device a few minutes after turning on my vehicle. Is this behavior expected?

It is likely that no user was logged in when the Data Diagnostic was detected and/or cleared. Check the Unidentified Driver Report for the expected log event(s).

Very short periods of missed engine run time may not always be detected, due to the resolution of Engine Hours available on the vehicle data bus.

Why do I see this Data Diagnostic detect and clear in the same minute?

Because the device needs to compare the vehicle's last known engine hours and odometer with the new engine hours and odometer, the device needs to wait until the engine is powered and it has received new engine hours and odometer readings before it can detect a Power Data Diagnostic. This means that "Detected" and "Cleared" events will often both appear in the log at the time of engine start, even if the period of lost time extends further back than indicated.

I had my device powered on before starting the engine. Why do I still see this Data Diagnostic?

The device not only checks that the it was powered on within one minute of the engine being turned on, but it also compares the last known engine hours and odometer with the new, incoming engine data. If there is a difference between the old and new engine data, this indicates that the vehicle was previously operated without the device powered on and the device will detect a Data Diagnostic.

Can I undock my device to sign off for a package delivery while my vehicle stays on without seeing this Data Diagnostic?

This is only possible if the device-vehicle connection is wireless AND is maintained for the whole time of being undocked. Otherwise, the device will detect that engine hours have increased, and a Data Diagnostic will be detected.

Why do I see this Data Diagnostic detected in the middle of my day while driving?

If the device was undocked or powered off at any time the vehicle was in operation, this diagnostic would be expected. To troubleshoot that this is the case, check the driver's logs to see if docked/undocked or power failure/restored events occurred near the Data Diagnostic.

2 – Engine Synchronization Data Diagnostic

Definition

An Engine Synchronization Data Diagnostic occurs if eFleetSuite does not receive vehicle data within the required time periods.

Related Malfunction - Engine Synchronization Compliance Malfunction

Any period during which the engine is on and there is an active Engine Synchronization Data Diagnostic accumulates towards detecting an Engine Synchronization Compliance Malfunction.

Possible Causes

- There is a connection problem between the ELD system and the vehicle bus (vehicle diagnostic port or wiring).
- For devices that can be undocked, there is a connection issue between the tablet/display and black box.
- The ECU or Vehicle Bus is not sending all expected data reliably.
- The device is showing Ignition On when the engine is not running.

Troubleshooting and Best Practices

- The device Diagnostics (System Check) screen indicates whether the required engine data is being received. Contact the provider for assistance if Odometer shows Failed with the vehicle engine running.
- Check any that cables and the 9-pin adapter are properly connected.
- Ensure that the device is installed to receive accurate ignition status. Contact the provider for assistance if needed.
- If an ignition-only source is not available (for example, if the device shows Ignition On with the key in “accessory” position), avoid leaving the key in a position that shows Ignition On without the engine running.

Clearing Procedure

An Engine Synchronization Data Diagnostic will clear once the device is receiving all required vehicle data at the correct frequency.

FAQ – Engine Synchronization Data Diagnostic

My system/vehicle/engine cannot support sending all of the vehicle data elements as frequently as required, how do I operate?

Consult with the provider regarding specifics of your setup to determine how regulatory requirements can be met.

What is the difference between a Power Data Diagnostic and an Engine Synchronization Data Diagnostic?

A Power Data Diagnostic is detected when the device is fully disconnected from the vehicle or the device is powered off while the engine is running. An Engine Synchronization Data Diagnostic is detected when the device can tell that the engine is running but that there are required pieces of vehicle data missing.

3 – Missing Required Data Elements Data Diagnostic

Definition

A Missing Required Data Elements Data Diagnostic occurs when an ELD event is recorded without the required vehicle and position data. A check is made on each recorded event for whether it contains all the required fields listed in Appendix A Section 4.5.1. The check is only made against Status Change Events, Intermediate Log Events, Login/Logout Events, Engine On/Off Events and Malfunction and Data Diagnostic Detected/Cleared Events.

Possible Causes

- The driver's status changed without valid odometer or engine hours reading while the engine was running.
- An Unidentified Driving event occurred without a valid odometer or engine hours.
- GPS position was unavailable when an automatic status change or intermediate log event was recorded.

Troubleshooting and Best Practices

- Ensure that the device is connected to the vehicle and receiving engine data when the engine is running.
- Check the antenna(s) and wiring to ensure there is nothing obstructing the GPS signal.
- If the device is currently receiving all of the required data, try turning the engine off and on - an Engine On/Off Event requires all fields.

Clearing procedure

The device keeps track of all required fields that have been detected as missing for a driver and the Missing Required Data Elements Data Diagnostic will only be cleared for a driver when the device has successfully recorded all previously missed fields.

FAQ – Missing Required Data Elements Data Diagnostic

Should I expect a Missing Required Data Elements Data Diagnostic if my device is not receiving valid GPS?

In the case of a manual status change when GPS is not available, the driver will be prompted for location information, and a Missing Required Data Elements Data Diagnostic will not be recorded.

However, In the case of an automatic status change (automatic D and ON events) when GPS is not available, the device will record a Missing Required Data Elements

Data Diagnostic and will also prompt the driver (when the vehicle is not moving) to enter the missing location.

Entering the missing location after the fact does not clear the Missing Required Data Elements Data Diagnostic.

I manually entered a location. Why didn't the Data Diagnostic clear?

When a Missing Required Data Elements Data Diagnostic is active, a manually entered location will not clear the diagnostic because the device still does not have a valid GPS fix.

If the engine is not sending required odometer and/or engine hour values, would I expect to see a Missing Required Data Elements Data Diagnostic or Engine Synchronization Data Diagnostic?

Both Data Diagnostics would be expected in this case. The Engine Synchronization Data Diagnostic would be logged against all currently logged in drivers (or the Unidentified Driver profile if no driver is signed in), and as each driver will have an event that was recorded with missing required data, a Missing Required Data Elements Data Diagnostic will also appear on each signed in drivers' (or Unidentified Driver's) log.

Does Missing Required Data Elements Data Diagnostic lead to a malfunction?

No. A Missing Required Data Elements Data Diagnostic does not aggregate towards a malfunction. However, this diagnostic may also be coupled with an Engine Synchronization Data Diagnostic or a Positioning Compliance Malfunction indicating a problem with the ELD system, so preventing this diagnostic is advised.

My device recorded an Intermediate Log that was missing GPS and odometer. It is now receiving both fields and I am logged out, but the Missing Required Data Elements Data Diagnostic didn't clear. Why not?

The ELD cannot verify that a piece of data is no longer missing until it records an event that includes that data. An Intermediate Log requires both GPS and odometer, but an ELD Log Off event only requires odometer. Once a subsequent event is recorded that can verify that the ELD is receiving GPS (like an Engine On/Off event) then the Missing Required Data Elements Data Diagnostic will be cleared.

Why do I have a Missing Required Data Elements Data Diagnostic, when my co-driver doesn't have one?

This will occur if the co-driver has not recorded an event with missing data. Each log event is checked to see if all required fields are present. If a field is missing on a log event, then a Missing Required Data Elements Data Diagnostic will be detected for that driver's log.

4 – Data Transfer Data Diagnostic

Definition

A Data Transfer Data Diagnostic indicates that the device is unable to communicate with the eFleetSuite host ELD Data Transfer Service for the purposes of performing an ELD Data Transfer when requested, such as at roadside inspection. The device must verify its ability to perform an ELD Data Transfer at least once every 7 days.

Related Malfunction - Data Transfer Compliance Malfunction

Once a single test fails and the Data Diagnostic is detected, the ELD Data Transfer check will be performed every day. This will accumulate into a Compliance Malfunction after three failed checks.

Possible Causes

- The device is in an area with poor cellular coverage, and is not able to communicate with the host upon startup.
- The device is in another situation where the cellular or Wi-Fi communications channel is not available or functioning.
- The host is not able to successfully process ELD Data Transfer requests.

Troubleshooting and Best Practices

- Perform a System Check to verify that communications is working as expected.
- Check the antenna(s) and wiring to ensure that nothing is blocking the device from communicating with the host.
- If the device has other applications that use the network, verify whether they have network access and are operating as expected.
- If the device is not in an area with good cellular coverage, move to an area with better coverage.
- eFleetSuite uses the same communication mechanism for day-to-day operation as for the ELD Data Transfer. If eFleetSuite communications is not working, the ELD Data Transfer function will also not work.
- Contact the provider for further assistance.

Clearing Procedure

A Data Transfer Data Diagnostic will be cleared when a successful ELD Data Transfer check between the mobile and host is processed.

FAQ – Data Transfer Data Diagnostic

I started up my vehicle and device, and I'm seeing this Data Diagnostic. What should I do?

If the device is in an area with good cellular coverage and you have performed the troubleshooting steps above, contact the provider for further assistance.

My ELD indicates that I have a good communications connection (icon is green), yet I still have a Data Transfer Diagnostic. Why is that?

This could be because the host function that handles creating the ELD Data File is unable to process ELD Data File requests. Contact the provider for further assistance.

5 – Unidentified Driving Records Data Diagnostic

Definition

When the vehicle is operated with no driver signed into the device or with multiple drivers signed in but none identified as the primary driver, the device will record driving time against the Unidentified Driver profile. The Unidentified Driving Records Data Diagnostic becomes active when the total driving time recorded to the Unidentified Driver profile exceeds 30 minutes in the last 24 hours.

Possible Causes

- A driver forgot to log into the ELD and drove more than 30 minutes total in a 24-hour period without signing in.
- One or more drivers were signed in without a primary driver designated, and drove more than 30 minutes total in a 24-hour period without signing in.

Troubleshooting and Best Practices

- Ensure that a driver is signed in and identified as the primary driver before moving the vehicle.
- Promptly review and accept Unidentified Driving records that belong on your log when prompted by the device.

Clearing Procedure

Once this Data Diagnostic is active, it is only cleared once there is no more than 15 minutes of Unidentified Driver driving time in the current day and preceding 7 days. To clear the Data Diagnostic:

- Drivers should review and accept Unidentified Driver driving time on the device to reduce the unclaimed amount to less than 15 minutes.
- A motor carrier may assign the Unidentified Driver driving time to a driver, but if the driver accepts that time on the host or on a different device, the original device is not aware of this and the Data Diagnostic will not clear for the full 7 days.
- If the Unidentified Driver driving time cannot be assigned or does not belong to a driver, such as mechanic moves, wait for the unclaimed UD Driving time to go below 15 minutes for the current day and the previous 7 days.

FAQ – Unidentified Driving Records Data Diagnostic

The vehicle was driven for 30 minutes with no driver signed in, but the Unidentified Driving Records Data Diagnostic was not recorded for several more minutes. Why is this?

The device is required to wait 5 minutes after the vehicle has stopped moving before it ends a UD driving event (records an automatic D to ON status change). When this occurs close to the 30-minute UD threshold, the detection of the Data Diagnostic may be delayed.

There are Unidentified Driving records on my driver log from another device. Do these count towards the Data Diagnostic?

No, only records for the current device being used accumulate towards the Data Diagnostic on that same device.

Why do I see a new Unidentified Driving Records Data Diagnostic Detected event every time I log into the device?

The FMSCA requires that the device record a new Unidentified Driving Records Data Diagnostic each time any driver signs in while the diagnostic is active.

I've accepted the Unidentified Driving event(s), why is the Unidentified Driving Records Data Diagnostic is still active when I log in?

If a motor carrier assigns the UD driving time to a driver and the driver accepts that time on the host or on another device, the original device is not aware of this and the Data Diagnostic will not clear for the full 7 days.

Compliance Malfunctions

P – Power Compliance Malfunction

Definition

This malfunction indicates that the device was not operational while the engine was running and the vehicle was driven.

Related Data Diagnostic - Power Data Diagnostic

Any period during which the vehicle is driven without the ELD fully operational accumulates towards detecting a Power Compliance Malfunction.

Possible Causes

- The ELD missed over 30 minutes of driving time in the last 24 hours. This is determined by checking whether the odometer has increased by more than 5 miles and engine hours has increased by more than 30 minutes without the ELD being on.

Troubleshooting and Best Practices

- Ensure that the ELD is powered on at all times when the vehicle's engine is running.
- See Power Data Diagnostic for more troubleshooting help.

Clearing Procedure

Once active, this malfunction is cleared when the distance traveled (odometer) and engine hours elapsed without the ELD being on goes below 5 miles and 30 minutes in the past 24 hours.

FAQ – Power Compliance Malfunction

How long will it take to clear a Power Compliance Malfunction?

The Power Compliance Malfunction will typically take 24 hours to clear as long as the device is docked, receiving valid engine data, and remains powered on while the vehicle is operated or running.

Why did the Power Compliance Malfunction clear when I still have Power Data Diagnostics in the last 24 hours?

Power Compliance Malfunctions indicate when the vehicle has moved while the device was not operational. Times where the engine was running (engine hours increased), but the vehicle did not move (no change in odometer) are not counted towards this malfunction.

It's been over 24 hours since the last Power Data Diagnostic ended. Why has the malfunction not cleared?

The device cannot verify that the Power Compliance Malfunction is no longer active until the device has been powered on, connected to a vehicle, and the engine is turned on. Provided that there is no new missed drive time detected, the malfunction will clear when these conditions are met.

Does the engine need to be running with the device powered on for 24 hours before the malfunction clears?

No. As long as there are no new detected periods of missing driving, the malfunction will clear after 24 hours the next time the device is powered on, connected, and the engine is turned on.

Do I need to connect my device to the same vehicle in order for the malfunction to clear?

No, the malfunction will clear based on the total missed driving time recorded on the device and is not dependent on being associated with the same vehicle.

E – Engine Synchronization Malfunction

Definition

The Engine Synchronization Compliance Malfunction indicates that the ELD is not operating with the required vehicle data elements.

Related Data Diagnostic - Engine Synchronization Data Diagnostic

Any period during which the engine is on and there is an active Engine Synchronization Data Diagnostic accumulates towards detecting an Engine Synchronization Compliance Malfunction.

Possible Causes

- The total amount of time that an Engine Synchronization Data Diagnostic was active over the past 24 hours is greater than 30 minutes. This malfunction would carry over to multiple vehicles for a device that can be undocked.

Troubleshooting and Best Practices

- See Engine Synchronization Data Diagnostic for troubleshooting.

Clearing Procedure

After establishing a good connection with the engine where eFleetSuite is receiving all engine data, wait for the total amount of time with active Engine Synchronization Data Diagnostics to drop below 30 minutes in the past 24 hours.

FAQ – Engine Synchronization Compliance Malfunction

How long will it take to clear an Engine Synchronization Compliance Malfunction?

Typically it will take approximately 24 hours from the time of establishing a good connection with the engine.

It's been over 24 hours since the last Engine Synchronization Data Diagnostic ended. Why has the malfunction not cleared?

The device cannot verify that it is receiving all engine data at the correct frequency until the device has been powered on, connected to a vehicle, and the engine turned on. After the device ensures that it is receiving valid engine data at the required frequency, the malfunction will clear.

Do I need to connect my device to the same vehicle in order for the malfunction to clear?

No, the malfunction will clear based on the aggregated missed driving time recorded on the device and is not dependent on being associated with the same vehicle.

T – Timing Compliance Malfunction

Definition

A Timing Compliance Malfunction indicates that the device system time is off by 10 minutes or more.

Possible Causes

- The device was tampered with and the clock was manually set to a time in the past or future.
- The device hasn't been able to set the time according to the reference time due to poor cell and/or GPS signal.
- The GPS receiver in the device is malfunctioning.

Troubleshooting and Best Practices

- Ensure that the device is connected to the cellular network and has good GPS signal.
- Check the antenna(s) and wiring to ensure that nothing is blocking the device from connecting.
- Ensure that the device time has not been manually altered.

Clearing Procedure

If the device was tampered with, manually set the time back to the appropriate time and lock the device to prevent further tampering. If the device has not yet set the time according to Cellular or GPS, wait for it to obtain a valid signal.

FAQ – Timing Compliance Malfunction

How long will it take to clear a Timing Compliance Malfunction?

It will clear immediately after the device clock is returned to within 10 minutes of the reference time.

Is there a related Data Diagnostic for Timing Compliance Malfunctions?

No, there is no Data Diagnostic related to Timing Compliance Malfunctions.

If I undock my device, it will no longer be receiving GPS. Will this cause a Timing Compliance Malfunction?

No. The device does not detect or clear a Timing Compliance Malfunction while undocked.

L – Positioning Compliance Malfunction

Definition

The Position Compliance Malfunction occurs when the total amount of time during which the device has an invalid GPS fix accuracy (greater than 0.5 miles) and has traveled over 5 miles in a vehicle without a valid GPS fix accuracy totals 60 minutes or more in the last 24 hours.

Possible Causes

- The device starts receiving invalid GPS fix accuracy (GPS icon will be yellow or red) and the vehicle moves farther than 5 miles in this state. If the device continues to receive invalid GPS fix accuracy for 60 minutes, a Positioning Compliance Malfunction will occur.

Troubleshooting and Best Practices

- Check GPS antenna and wiring.
- Verify that nothing is covering or blocking the GPS antenna.
- Contact the provider for further assistance.

Clearing Procedure

Maintain a good GPS fix accuracy and wait until the amount of time in which the vehicle traveled over 5 miles with poor GPS fix accuracy over the last 24 hours falls below 60 minutes.

FAQ – Positioning Compliance Malfunction

Is the time in which the vehicle travels without valid GPS fix accuracy before travelling over 5 miles included in the amount of time that counts towards the Position Compliance Malfunction?

No. Only time in which the device continues to have invalid GPS fix accuracy after already traveling 5 miles with invalid fix accuracy is counted towards the malfunction.

Is there a related Data Diagnostic for Positioning Compliance Malfunctions?

No, there is no Data Diagnostic related to Positioning Compliance Malfunctions.

Does the vehicle need to be in motion with valid GPS for 23 hours before the malfunction will clear?

No. If the device was in a state with poor GPS for a consecutive 60 minutes to trigger the malfunction, it can clear after 23 hours regardless of whether the ELD has been associated to a vehicle. However, the device must have been docked with the engine running at some point during this period and have accurate GPS before it will clear.

R – Data Recording Compliance Malfunction

Definition

The Data Recording Compliance Malfunction indicates that the device is unable to record new events or the device is approaching the limit for its internal storage.

Possible Causes

- The device has less than 200MB of free storage space.
- The database has become corrupt or the file system has been tampered with.

Troubleshooting and Best Practices

- If storage use has increased due to some other driver activity (such as photo or video capture), the driver can attempt to reduce storage usage.
- If disk space is low, clear unnecessary files to make space on the device and then reboot.
- If disk space is not low, reboot the device. If rebooting the device does not clear the malfunction, reprovision the device.
- Contact the provider for further assistance.

Clearing Procedure

This malfunction will clear when eFleetSuite is able to record data successfully and the device has more than 200MB of free storage space.

FAQ – Data Recording Compliance Malfunction

When will the Data Recording Compliance Malfunction clear?

If the cause is from the disk space being too low, the malfunction will clear after cleaning up unnecessary files and rebooting. If the cause is due to not being able to access the database, it will clear as soon as eFleetSuite is able to save data to the database.

S – Data Transfer Compliance Malfunction

Definition

The Data Transfer Compliance Malfunction indicates that the device is unable to communicate with the eFleetSuite host ELD Data Transfer Service for the purposes of performing ELD Data Transfer when requested (e.g. at roadside inspection). The Data Transfer Data Diagnostic escalates to Malfunction status when the diagnostic situation persists for an additional 3 days.

Possible Causes

- The device has not been able to reach the host for a prolonged period (~10 days).
- The host has not responded to communications from the device.
- The host function responsible for creating the ELD Data File is not responding as expected for a prolonged period of time.

Troubleshooting and Best Practices

- See the Data Transfer Data Diagnostic section.

Clearing Procedure

Ensure the device has a valid data connection and can reach the host.

If the device can reach the host, the provider should verify the ability of the host to receive, process and respond to a request.

FAQ – Data Transfer Malfunction

When will a Data Transfer Malfunction clear?

As soon as the device can ping the host & receive a confirmation from the host, the malfunction will clear. After ensuring the end-to-end system is working correctly, the device could take up to 24 hours to clear.

O – Other Malfunction

Definition

The Other Compliance Malfunction occurs when the eFleetSuite application has stopped or is not responding as expected.

Possible Causes

- The eFleetSuite application has crashed or been manually stopped.
- The eFleetSuite application is not responding.

Troubleshooting and Best Practices

- Restart the application and/or reboot the device.
- Contact the provider for further assistance.

Clearing Procedure

Ensure eFleetSuite is running and responding as expected.

FAQ – Other Malfunction

When will the Other Malfunction clear?

The malfunction will clear as soon as eFleetSuite is running and responding normally.

Why don't I see an "Other Malfunction" detected or cleared in driver logs?

The "Other Malfunction" is used to report that eFleetSuite is not running. If the engine is run or the vehicle is driven in that state, other Data Diagnostics or Compliance Malfunctions are likely to be reported once eFleetSuite is running normally.

Driver Log Impacts

Data Diagnostics and Compliance Malfunctions are recorded to the driver log for any signed in drivers or the Unidentified Driver profile. There will be a “Data Diagnostic [or Malfunction] Detected” event recorded in the driver’s log to document when these events occur, and a separate “Data Diagnostic [or Malfunction] Cleared” event recorded when the conditions required to trigger the state have cleared. These events will indicate which type of Data Diagnostic or Compliance Malfunction has been detected or cleared.

Regulations require that any status changes that occur while a Data Diagnostic or Compliance Malfunction is active include an indication of that state. The status change will show the text “Data Diagnostic [or Malfunction] Detected” with the location details. This does not indicate the detection of a new Data Diagnostic or Compliance Malfunction, but that the status change occurred while one of these states was active.

Device

Data Diagnostics

On the device, active Data Diagnostics are displayed to the driver with a warning indicator in the eFleetSuite taskbar. 

Data Diagnostic Detected and Cleared events can be seen in the driver logs. Tap **Logs**, then **Events** to locate these events.

Compliance Malfunctions

Compliance Malfunctions are indicated by a pop up. This pop up will remain active on the screen until the malfunction is cleared, and cannot be dismissed. Any time a malfunction is active, the driver is required to keep a paper log for the shift to remain in compliance, as well as using the device if possible. If the malfunction is such that they cannot access their log history on the device, the driver must also print or recreate on paper their previous 7 days of logs to remain compliant.



Malfunction Detected and Cleared events can be seen in the driver logs. Tap **Logs**, then **Events** to locate these events.

Log Samples

Driver log Data Diagnostic Detected and Cleared events:

10:47 PM	Data Diagnostic Detected - 1	1000 mi T	0.0 T	156	Automatic
Active Power Data Diagnostic					
10:47 PM	Data Diagnostic Cleared - 1	1000 mi T	0.0 T	157	Automatic
Active Power Data Diagnostic					

Driver log Malfunction Detected event:

1:36 PM	Malfunction Detected - P	1020 mi T	1.0 T	165	Automatic
Active Power Compliance Malfunction					

Driver log Malfunction Cleared event:

10:47 PM	Malfunction Cleared - P	1020 mi T	1.0 T	165	Automatic
Active Power Compliance Malfunction					

Status change that occurs with a Data Diagnostic active:

8:06 AM	Authorized Personal Use of CMV (PC)	0 mi E	0.0 E	129	Driver
2mi (3km) NW IA Coralville Active Data Diagnostic Event Detected					

Status change that occurs with a Compliance Malfunction active:

1:38 PM	ON	0 mi E	0.0 E	167	Driver
2mi (3km) NW IA Coralville Active Malfunction Detected					

Host (Website)

Host driver logs will include Data Diagnostic and Malfunction Detected/Cleared events. Compliance Malfunction and Data Diagnostic events that occurred when no driver was signed in will be recorded to the Unidentified Driver profile, and can be seen in the **Unidentified Driver Report**.

Driver Logs

Similar to the mobile device, the eFleetSuite host driver logs will display Data Diagnostic and Compliance Malfunction events. Use the **Driver Vehicle Usage Report** and **Unidentified Driver Report** if needed to locate detected/cleared events that may have been recorded to another driver.

Unidentified Driver Report

The host **Unidentified Driver Report** is provided to record and display events that occur on devices when no drivers are signed in. To run this report, navigate to **Unidentified Driver Report** beneath the **HOS** menu. Select the vehicle and date range, then click **Print**. This will generate a PDF with unidentified driver events by date.

Unidentified Driver Report									
All times in Central time zone based on User Preferences							Record Date: 3/14/2018 CDT		
Carrier: ISE FS									
USDOT Number: -									
Vehicle ID	Type / Status	Start	End	Seq ID	Origin	Record Status	Details	Vehicle Miles	Engine Hrs
40D1A3E326	Engine Shutdown	8:24 AM	-	75	Automatic	Active	2mi (3km) NW IA Coralville	1000 mi T	0 T
40D1A3E326	Data Diagnostic Detected - 3	8:24 AM	-	76	Automatic	Active	Missing Required Data Elements Data Event	1000 mi T	0 T

Log Samples

Driver log Data Diagnostic Detected and Cleared events:

Data Diagnostic Detected - 1	140	Automatic	Active	3:49 AM	-	Power Data Event	HCHBOT	1195 mi T	16.2 T
Data Diagnostic Cleared - 1	143	Automatic	Active	3:49 AM	-	Power Data Event	HCHBOT	1195 mi T	16.2 T

Driver log Malfunction Detected and Cleared events:

Malfunction Detected - E	9	Automatic	Active	10:37 AM	-	Engine Synchronization Compliance	IFTASH	N/A	N/A
Malfunction Cleared - E	12	Automatic	Active	6:42 AM	-	Engine Synchronization Compliance	IFTASH	N/A	N/A

Status change that occurs while a Data Diagnostic is active:

 SB	21	Driver	Active	9:58 AM	2/16/2018 4:46 AM	9mi (14km) E SC Spartanburg Data Diagnostic Event Detected	WHSJH	0 mi E	0 E
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Status change that occurs while a Data Diagnostic and a Compliance Malfunction are active:

OFF	525	Driver	Active	3/25/2018 6:10 PM	3/27/2018 12:07 PM	9mi (14km) E SC Spartanburg Malfunction Detected Data Diagnostic Event Detected	WHSJH	42 mi E	1.1 E
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Data Diagnostic and Compliance Malfunction Quick Guide

Data Diagnostic Detection and Clearing

Diagnostic Type	Detects When...	Clears When...
1 - Power Data Diagnostic	The engine was running for at least a minute before the device was connected/powered on Or The vehicle was driven without the device connected/powered on	The device is on, connected, and can verify the engine is running
2 - Engine Synchronization Data Diagnostic	The device hasn't received required engine data within the required time	The device starts receiving required engine data again
3 - Missing Required Data Elements Data Diagnostic	The device records an event without all the required fields	The device records a new event or events that verify all required fields that were previously missing can be found
4 - Data Transfer Data Diagnostic	It has been more than a week since the device has last successfully verified that it can transfer data to the FMSCA	The device verifies that it can transfer data to the FMCSA
5 - Unidentified Driving Records Data Diagnostic	There is more than 30 minutes of unclaimed unidentified driving time within the last 24 hours	There is less than 15 minutes of unclaimed unassigned driving time within the last 168 hours (7 days)

Malfunction Detection and Clearing

Malfunction Type	Detects When...	Clears When...
P - Power Compliance Malfunction	Over the last 24 hours, there has been at least 30 minutes of missing drive time	The total missed driving time goes below 30 minutes in 24 hours
E - Engine Synchronization Compliance Malfunction	Over the last 24 hours, there has been at least 30 minutes of time when the device wasn't receiving all the required engine data	The total accumulated Engine Synchronization Data Diagnostic time goes below 30 minutes in 24 hours
T - Timing Malfunction	The system clock is more than ten minutes off from UTC (GPS Time)	The system clock is less than ten minutes off from UTC (GPS Time)
L - Positioning Compliance Malfunction	Over the last 24 hours, the vehicle has traveled more than five miles and hasn't received valid GPS for over 60 minutes	The total amount of time in which the vehicle traveled over 5 miles with poor GPS fix accuracy goes below 60 minutes in 24 hours
R - Data Recording Compliance Malfunction	The amount of space left on the device is less than 200MB Or The file system has been tampered with	The amount of free space on the device is above 200MB And The file system is no longer corrupted
S - Data Transfer Compliance Malfunction	A ELD Data Transfer check failed and subsequent checks continued to fail for another 3 days	The device can successfully verify the connection to send data to the FMSCA
O - Other Malfunction	eFleetSuite has been manually stopped, is not responding, or is otherwise not running	eFleetSuite is running and functioning as expected