Uncontrolled Copy

ID #	CBR-995
Version	5

Title

Mack Chassis - Telematics Gateway (TGW, MID 142) Losing Communication With The Instrument Cluster (IC) - Counts Of Fault Code (FC) MID 140 PSID 239 FMI 12 Data Link, MID 142 Faulty Device or Component Logging, Possibly Following Engine Start

Abstract

Counts of MID 140 PSID 239 FMI 12 may log in chassis equipped with telematics modules. The code and message may appear together or independently, and the module may not appear in product information when checked with PTT.

TGW Possibly Missing From Product Information In Premium Tech Tool (PTT) - OBD13 Through OBD16 Emissions With TGW1 Or TGW2

Content

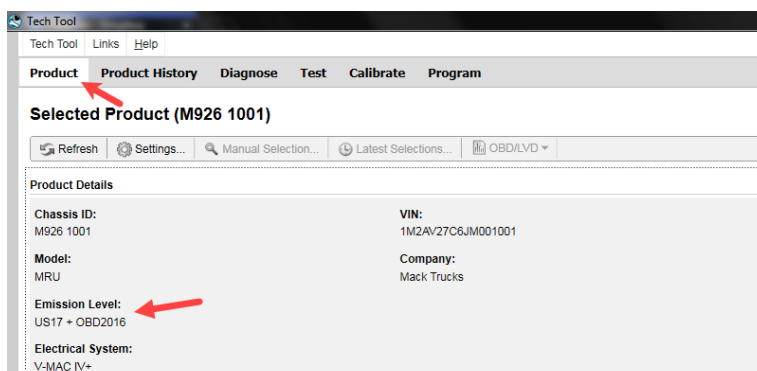Published Date - 10/19/2023

Model Years - 2013 - 2014
Models -
Mack - CHU,GU,LEU,TD,CHX,MRU

Verify the chassis emissions level first.

- Details can be found in the Product Details box on the Product tab in PTT as seen below:

- US10+OBD13 and Certain US14+OBD13 (TGW1):

Chassis built commonly from late Model Year 2013 through the beginning of Model Year 2015 utilized the first generation Telematics Gateway, TGW1. First-gen TGWs utilized 2G cellular technology, which at the time of introduction had been in use by all cellular providers for several years. AT&T, the service provider for all TGWs, shut down its 2G networks at the beginning of 2017. Other US providers are currently moving to follow suit. With the shutdown of 2G networks, TGW1s ceased broadcasting.

- It is not possible to replace a TGW1 with a TGW2. If a chassis is having issues with a TGW1, it needs to be removed from the system.

- If MID 140 PSID 239 FMI 12 is logging regularly:

1. Using Premium Tech Tool (PTT), use Operation 1700-22-03-06 Accessory Kit under the Program tab to run Accessory Kit 85151006.

2. Run PTT Operation 1700-08-03-39 Program Electronic Control Unit and program the Information Display (MID 140).

3. Remove Fuse F11 or F27.

4. Remove the harness connector from the TGW.

5. Check operation.

- US14+OBD13 And US14+OBD15 (TGW2)

1. Refer to Tech Tip TT-001-2017 first and ensure software is correct as specified.

• **This Tech Tip covers situations where the TGW is showing a Product Data mismatch or is not present in the Product Information in PTT.**

• **NOTE:** The key cycle operation described in the Tech Tip may need to be repeated multiple times before the module properly powers up.

• Because this issue can be related to battery voltage during cranking, battery connections and grounds should be ensured clean and tight. Batteries should be tested and verified to be in good condition.

2. Once all of the above information is reviewed and verified:

A. Using Premium Tech Tool (PTT), use Operation 1700-22-03-06 Accessory Kit under the Program tab to run Accessory Kit 85152126.

B. Run PTT Operation 1700-08-03-39 Program Electronic Control Unit and program the Information Display (MID 140).

C. Check operation.

- US14+OBD16 (TGW2)

1. Because this issue can be related to battery voltage during cranking, battery connections and grounds should be ensured clean and tight. Batteries should be tested and verified to be in good condition.

2. Once batteries and connections are verified:

A. Using Premium Tech Tool (PTT), use Operation 1700-22-03-06 Accessory Kit under the Program tab to run Accessory Kit 85152126.

B. Run PTT Operation 1700-08-03-39 Program Electronic Control Unit and program the Information Display (MID 140).

C. Check operation.

- **US17+OBD16 And Newer**
  • The issues described above do not occur in GHG17 and newer chassis. If MID 140 PSID 239 FMI 12 is logging, normal diagnostic procedures should be followed.

Tags

k18412228   mid 140 psid 239 fmi 12   mid 142

Categories ★

Mack > US14 > US14+OBD13 > CXU/CHU > Control Systems (ECUs) > EMS - Engine ECU (EECU), Mack

Mack > US14 > US14+OBD13 > GU > Control Systems (ECUs) > EMS - Engine ECU (EECU), Mack

Mack > US14 > US14+OBD13 > LEU > Control Systems (ECUs) > EMS - Engine ECU (EECU), Mack

Mack > US14 > US14+OBD13 > MRU > Control Systems (ECUs) > EMS - Engine ECU (EECU), Mack

Mack > US14 > US14+OBD13 > TD > Control Systems (ECUs) > EMS - Engine ECU (EECU), Mack

Mack > US10+OBD13 > CXU/CHU > Control Systems (ECUs) > EMS - Engine ECU (EECU), Mack

Mack > US10+OBD13 > GU > Control Systems (ECUs) > EMS - Engine ECU (EECU), Mack

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Available updates

	Software Package	Status
☐	Telematics GateWay (TGW)	🚫 Blocked

1700-08-03-39 Program Electronic Control Unit

🟨 Simulation

This operation shows all updates that are available for this product.

Select the software packages for the control units to be updated and then click Program to start.

To reinstall the same software version in a control unit, exit the operation and select the operation Replace hardware.

When multiple software packages are selected, there will be a request to run a key cycling after each package

Package status information

If a software package requires attention, a symbol is shown in the Status column

🚫 **Blocked software package**

    The software package cannot be applied. Software packages can be blocked due to control unit data mismatches
    Go to Product Identification and look for information about mismatches in Product Status
    If you are interested in a software package that is blocked, and no reason for the block can be found in Product Status, then please contact help desk.

Control unit calibration

It may be necessary to perform calibrations after an Electronic Control Unit has been programmed

☑ I have read and understand the above advisory

Program >   Cancel

Product   Product History   Diagnose   Test   Calibrate   Program   Impact

Programming Steps

Retrieving software part numbers

Reading out transferable parameters from affected Electronic Control Units

Downloading software from central systems

Programming Electronic Control Units

Programming parameters

Finalizing programming

1700-22-03-06 Accessory Kit

Enter an accessory kit number and click Program to apply the kit

Kit number:

Continue >   Cancel
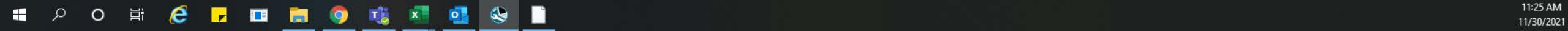
Tech Tip

Release Date: 1/20/2017
Number: TT-001-2017
Function Group: 39
Title: Use Paper Logs message being displayed on the DID

Problem -- Reports are being received that the message "Volvolink Hardware Failure – Use Paper Logs" is appearing on the DID or high count of MID 140 PSID 239 FMI 12.

Overview:

This message occurs when the Telematics Gateway (TGW) is not being detected on the J1587 datalink to the Instrument Cluster. This Message only appears on the Volvo DID. Mack vehicles will not show any dash message. Tech Tool will be the source of indications for the Mack vehicle. Both will have a high count of MID 140 PSID 239 FMI 12 in the inactive faults for Telematics Gateway ECU.

- **Behavior:** Sometimes (randomly) at TGW2.1 startup the 3G modem fails to start. If this happens, the TGW2.1 will go into a situation to constantly restarting itself (instead of a controlled retry to restart the modem), resulting in loss of all TGW2.1 functionality until power is cut.
- **Root cause**: Management of failed modem restart missing in the SW
- **Failure recovery**: Cut battery power, restart
- **Impacted vehicles**: All vehicles with TGW2.1 3G HW and 23035402 SW

TGW Part Number	**Volvo**	22558686		**Mack**	22555757

- **Corrective action**: Reprogram with previous 22957679 SW
- The TGW is not defective and can be corrected with new software programming.
- With this condition, any Uptime services or Partnered services will not report as designed.

Recommended Actions:

- If you have a reported condition of the Use Paper Logs message on the DID high count of MID 140 PSID 239 FMI 12, DO NOT REPLACE THE TGW. Please follow steps below.

If vehicle is not at a work shop facility:

1. **For vehicles with a battery cutoff switch**: turn to off position and turn the IGN key to the on position for 5 min. This will allow any voltage to dissipate in the entire vehicle. After 5 min, turn IGN key back to OFF position, and then turn battery disconnect switch to the ON position.
2. **For vehicle without a battery disconnect switch**: Turn IGN switch off, remove fuse F13 for 5 min, reinsert fuse F13, turn IGN switch back on.
3. Once power has been reset to the vehicle, it will complete the startup of the TGW and currently there is a remote update available for it and will be processed to automatically update the software as needed.

If vehicle is at a work shop facility:

1. Connect to Tech Tool and verify Telematics Gateway is either present or not present on the product information test.

a. If present proceed to step 2
b. If not present proceed to step 3
2. Reprogram Telematics Gateway with Tech Tool as normal. Once complete the MSW should be 22957679 in Product Data.
3. Disconnect power by either the battery shutoff switch or pull fuse to TGW (F13).
   a. **For vehicles with a battery cutoff switch**: turn to off position and turn the IGN key to the on position for 5 min. This will allow any voltage to dissipate in the entire vehicle. After 5 min, turn IGN key back to OFF position, and then turn battery disconnect switch to the ON position. Recheck with Tech tool to determine if Telematics Gateway is now present. If so, reprogram with most up to date from Central Systems. Once complete the MSW should be 22957679 in Product Data.
   b. **For vehicle without a battery disconnect switch**: Turn IGN switch off, remove fuse F13 for 5 min, reinsert fuse F13, turn IGN switch back on. Recheck with Tech tool to determine if Telematics Gateway is now present. If so, reprogram with most up to date from Central Systems. Once complete the MSW should be 22957679 in Product Data.

- Once complete with either process above. Correct operation can be determined by viewing the other information screen in the Volvolink menu of the DID. It should show the IP address, GPS, and satellites in view (as long as truck is outside).