



# Technical Service Bulletin

Technical Service Bulletin: TSB210187	Released Date: 30-Sep-2021
Fault Codes 3868, 4572 and 4677 Caused by Diesel Exhaust Fluid (DEF) Header Malfunction	

## Fault Codes 3868, 4572 and 4677 Caused by Diesel Exhaust Fluid (DEF) Header Malfunction

### Warranty Statement

The information in this document has no effect on present warranty coverage or repair practices, nor does it authorize TRP or Campaign actions.

### Contents

#### Product Affected

- B6.7 CM2350 B121B
- B6.7 CM2450 B155B
- L9 CM2350 L116B
- L9 CM2450 L126B
- X12 CM2350 X119B
- X12 CM2450 X137B
- X15 CM2350 X114B
- X15 CM2350 X116B
- X15 CM2450 X124B
- X15 CM2450 X134B

#### Issue

##### Symptom:

- A combination of one or all DEF header fault code(s) 3868, 4572 and/or 4677 are logged.

**Note :** These ECM calibrations will **only** address DEF header sensor malfunctions that are logging one or combination of DEF header fault code(s) 3868, 4572 and/or 4677.

- Engine has a DEF header malfunction and replacement is **not** available.

##### Root Cause:

- DEF header replacement parts are **not** available and DEF header part shortages have necessitated the release of an ECM calibration code that allows the engine to operate

normally without engine torque and vehicle speed limits until a DEF header is available for final repair.

## Verification

- Verify one or all DEF header datalink Fault Codes 3868, 4572 and/or 4677 are logged.
- Verify published troubleshooting has been completed.
- Verify DEF header part is **not** available for the repair.

## Resolution

- Because of the lack of DEF header part availability, new ECM calibration codes are being made available that allows the engine to operate normally without engine torque and vehicle speed limits until a DEF header is available for final repair.
- 
- Downloading this ECM calibration code **must** be filed in accordance with one of the appropriate TRPs. See TRP2484 or TRP2489 for further details.
  - TRP2488 – qualified engine installed in PACCAR chassis. Proper PACCAR authorization number **must** be obtained, reference the TRP for further instructions.
  - TRP2490 – qualified engine installed in DTNA (Freightliner, Freightliner Custom Chassis, Thomas Bus, and Western Star) chassis.
  - TRP2489 – qualified engines installed in Navistar® chassis
  - TRP2484 – qualified engines installed in the following chassis types.
    - Tico, Tiffin, Oshkosh Mixers, Sutphen
    - Additional chassis types will be added as they become eligible
- Unauthorized download of this ECM calibration code is considered tampering of emission control devices on Cummins products. Cummins Inc. prohibits tampering of emissions control devices on Cummins® products in any capacity. Reference Warranty Memo 1633 for additional details. See link below.

## Note :

<https://quickserve.cummins.com/protected/files/qsol/en/warranty/memos/m1633.pdf>  
(<https://quickserve.cummins.com/protected/files/qsol/en/warranty/memos/m1633.pdf>)

## Customer Communication

- This communication is for information purposes **only** and to help provide clear communication to the customer.
  - Because of a global shortage of parts in the industry, as a result of unprecedented demand in the wake of the global pandemic and other events beyond the manufacturers' control, an ECM calibration code solution is being provided that reduces the inducement levels when DEF header datalink communication faults are detected. Fault codes 3868, 4572 and/or 4677 could be active but no amber check engine light illuminated indicating there is no communication between the engine and DEF header, however the vehicle will be allowed to operate normally without engine torque and vehicle speed limits.
  - DEF Level indicator will **not** provide an accurate reading and is **not** indicative of amount of DEF available in the tank. See Table 1.

- The DEF fluid level in the tank will need to be manually inspected to allow proper vehicle operation.
- By agreeing to this repair, one is agreeing to make the vehicle available at a later date once DEF header parts are available. A future communication will be sent to make these arrangements.
- DEF quality, DEF temperature and DEF level in the electronic service tool will **not** read correctly.
- These products have new corresponding engine ECM calibrations codes that align with the repair.
  - A Fleet Count will be required to install the new ECM calibration code.
  - An ECM code lookup tool and complete listing of ECM codes are located at the following link:

**Note :**

[https://quickserve.cummins.com/qs3/qsol/service/def\\_header\\_ecm\\_tools.html](https://quickserve.cummins.com/qs3/qsol/service/def_header_ecm_tools.html)  
 ([https://quickserve.cummins.com/qs3/qsol/service/def\\_header\\_ecm\\_tools.html](https://quickserve.cummins.com/qs3/qsol/service/def_header_ecm_tools.html))

- Fault Codes 3868, 4572 and/or 4677 will still be active.
- Running an engine that is **not** properly maintained such as without DEF or improper DEF quality are conditions that are consider customer abuse. Reference Responsibilities procedure in the Warranty Administration Manual.

**Note :** <https://quickserve.cummins.com/qs3/pubsys2/xml/en/procedures/111/111-502-003.html>  
 (<https://quickserve.cummins.com/qs3/pubsys2/xml/en/procedures/111/111-502-003.html>)

<b>Table 1, Changes to ECM Calibration Code with New ECM Calibration Code with No Torque Or Speed Inducement(s) with any Combination of Affected Fault Codes</b>		
<b>Item</b>	<b>With Existing ECM Calibration Code</b>	<b>With New ECM Calibration Code</b>
FC3868	Amber lamp and Malfunction indicator lamp (MIL)/Torque and speed inducement	No lamps/ no torque and speed inducement
FC4572	Amber lamp and MIL/Torque and speed inducement	No lamps/ no torque and speed inducement
FC4677	Amber lamp and MIL/Torque and speed inducement	No lamps/ no torque and speed inducement
DEF Level	DEF gauge is not accurate/Electronic service tool is <b>not</b> accurate	DEF gauge is not accurate/Electronic service tool is <b>not</b> accurate
DEF Temperature	Electronic service tool is <b>not</b> accurate	Electronic service tool is <b>not</b> accurate
DEF Quality	Electronic service tool is <b>not</b> accurate	Electronic service tool is <b>not</b> accurate

## Document History

Date	Details
2021-8-26	Module Created
2021-9-16	Updated Resolution section and updated Table 4 and Table 6.
2021-9-17	Added B6.7 CM2350 B121B, deleted Tables 2, 3, 4, 5, 6, 7, and 8, and added link to PDF that includes all ECM calibration codes.
2021-9-19	Added mention of Tiffin in Resolution section.
2021-9-23	Added reference to TRP2488 and TRP2490. Added Note in issue section.
2021-9-27	Added mention of Oshkosh in Resolution section.
2021-9-28	Added mention of Stuphen in Resolution section.
2021-9-30	Fixed typo.

---

**Last Modified: 30-Sep-2021**

---