

**\*\* SOLUTION \*\***

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Title	Diagnostic Trouble Codes ( DTC ) P2080, P2084, P242B Lighting The Malfunction Indicator Lamp ( MIL ) - <b>US14+OBD16, US17+OBD16, And US17+OBD18 Emissions, Model Years 2017 To 2019</b>
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**Mack Models**

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<b>Mack Model</b>	LR , MRU - TerraPro , AN - Anthem , CHU - Pinnacle, Axle back , CXU - Pinnacle, Axle front , GU - Granite
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**Volvo Models**

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<b>Volvo Model</b>	VNL , VNM , VNR , VNX , VAH , VHD
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**Emission Standard**

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Emission Standard	US14+OBD16 , US17+OBD16 , US17+OBD18
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**Engine family**

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Engine family	11L Engine , 13L Engine , MP7 , MP8
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**\*\* SOLUTION \*\***

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Cause	Diagnostic Trouble Codes ( DTC ) P2080, P2084, and/or P242B may set after key off. It has been found that this may be due to incorrect calculation of the "soak" time of ambient temperature.
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**Vehicles may exhibit the MIL and one or any combination of the above fault codes from the Engine Control Module (EMS), as well as one or more of the symptoms below:**

- **No Diesel Exhaust Fluid ( DEF ) Dosing**
  - DEF will not be injected with these faults active.
- **Unable To Complete A Parked Regeneration**
  - Aftertreatment Hydrocarbon Injector ( AHI ) injection will not take place with these faults active.
- **Parked Regeneration Runs Too Long, And Does Not Complete**

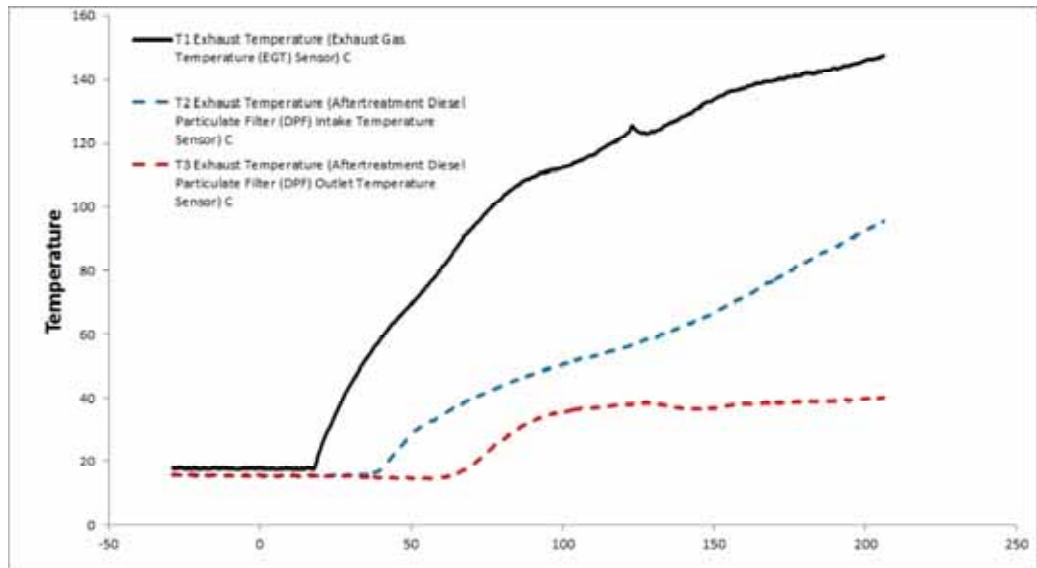
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Solution	<div data-bbox="393 1701 1029 1885" data-label="Complex-Block"><div style="background-color: yellow; border: 2px solid black; padding: 5px;"><p style="text-align: center;"> <b>WARNING</b></p><p style="text-align: center; color: red;"><b>No parts should be replaced for these fault codes unless a definite sensor failure is found.</b></p></div></div>
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**Fault Tracing Procedure:**

1. Allow the vehicle to sit until the engine and exhaust have reached ambient (air) temperature.
2. Turn the ignition to ON, engine OFF.
2. Using Premium Tech Tool (PTT), run either of the operations below:
  - [2545-08-03-02 Exhaust Aftertreatment Diagnostics](#), option A
    - This will provide a numerical view of exhaust temperatures.
  - [2589-08-03-02 Exhaust Aftertreatment System, Service Regeneration](#)
    - This will provide a graphical view of exhaust temperatures.
3. Ensure that the sensor readings are within 10 °C (18 °F) of one another before starting the engine.
4. Start the engine.
5. Monitor exhaust temperatures on PTT:
  - The sensor temperatures should rise in the order of 1, 2, 3 as shown below after starting the engine.
6. Evaluate results:
  - **If the sensor readings are equal at ambient temperature and rise in the correct order when the engine is running:** No further fault tracing should be performed. Clear the DTCs and return the vehicle to service.
  - **If one or more sensors are displaying a different reading from the others or are spiking instead of smoothly increasing with the engine running:** The sensor(s) should be suspected to be faulty.
  - **If the temperature sensor values rise out of order:** The sensors should be checked to ensure they are installed in the correct positions.

An example of proper temperature sensor function can be found below:



This CBR will be updated when new information is available.

Solution visibility [Dealer distribution](#)

### Function(s)/component(s) affected

Function affected 1 1 0 EMS , DEF Dosing , DOC , DPF

### Function Group

Function Group 254 catalytic converter; exhaust emission control equipment , 258 emissions after-treatment

### Customer effect

Main customer effect regeneration , temperature , fault code/display

### Fault Codes And Error Codes

OBDII Diagnostic Trouble Codes (P, U, B Format) P2080-64 , P2084-64 , P242B-64

### Conditions

Vehicle operating mode on start-up , when stationary

### Administration

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Last modified by RU4469V

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NA\_Reviewer Jeremy Newton

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