



## Diagnostic Trouble Codes (DTC) For The Engine Pre-Heat Relay: Supplementary Instructions



> Internal Content



### IMPORTANT

This solution does not apply to vehicles manufactured prior to US10+OBD13 emissions. For vehicles with previous emissions levels, **ONLY** the component found to be the cause of the issue should be replaced.

### PARTS

**Verify that an applicable part is currently installed.** Affected Supply Power Cable part numbers (current as of June 2019) are:

- [23122110 - 11L](#)
- [23122112 - 13L](#)
- [23122116 - 13L](#)

Impact should always be reviewed for the latest part information.

### REPAIR

**Prior to replacing the relay:**

1. Complete diagnostic steps for the applicable code(s) in Premium Tech Tool.
2. Verify proper terminal tension of all connections at both the heating element and the relay, including the plug-style connector.
3. Check for software updates available for the EMS:
  - **If there is a software update available:** Update the software. Proceed to the next section.
  - **If the software is current:** Proceed to the next section.

**If all diagnostic steps indicate that the relay is the faulty component:**

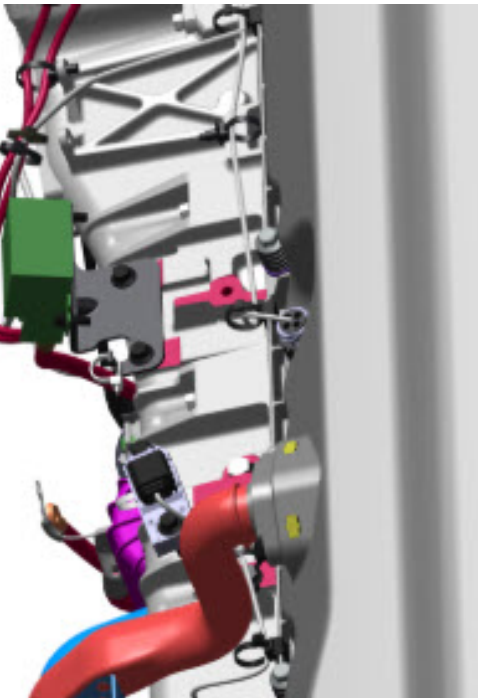
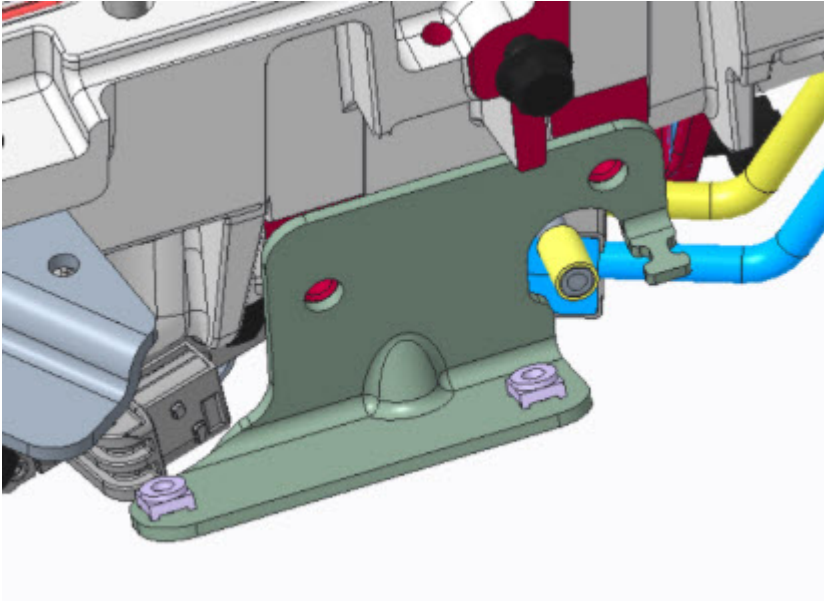
111

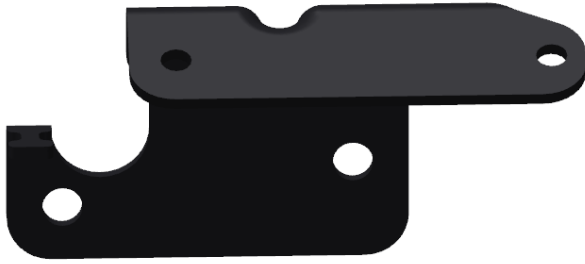


• Replace **both** the Pre heat relay ( [D/N 23602281](#) ) and the Supply

• Replace **both** the F1-Heat relay ( [P/N 20092004](#) ) and the Supply Power Cable.

• Install the newly updated bracket design with 2 mounting locations ( [P/N 24399742](#) ). See illustration below.





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## 13L

- Replace **both** the Pre-heat relay ( [P/N 23692384](#) ) and the Supply Power Cable.
- Install the newly updated bracket design with 2 mounting locations ( [P/N 23803412](#) ). See illustration below.



Tags

- k53338075
- p0381-13
- p0540-7e
- p0541-00
- p0543-00
- p2604-7f
- p2605-13
- p2606-7f
- p2608-7e
- p2609-00
- p2ce1-13
- p2ce3-11
- p2ce4-12
- Harness
- p26087e
- p260900
- p2ce113
- p038113
- p05407e
- p054100
- p054300
- p26047f
- p260513
- p26067f
- p2ce311
- p2ce412
- volvo
- mack

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