

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

---

Title	Diagnostic Trouble Code ( DTC ) P10AE Logged In TECU With ACTIVE Or INACTIVE Status, Fault Code Cannot Be Cleared; Possibly Accompanied By P105817 And P105818 - <b>US10+OBD13 And Newer Emissions (16-Pin Diagnostic Connector), Commonly Model Year 2014 And Newer</b>
-------	--

---

**Mack Models**

---

<b>Mack Model</b>	AN - Anthem , CHU - Pinnacle, Axle back , CXU - Pinnacle, Axle front , GR - Granite , GU - Granite , PI - Pinnacle , TD - Titan
-------------------	---

---

**Volvo Models**

---

<b>Volvo Model</b>	VNL , VNM , VNR , VNX , VAH , VHD
--------------------	-----------------------------------

---

**Emission Standard**

---

Emission Standard	US10+OBD13 , US14+OBD13 , US14+OBD15 , US14+OBD16 , US17+OBD16 , US17+OBD18
-------------------	---

---

**Engine family**

---

Engine family	11L Engine , 13L Engine , 16L Engine , MP7 , MP8 , MP10
---------------	---

---

**Transmission**

---

Transmission	AMT-F With Crawler Gears , AMT-F Without Crawler Gears , AMT-D , AMT-F , AMT-D , AMT-F With Crawler Gears , AMT-F Without Crawler Gears
--------------	---

---

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

---

Cause	P10AE81 may be generated in OBD13 and newer chassis. The code may show to be in Active or Inactive status and cannot be cleared if Active. P10AE81 may or may not be accompanied by P105817 and P105818
-------	---

This fault is intended to prevent unintended movement that could result from a related mechanical failure in the gearbox.

P10AE is generated when the Gearbox status is reported as Neutral, but the countershaft to mainshaft gear ratio results in speed signals that indicate that the transmission is NOT in neutral when the clutch is engaged. The active fault will cause the following symptoms:

- Red STOP Lamp will be illuminated
- If the vehicle is running when the fault occurs, the gearbox will not shift and will keep the clutch disengaged.
- If the vehicle is shut down with the fault active, a no crank / no start condition may be observed if gearbox air pressure is too low when trying to restart the unit.

---

Solution
----------

**DO NOT PROGRAM THE TECU TO TRY TO RESOLVE THIS FAULT**

## 1. If P10AE is ACTIVE and the engine will Crank and Run

**Main symptom:** The clutch will remain disengaged if a gear is selected via the gear selector

1.1. Allow the unit to idle for 30-45 seconds.

1.2. Check the status of P10AE81.

1.2.1. If the code is still **active** after idling: The gearbox should be investigated for possible mechanical issues

1.2.2. If the code is **inactive** after idling: The code in this case was a ghost or intermittent fault. Items in Section 3 should be reviewed to confirm there are no other issues that need to be addressed.

## 2. Operate the vehicle if possible to evaluate mechanical condition.

## 3. Review the DTC Readout and follow the appropriate steps below:

3.1. If P10AE81, P105817 and P105818 all appear on the DTC Readout and are setting at the same time: Replace the ribbon harness, proceed to Section 4.

3.2. If P10AE81 is logged separately: Inspect for mechanical failure

3.2.1. If mechanical failure is noted: Repair as required. (A true mechanical cause for this fault will likely never pass the monitor and allow the fault to become inactive)

3.2.2. If there is no mechanical issue present: Replace the ribbon harness and proceed to Section 4.

- **NOTE:** High counts of P10AE81 with no indication of a mechanical issue make the internal transmission harness the likely cause.

## 4. Once the issue(s) has been corrected:

4.1. Start and idle the truck for 30-45 seconds.

4.2. Confirm P10AE81 is inactive.

4.3. Clear all of the inactive faults

4.4. Road test and release the vehicle to service.

---

Solution visibility

Dealer distribution

---

Support Area

Americas , CBR

---

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

---

Function affected

3 1 0 TECU , engagement

---

## Function Group

Function Group 43 gearbox , 47 gearbox and reverse gear (or forward gear) combined system

### Customer effect

Main customer effect calibration/programming/pairing/missing operation , diagnostics/methodology , stop /start , fault code/display , loss of drive

### Fault Codes And Error Codes

J1939 Fault Codes (MID-PID-FMI Format) MID 130 PSID 29 FMI 7 / P10AE81

OBDII Diagnostic Trouble Codes (P, U, B Format) P1058-17 , P1058-18 , P10AE-81

### Conditions

Vehicle operating mode on start-up , engagement

Frequency of occurrence of problem random

Engine speed <500 rpm , 500 - 1000 rpm

Other conditions after a workshop procedure on the vehicle

### Administration

Author UT9268H

Dealer ID UT9268H

Last modified by RU4469V

Creation date 02-05-2018 16:05

Date of last update 08-10-2019 14:10

Review date 02-05-2019 00:05

Status Published

Average score 1

Number of scores 1

NA\_Reviewer ut9268h

NA\_Author\_Group GTT

UNCONTROLLED COPY. Printed document is for temporary use only and should not be retained.