Solution K64554358
Thursday, June 7, 2018 8:11:00 PM CEST

Mack Models

Mack Model	Anthem , CHU , CXU , GU , TD

Volvo Models

Volvo Model	VNR , VNX , VNL , VNM , VHD , VAH

Engine family

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

Emission Standard

Emission Standard	2018 , OBD2017 , US17 GHG , US16 , US15 , US13 OBD , US14 GHG

** SOLUTION **

Title	Diagnostic Trouble Code (DTC) P10AE Logged In TECU With ACTIVE Status, Fault Code Cannot Be Cleared; Possibly Accompanied By P1058 - US10+OBD13 And Newer Emissions (16-Pin Diagnostic Connector), Commonly Model Year 2014 And Newer
Cause	P10AE81 may be generated in OBD13 and newer chassis. The code will show to be in Active status and cannot be cleared. P10AE 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.
Solution	**DO NOT PROGRAM THE TECU TO TRY TO RESOLVE THIS FAULT** **Programming will clear the clutch slip point calibration. With the code active prior to programming, the slip point cannot be recalibrated and diagnostic procedures will not run.** **A. If the TECU has been programmed and diagnostics cannot be completed:**

1. An eService case will need to started
2. **The eService case must include:**
    a. A complete DTC readout from the time of the vehicle's arrival
    b. A thorough description of all reported and observed symptoms
    c. Any other operations performed prior to programming the TECU

    Note: For TECU that has been programmed with active fautl P10AE81 and is locked in a state with P10AE81 active and the unit is not mechanically failed and causing this fault the TECU SW must be backed up to a version older than 17B and the TECU reflashed and calibrated. Then the TECU can be reflashed with the current SW and the fault will be inactive. The unit can then be recalibrated.

3. If the fault returns during calibration after Dealer Technical Support has been involved:
    a. Proceed to Section D.

B. 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. Allow the unit to idle for 30-45 seconds.
2. Check the status of P10AE.
    a. If the code is still **active** after idling: The gearbox should be investigated for possible mechnical issues
    b. If the code is **inactive** after idling: The code in this case was a ghost fault. Items in Section D should be reviewed to confirm there are no other issues that need to be addressed.

C. Operate the vehicle if possible to evaluate mechanical condition.

D. Review the DTC Readout and follow the appropriate steps below:

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 E.
2. **If P10AE is logged separately:** Inspect for mechanical failure
    a. If mechanical failure is noted, repair as required.
    b. If there is no mechanical issue present: Replace the ribbon harness and proceed to Section E.
        • NOTE: High counts of P10AE with no indication of a mechanical issue make the harness the likely cause.

E. Once the issue(s) has been corrected:

1. Start and idle the truck for 30-45 seconds.
2. Confirm P10AE81 is inactive.

3. Clear all of the inactive faults
4. Road test and release the vehicle to service.

Solution visibility	Dealer distribution
Support Area	Americas , CBR

Function(s)/component(s) affected

Function affected	automatic transmission , engagement , 3 1 0 TECU

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 code(s)

OBD 2013 Diagnostic Trouble Codes	P1058-17 , P1058-18 , P10AE
NA_MIDs	MID 130 PSID 29 FMI 7 / P10AE81

Conditions

Vehicle operating mode	on start-up , engagement
Frequency of occurrence of problem	random
Engine speed	<500 rpm , 500 - 1000 rpm
Warning light/lamps /pictograms	red
Other conditions	after a workshop procedure on the vehicle

Administration

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