

**Solution K03435224****Friday, June 11, 2021 5:03:01 PM CEST****** SOLUTION ****

Title *Expired - Mack Chassis - Equipped With An Automated Manual Transmission (AMT, mDRIVE) - Vehicle Attempts To Move Forward With The Service Brake Applied - US10, US10+OBD13, US14+OBD13 And Newer Emissions, Model Year 2011 And Newer*

Mack Models

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

Emission Standard

Emission Standard US10+OBD13 , US14+OBD13 , US14+OBD15 , US14+OBD16 , US17+OBD16 , US17+OBD18 , US17+OBD19

Engine family

Engine family MP7 , MP8 , MP10

Transmission

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

**** SOLUTION ****

Cause This may be caused by the service brake switch out of range or an error in the clutch control components.

It is important to note that if there are any clutch control related codes logged (active or inactive), they need to be resolved first before continuing with the diagnoses.

Solution**Symptoms of a brake switch related issue are:**

- Need to depress the brake pedal harder than normal to maintain the vehicle's stopped condition.
- Need to depress the brake pedal harder to get the transmission in gear.
- Need to depress the brake pedal harder to disengage the cruise control.

To diagnose the brake switch(es):

1. Connect a known good pressure gauge to a service brake chamber with a tee fitting or inline with the service brake pressure switch under the dash.
2. Run the appropriate Premium Tech Tool (PTT) Operation:

- **For US10 Vehicles (9 Pin Diagnostic Connector):** 1700-08-03-07 [Switch Status Monitoring](#). Monitor the **Service Brake** signal.
- **For US10+OBD13 And Newer Vehicles (16 Pin Diagnostic Connector):** 2751-08-03-02 [Cruise Control](#). Monitor the **Brake Pedal Switch** and **Brake Pressure Switch** signal.

3. Slowly depress the service brake pedal while watching the appropriate switch signal(s) from Step 2.

If the vehicle has two brake switches, they should both activate at the same time or nearly so.

- Some early mDrive-equipped vehicles have one service brake pressure switch.
- Vehicles manufactured later have two pressure switches.

PTT will display the correct signals for the vehicle's configuration.

4. Record the pressure displayed on the gauge when the signal status light turns green.

5. Compare results with the switch specifications.

- Switch specifications are 2-6 psi (13.8-41.4 kPa) of ascending pressure.

Repair

1. If the pressure is outside of the switch specification:

1.1. Replace the service brake switch that is showing to be defective.

2. **If the brake switches are within specification:** and clutch control system faults are present with the complaint diagnose the clutch faults.

2.1. Check the DTC Readout for clutch control system fault codes.

2.2. Diagnose the clutch fault codes present.

2.2.1. Multiple tests are available under Function Group 4 of the Test tab in PTT to check various clutch functions.

Solution visibility

Dealer distribution

Function(s)/component(s) affected

Function affected

service brake

Function Group

Function Group	4 power transmission , 5 brake
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Customer effect

Main customer effect	efficiency/abnormal behavior , stop/start , slipping
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Acceleration/speed	not regulated
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Road behaviour	driveability
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Conditions

Vehicle operating mode	deceleration , when stationary , when braking
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Frequency of occurrence of problem	always
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Administration

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