



## Mack Chassis - SNM 13 - 009 EPA - 2010, MP7, MRU / LEU Service Regeneration System State / System Status " ERROR " Message



> Internal Content

For more information refer to SNM 13 - 009 EPA - 2010, MP7, MRU / LEU Service Regeneration System State / System Status " ERROR " message [here](#).



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**To:** U.S. and Canada Mack General Managers  
U.S. and Canada Mack Service Managers  
U.S. and Canada Mack Warranty Managers

**Bulletin:** SNM 13-009  
**Date:** February 14, 2013  
**Valid to:** December 31, 2013  
**Replaces:** N/A  
**Action Required?** **Yes**

**From:** Greg Holderfield – Director, Product Reliability

**Subject:** EPA-2010, MP7, MRU/LEU Service Regeneration System State / System Status “ERROR” message

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Mack Trucks has received complaints of EPA-2010 MRU/LEU chassis unable to perform Service Regenerations. In VCADS the Service Regeneration function 2545-08-03-03, System State field is populated with “ERROR” with no fault codes logged.

#### **ISSUE DESCRIPTION:**

In the process of diagnosing a variety of issues, Service Regeneration is commonly required. In some cases, this is not possible due to System State field is populated with the “ERROR” message. The cause of this is the component drivers inside the ACM may have become opened or have shut off to protect them-selves. No fault codes will log for this event.

The 12 Volt high side driver-2 supplies the following ACM pins: 45, 49, and 53.  
This driver supplies the following components:

1. TRU fuel shut off solenoid (pin 1) and pump (pin 1)
2. Atomization Module (2 valves) (pin 1) and (pin 3)
3. Igniter coil (pin E)
4. Combustion Air Solenoid (pin 1)

The 5 Volt driver supply-1 at pin 50 supplies the following components:

1. DEF tank temp/level sensor (pin 1)
2. Flame temp sensor (pin 1)
3. DPF Differential Pressure Sensor (pin 3)
4. TRU Fuel Pressure Sensor (pin 1)
5. TRU Atomization Air Pressure Sensor (pin 1)

**NOTE:** Cycle the key OFF between each of the component checks and allow the modules to power down completely before cycling the key back ON. **It takes 90 to 120 seconds for the system to completely power down**



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#### 12 Volt high side driver-2

Test the circuits in the following manner. With key OFF and modules powered down, unplug one of the components from the Driver-2 list.

Key ON.

Check for voltage between the indicated component pins and a good ground source. If voltage reads zero, some other component is causing the driver to be opened. Cycle the key back OFF and power down, reconnect the disconnected component, and test the next component on the list. If voltage reads system volts, the disconnected component is most likely the cause of the short but check the other components one at a time to check the system completely. If 12 volts is read on all components, go to tests for Driver-1.

#### 5 Volt driver supply-1

Driver-1 test is done in a similar fashion as in test for Supply-2. With key OFF and all modules powered down, unplug one of the sensors from the 5 volt driver Supply-1 list.

Cycle the key back ON should have 5 volts. Check for voltage between the indicated sensor pins and a good ground source. If voltage reads 5 volts, the disconnected component is most likely the cause of the short but check the other components one at a time to check the system completely.

If voltage reads zero there is another sensor on this line that shorted and causing the driver to be opened. Cycle the key back OFF, allow all the modules to power down, reconnect the disconnected sensor, and disconnect the next sensor on the list.

When all tests and repairs have been completed, go to function 1700-08-03-32 and perform an engine Learned Data Reset and an ACM Learned Data Reset function.

Perform the Service Regeneration test. Make sure all sensor values are reading correctly for the current conditions.

#### **Affected Models:**

EPA 2010, MRU, LEU

**Note:** This is a temporary diagnostic procedure. New software is being developed to include correct fault code logging that would lead to the failed component.