



Solution

Title (customer effect) Mack Chassis - Engine Idle Speed Ramps Up To 1100 RPMs With No Driver Input - Smart Idle - US10 And Newer

Cause During extended periods of idling, engine speed may increase for a short time without any external command to do so.

Solution

Overview

A chassis equipped with a Mack engine will increase engine speed periodically when the truck is idling for an extended amount of time. This is controlled by the Smart Idle function. When the Smart Idle function is active, Low Voltage Fault Protection is also active. System voltage is monitored, and if low voltage is observed, engine speed is automatically commanded to ramp to 1100 RPM for 300 seconds (5 minutes) in order to increase alternator load and recharge the batteries.

Repair

If the chassis is entering smart idle excessively:

1. Check and confirm that system voltage is not dropping below 12.8 volts DC during extended idle.
2. Load test the batteries.
3. Ensure the alternator is functioning correctly.
4. A voltage drop test may be required if the batteries and alternator are found to be good to determine if there is excessive drain on the system, which may indicate:
 - A short in a harness or connector
 - A component drawing excessive power
 - Too many accessories operating simultaneously
 - This may include items plugged in in the cab or bunk

Internals **Smart Idle Parameters, Enabling and Disabling**

1
comm
ents
(BO)

PARAMETER	TITLE	DESCRIPTION	MIN	MAX	UNITS	NOTES
EBB	Enable the Smart Engine Idle function		0=Off	1=On	N/A	
EBC	Smart Engine Idle battery voltage threshold	Sets battery voltage at which Smart Idle activates	0	30	Volts	Default 12.8V
EBD	Smart Engine Idle engine speed	Sets engine speed during Smart Idle activation	0	250	RPM (x10)	Default 110
EBE	Smart Engine Idle entry time	Sets amount of time Smart Idle will wait before activating	0	250	Seconds	
EBF	Smart Engine Idle exit time	Sets a delay for Smart Idle to deactivate after voltage threshold is reached	0	250	Seconds	
EBG	Smart Engine Idle engine speed threshold	Sets max engine speed at which Smart Idle will activate	0	250	RPM (x10)	
EBH	Smart Engine Idle engine speed ramp rate	Sets the number of RPM engine speed will increase per second with Smart Idle activation	0	250	RPM/s	

Solution visibility

Dealer distribution

Function(s)/component(s) affected

Function affected engine , battery/power supply , low voltage disconnect , CV electronic control unit , 110 EMS , MID 128 – EMS , MID 144 – VECU , EECU , VECU , Diagnostic tool

Function Group

Function Group 2841 Electronic Control Unit , 365 entire vehicle control system

Customer effect

Main customer effect engine speed , power supply , calibration/programming/pairing/missing operation , diagnostics/methodology

Engine speed does not exceed a certain number of revs , unstable idle speed

Conditions

Vehicle operating mode stationary speed , when stationary

Administration

Author RU4469V

Dealer ID RU4469V

Last modified by RU4469V

Creation date 03-11-2017 18:11

Date of last update 03-11-2017 18:11

Status Published

NA_MACK_Vehicle_Range

NA_MACK_Vehicle_Range

Cabover , LR , LEU , MRU , Conventional , CHU , CXU , GU , TD

Engine family

Engine family Mack , MP7 , MP8 , MP10

Emission Standard

Emission Standard US17 GHG , US14 CNG , US16 , US15 , US10 , US13 OBD , US14 GHG
