

# IMPORTANT SERVICE INFORMATION FOR:

- ✓ SERVICE MANAGER
- ✓ SERVICE ADVISOR
- ✓ TECHNICIAN
- ✓ PARTS DEPARTMENT
- ✓ WARRANTY PERSONNEL

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GROUP: **FUEL** 

# N-SERIES – UNDERSTANDING DPF REGENERATION; MODES OF REGENERATION QUICK REFERENCE GUIDE

### AFFECTED VEHICLES

2011-current Isuzu N-Series
 Equipped with Diesel Particulate Filter (DPF)

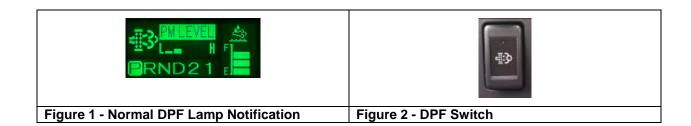
This bulletin supersedes bulletin IB14-L-001. This bulletin is being revised to update Model Years and Service Information. Please discard bulletin IB14-L-001.

# **SERVICE INFORMATION**

Isuzu has found that many times customers are unfamiliar with the overall operation of the DPF system (including the importance of completing a regeneration), which leads to unnecessary vehicle downtime. Please make sure your sales and service staff is completely familiar with the DPF system functionality and operation so when a new truck is delivered or comes in for service, the dealership team can instruct customers on proper operation which will minimize vehicle downtime.

The quick reference information below is provided to assist dealer personnel in better understanding the DPF Emission System Operation. Additional information regarding DPF Regeneration can be found in the Owner's Manual, Service Manual, the driver side sunvisor label, or on the Emission System Operation video. For your convenience, this video may be downloaded from <a href="https://www.isuzucv.com">www.isuzucv.com</a>.

IMPORTANT: DPF cleaning is due every 100,000 miles or 3,000 hours of operation (whichever occurs first). Some applications (such as sweepers, trucks that idle for extended periods, along with frequent stop/go), may require more frequent cleaning. Please see the appropriate owner's manual for specific cleaning instructions.



MID Message	Action Required	Description
REGEN. IN PROGRESS	No Action Required	DPF filter is in Regeneration Mode.
REGEN. REQUIRED	When Possible	Perform Running Regeneration – Drive vehicle above 30 mph (50 km/h) for approximately 20 minutes until "REGEN IN PROGRESS" message goes off or, if that is not possible, perform the Switch Regeneration described below. A REGEN can also occur when stationary with the transmission in "P".
REGEN. REQUIRED	Immediately	
SEL.REGEN. REQUIRED	When Possible	Perform Selectable (Switch) Regeneration – Idle in "P" (A/T) or neutral (M/T) with the parking brake on, press the switch and continue idling
SEL REGEN. REQUIRED	Immediately	approximately 20 minutes until "REGEN IN PROGRESS" message goes off.
CHECKING PM LEVEL	When Possible	Illuminates when the DPF switch is held down. When ON, the system is checking whether or not Selectable (Switch) regeneration is possible, and then changes to the required warning light. If the switch does not change, regeneration is not required.

IMPORTANT: Before starting DPF regeneration, ensure that the exhaust area is clear of grass, leaves, or any dry debris that could ignite, as this area will become very hot during regeneration.

# **REGENERATION MODES**

Mode Name	Description
Automatic Regeneration	<ul> <li>ECM monitors sensor inputs and determines if DPF regeneration is necessary</li> <li>The ECM will command "REGEN IN PROGRESS" message</li> <li>Vehicle should be driven normally</li> </ul>
	<b>Note:</b> If idling at a stop or in "Park" during this regeneration mode, the engine RPM will increase and the exhaust brake will activate.
	<b>Note:</b> DPF regeneration may be initiated automatically during prolonged idling. The "REGEN IN PROGRESS" light will illuminate – this is normal and does not indicate a failure.
Emergency Regeneration	Yellow or Red "REGEN REQUIRED" light comes "ON" Driver must choose one of the following options to perform this regeneration. If one of the following options is not completed, Limp Home Mode may be activated.
	<ul> <li>Running Option 1:</li> <li>Operate vehicle above 30mph for approximately 20 minutes</li> <li>ECM will determine if regeneration is necessary</li> <li>Drive until the "REGEN IN PROGRESS" message goes off, or if that is not possible, perform the Switch Regeneration as described below</li> </ul>

# **Switched Option 2:**

- Set the parking brake with engine running and transmission in Park or Neutral Position
- Press the DPF button
- Continue idling for approximately 20 minutes until the "REGEN IN PROGRESS" message goes off

IMPORTANT: Once Emergency Switched or Selectable Regeneration Modes have been selected, the Emergency Running Modes are no longer available. Automatic and Emergency Running Modes will become available after Switched or Selectable DPF regeneration is completed.

# **Selectable Regeneration**



NOTE: For quickest possible regeneration, be sure the vehicle is at operating temperature before performing selectable regeneration.

- Engine is running and in "Park" position
- Parking brake is applied
- Press and hold the DPF button
  - "CHECKING PM LEVEL" will turn "ON" when the system is checking if "Selectable" regeneration is possible
  - If the regeneration light does not stay "ON", regeneration is not necessary
- If the "REGEN IN PROGRESS" light turns "ON", regeneration will start and will take about 20 minutes
- Engine RPM will increase and the exhaust brake will activate
- If the selectable regeneration mode is interrupted, the red "SEL REGEN REQUIRED" light will flash and will go into reduced power condition

CAUTION: The following actions will interrupt the stationary type regeneration. Failure to restart and complete the regeneration cycle will result in filter clogging.

- Applying the accelerator pedal
- Shifting into gear (Automatic Transmission)
- Pressing the clutch pedal (Manual Transmission)

#### **Limp Home Mode**



This condition should only be diagnosed and repaired by an Isuzu trained technician

- MIL lamp is on, vehicle speed is reduced
- Technician diagnosis required
- IDSS induced regeneration (fast or slow) based on diagnosis
- Slow process will take 2 hours

# **IMPORTANT:** If the truck continues be operated without regenerating you will notice:

- Engine reduced power condition with the red "REGEN REQUIRED" light
- Illuminated check engine light
- You must take vehicle to dealer for service