



TECH TIP

**DX3 MANUAL REGEN MONITOR (NON
BURNER)**

**GROUP: 0-GENERAL
TECH TIP NO: TT-22-024
DATE: 11-22-22**

SUBJECT VEHICLES: 15MY-21MY Conventional Trucks equipped with a J08 engine or Cab Over Engine (COE) equipped with a J05 engine.

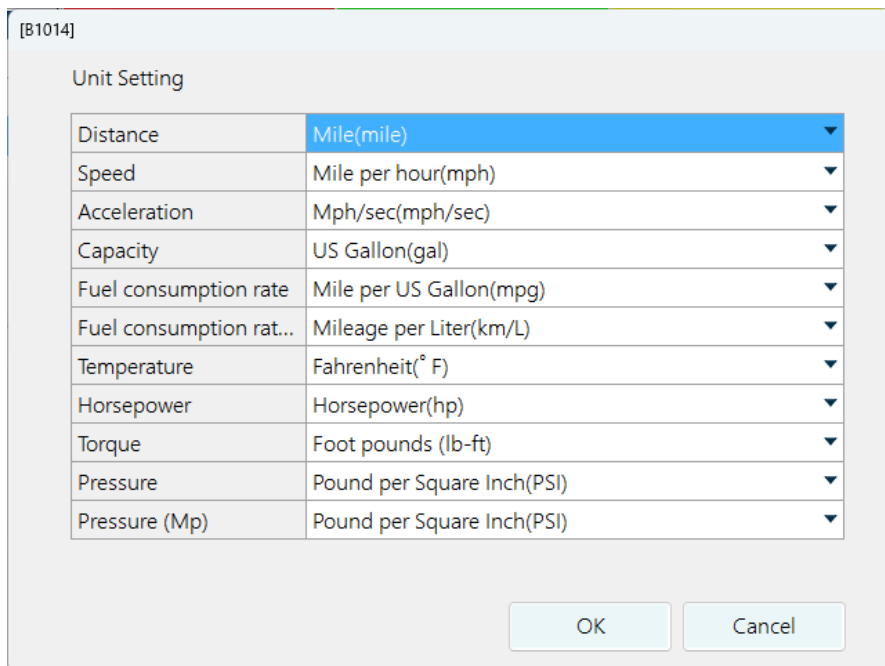
OVERVIEW:

The purpose of this procedure is to provide instructions in how to perform a manual regen recording on Hino Trucks equipped with a 5th or 7th exhaust fuel injector with DX3.

Note: This technical tip is provided as technical information and is not authorization for a warrantable repair.

REPAIR PROCEDURE:

Note: Be sure to change Unit Settings in DX3. Click **Settings** (gear in the upper right) > **Unit Setting** and then mirror the settings below, click **OK**. Log out of DX3, then Log back in to hold new settings for future DX3 connections and data monitoring.



1. Connect DX3 and allow **Read Out** to complete. Click **Customization**, in system select **Engine CAN**, and scroll to locate **DPF Soot Amount Piling Up**. Set the soot level to **3.5g/L** for a manual regen, and click **Write**, follow DX3 to complete writing of soot level.

Note: Key must be ON with the Engine OFF to write or change any value. Ignition must then be turned off for 60 seconds to finalize writing of value, and turned back on.

Customization

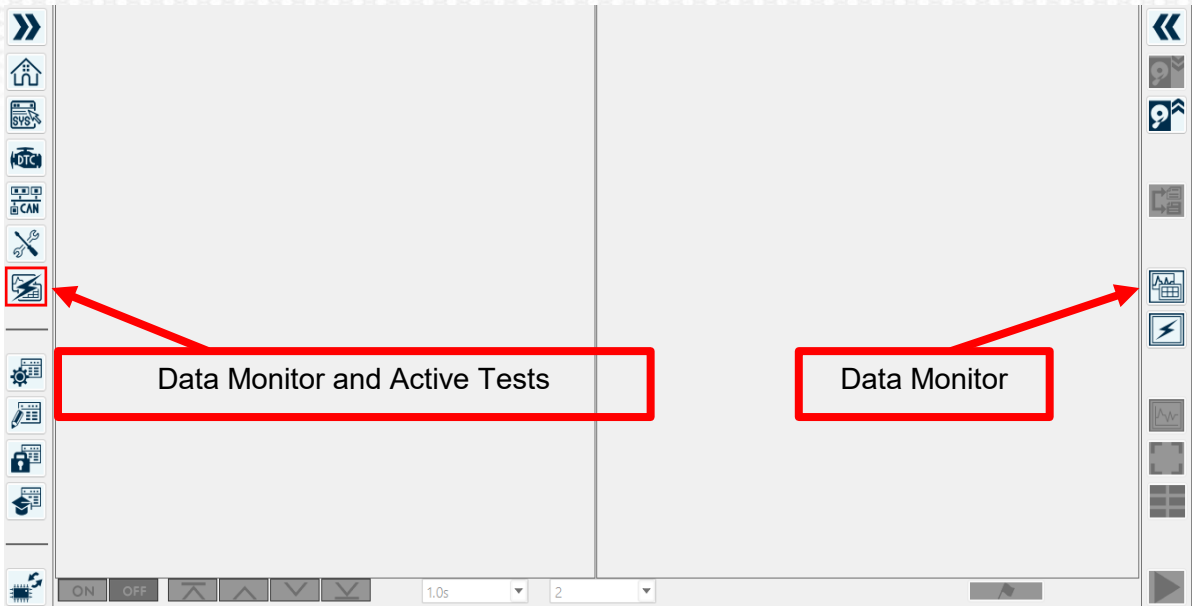
System: 01 Engine Serial(K line)

No.	Items	Initial value	Set value	Unit	Write to ECU	
<input type="checkbox"/>	439	Idle Shutdown Active Minimum Coolant Temperature	-40	-40	°F	
<input type="checkbox"/>	440	Idle Shutdown Active Minimum Ambient Temperature	-40	-40		
<input type="checkbox"/>	449	Setting of economy running intensity	Low	Low		
<input type="checkbox"/>	451	Setting start idle up mode changeover	Always	Always		
<input type="checkbox"/>	453	Setting of actuation time for hill start gear change assi...	0.0	0.0	Seconds	
<input type="checkbox"/>	456	Long idling control RPM	0	0	rpm	
<input type="checkbox"/>	474	Customized Backup (data 2 byte 6 digits) 1	0	0		
<input checked="" type="checkbox"/>	534	DPF Soot Amount Piling Up	0.000	3.5	g/L	
<input type="checkbox"/>	543	PM deposit volume 1 (A09C)	0.000	0.000	g/L	
<input type="checkbox"/>	544	PM deposit volume 2	0.000	0.000	g/L	
<input type="checkbox"/>	580	Total idle fuel injection	0.0	0.0	gal	
<input type="checkbox"/>	581	Trip idle injection quantity	0.0	0.0	gal	
<input type="checkbox"/>	582	Total fuel injection quantity	0.0	0.0	gal	

Signal description

Write Customization generation is desired.

2. Select ***“Data Monitor and Active Tests”*** then select ***“Data Monitor”***.



3. In the Data Monitor Item Configuration menu on the next page, select **Engine CAN** and the following parameters and then click **OK**.

Engine Speed

DPR Mode

DPR Differential Pressure

DPR Soot Amount Piling Up

SCR Catalyst Exhaust Gas Temp (DCU Reception) Exhaust Temp Sensor at ATC

DPR Exhaust Gas Temp (In)

Exhaust Gas Temp Before Oxidation Catalyst

DPR Exhaust Gas Temp (Out)

Additional Pressure On Fuel

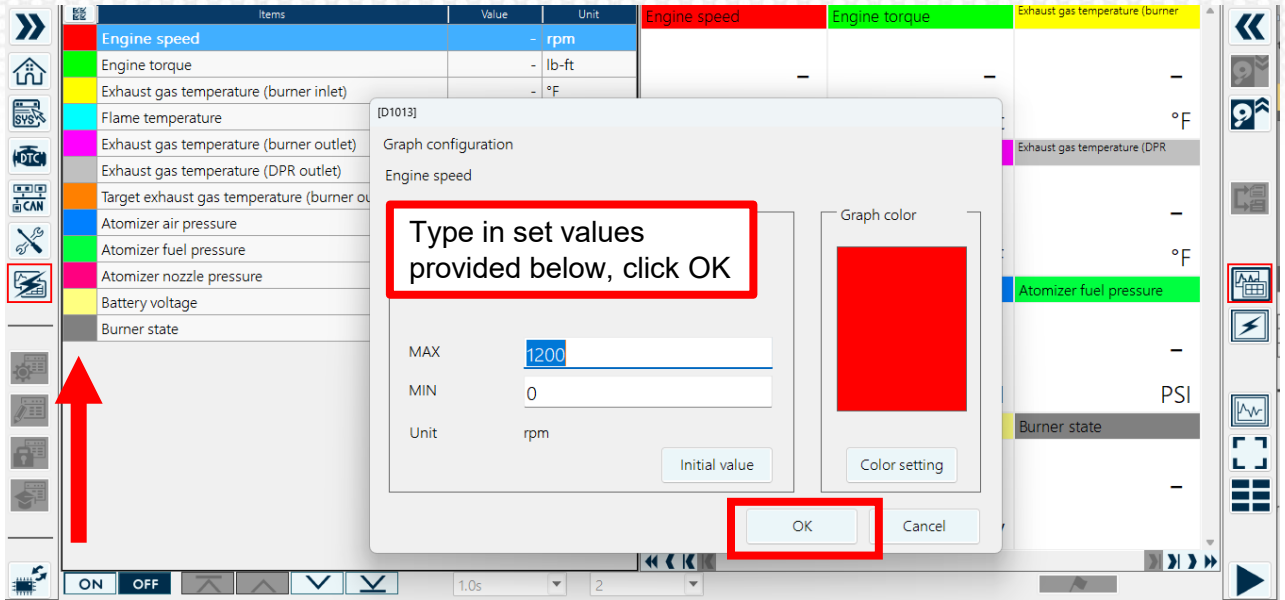
The screenshot shows the 'Data monitor item configuration' dialog box. The 'System' dropdown menu is set to '02 Engine CAN'. The 'Filter' dropdown is set to 'Select all'. The 'Items' list on the right contains the following items:

No.	Items
02	Engine speed
02	DPR mode
02	DPF Soot Amount Piling Up
02	DPR differential pressure
02	SCR catalyst exhaust gas temperature (Dosing control u...
02	Exhaust gas temperature sensor 1 (ATC upstream)
02	Exhaust gas temperature before oxidation catalyst
02	DPR exhaust gas temperature (IN)
02	DPR exhaust gas temperature (OUT)
02	Additional pressure on fuel

The 'OK' button is highlighted with a red box. The 'Save', 'Read', and 'Cancel' buttons are also visible. The 'Sampling rate(ms)' is set to 'Real time' and the 'Trigger Configura...' button is also visible.

IMPORTANT – MIN/MAX Values must be adjusted prior to performing this recording.

4. Adjust MIN/MAX Values. Click the colored box next to each parameter one at a time to set values below, click **OK** to accept each value.



Engine Speed **Max 1200 / Min 0**

DPR Mode **Max 40 / Min 0**

DPR Differential Pressure **Max 2 / Min 0**

DPR Soot Amount Piling Up **Max 10 / Min 0**

Additional Pressure On Fuel **Max 150 / Min 65**

SCR Catalyst Exhaust Gas Temp (DCU Reception) Exhaust
Temp Sensor at ATC (ATC Upstream)

DPR Exhaust Gas Temp (In)

Exhaust Gas Temp Before Oxidation Catalyst

DPR Exhaust Gas Temp (Out)

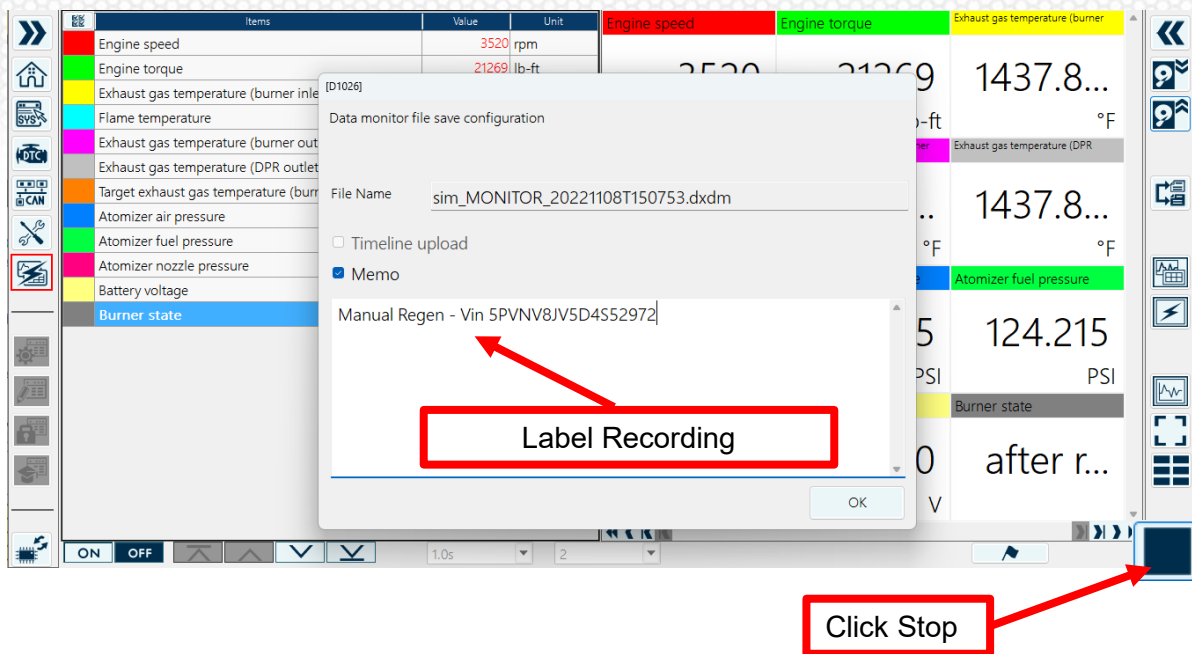
Max 2000*F / Min 32* for ALL Temp Sensors

5. Start the truck, start the DX recording and then press the manual regen switch on the dash to start manual regen. Record until manual regen has completed.

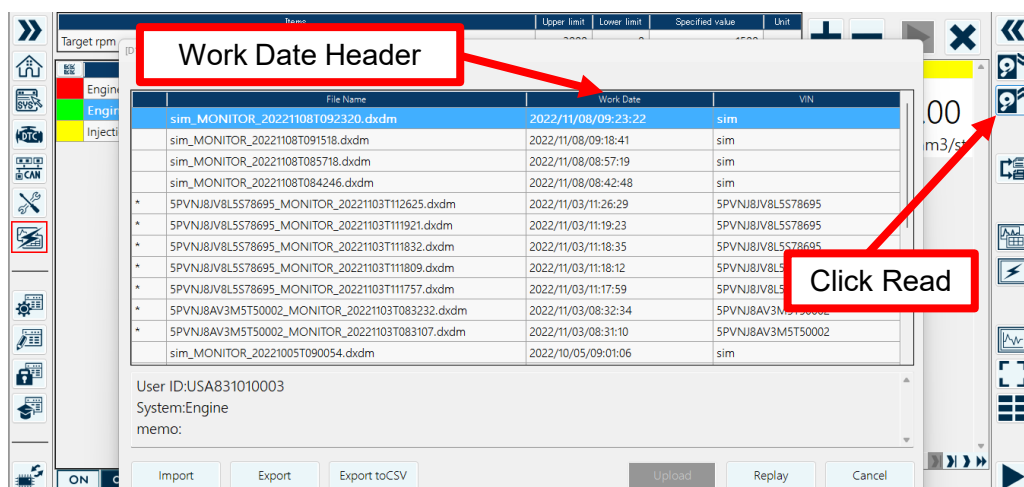
Items	Value	Unit
Engine speed	-	rpm
Engine torque	-	lb-ft
Exhaust gas temperature (burner inlet)	-	°F
Flame temperature	-	°F
Exhaust gas temperature (burner outlet)	-	°F
Exhaust gas temperature (DPR outlet)	-	°F
Target exhaust gas temperature (burner outlet)	-	°F
Atomizer air pressure	-	PSI
Atomizer fuel pressure	-	PSI
Atomizer nozzle pressure	-	PSI
Battery voltage	-	V
Burner state	-	

Start Recording, record until regen completes.

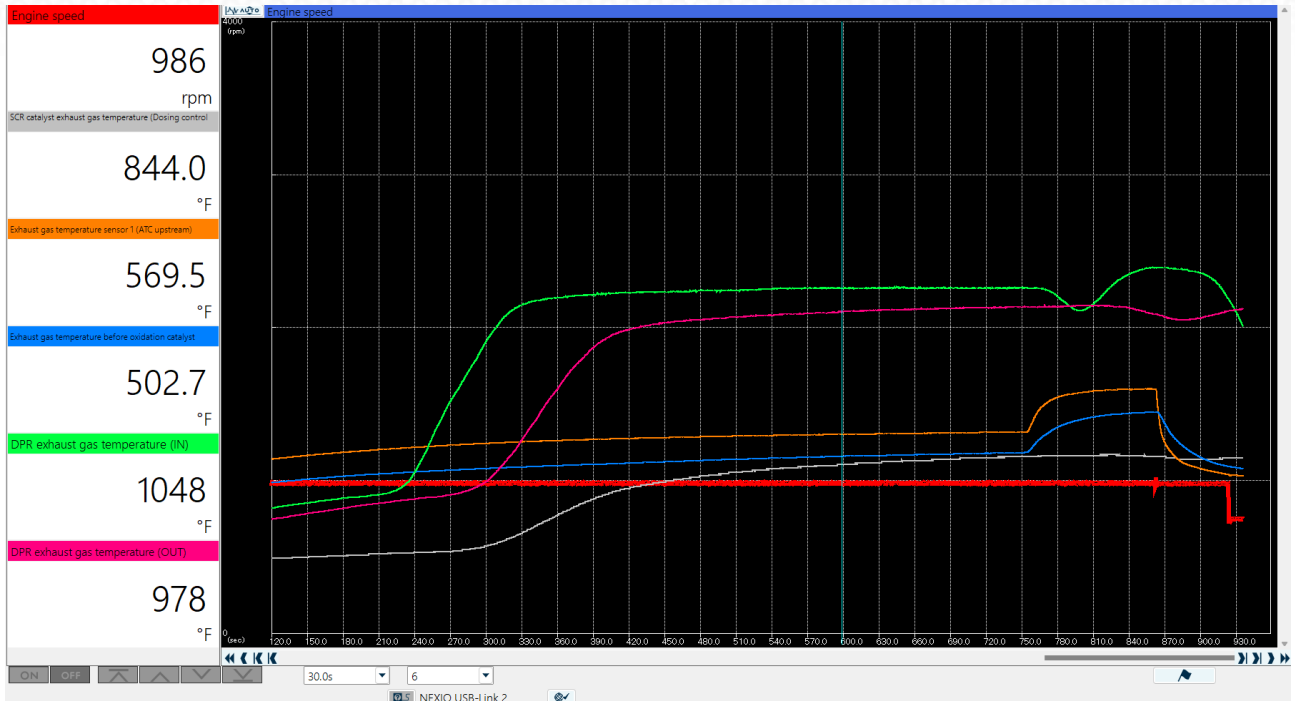
6. Click the **Stop** in the lower right of DX3 to stop the recording. In the save box, **label the recording**, be sure to include the test name and VIN or TechAssist Case number and click **OK**.



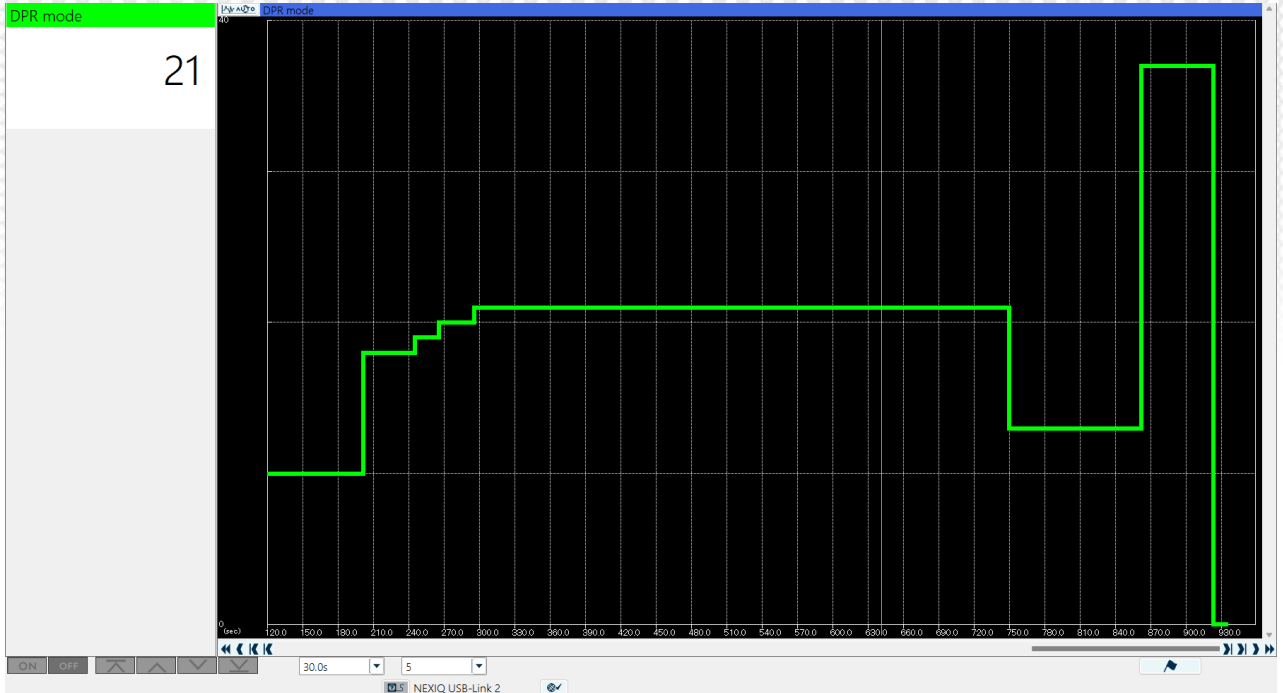
7. Click **Read**, click on the **Work Date** header a couple of times to sort recordings by work date.



8. Graph data to review. Temperature Sensors and Engine RPMs can be grouped together, other sensors are best reviewed and graphed individually.



9. Graph DPR mode on its own.



Regeneration Modes

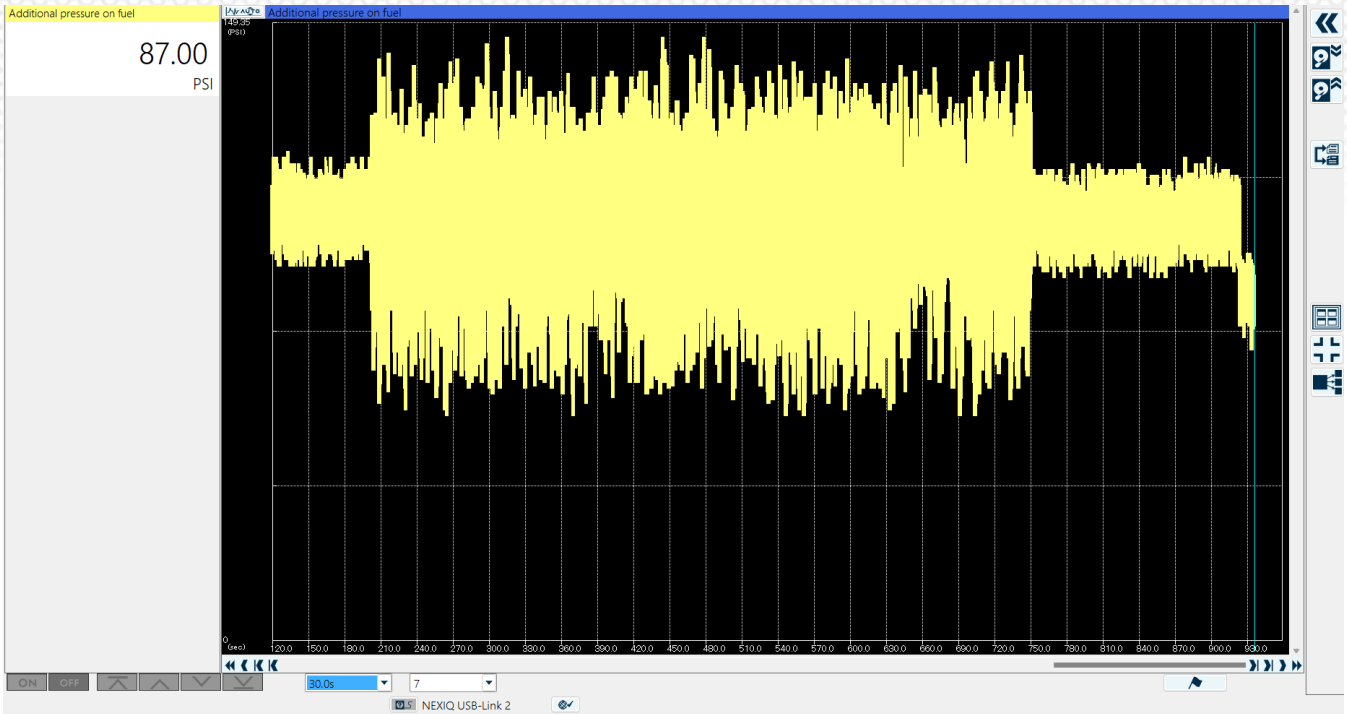
Parameters	Injection Type	After-Injection		Post-Injection								Post-Injection and Fuel Additive Injector														
				Below 260 °C EGR Normal				Below 260 °C EGR Valve Stuck				Above 260 °C EGR Normal				Above 260 °C EGR Valve Stuck										
Temps	DOC Inlet Sensor																									
	ATC Sensor	Below 230 °C	Above 230 °C	→																						
Modes	DPR Filter Inlet Sensor	Below 200 °C		T1	T2	T3	*	T1	T2	T3	*	T1	T2	T3	*	T1	T2	T3	*							
	Active Regen	2	4	5	6	7	8	25	27	28	29	14	15	16	17	22	23	24	25							
Modes	EGR Valve	Closed		Varies with Driving Pattern				Closed				Varies with Driving Pattern				Closed										
	Throttle Valve																									
	Exhaust Brake	Open		Open				Open								Open										
	Manual Regen	3	9	10	11	12	13	10	11	12	13	18	19	20	21	18	19	20	21							
Modes	EGR Valve	Closed		Closed				Closed				Closed				Closed										
	Throttle Valve																									
	Exhaust Brake	Closed		Closed				Closed				Closed				Closed										

T1, T2, and T3 are preliminary target temperatures

* DPR Filter Regeneration Temperature

GMV216

10. Graph Additional Pressure on Fuel on its own



Note: Please review our DX3 training course as needed for any graphing questions.

Note: If you are not able to determine judgment, please follow **TechTip #22-019 Sending DX3 Files to TechAssist**. Create a TechAssist case outlining the customer's concern, diagnosis performed and related DTC's, then attach file(s) for review.