Service Bulletin

INFORMATION

Subject: A New Way to Look at NOx Sensor Readings and Exhaust Temperature During a DPF Regeneration or a Reductant System Malfunction Warning Service Bay Test

Brand:	Model:	Model Year:		VIN:		Engine:	Transmission:
		from	to	from	to		
Chevrolet	Colorado	2016	2016			2.8L Diesel (LWN)	
GMC	Canyon	2016	2016				

Involved Region or Country	North America

Introduction

The following procedure is to aid in graphing NOx sensor readings and temperature sensor readings using the GDS2.

Information for the temperatures and NOx sensors can be pulled from the DPF Service Regeneration and the Reductant System Malfunction Warning Service Bay Test from session files or stored data in GDS2.

Suggested Procedure for Graphing the DPF Service Regeneration Temperatures

Locate the DPF Service Regeneration in the Stored Data:

1. Select the Review Tab.

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2. Select the Diagnostic Data Display tab.

3. Select the Exhaust Gas Temperature Sensor 1.

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Note: The LOCK PARAMETER BUTTONS must be selected after each parameter has been selected to be graphed.

4. Select the Lock Parameter button located at the upper right side of display.

5. Repeat the steps above to add the Exhaust Gas Temperature Sensor 2, 3, 4 and 5.

Stored Data Review

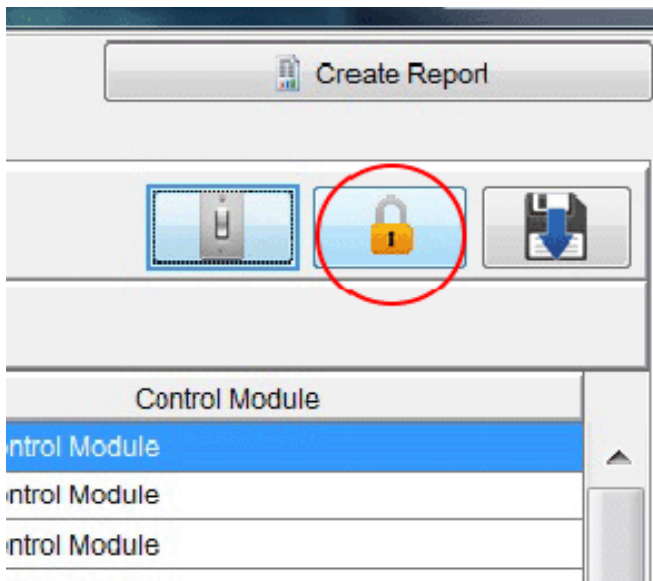| Graphical Data Display	Diagnostic Data Display	Line Graph	Bookmarks	System Informa

Data List: Exhaust Aftertreatment Data

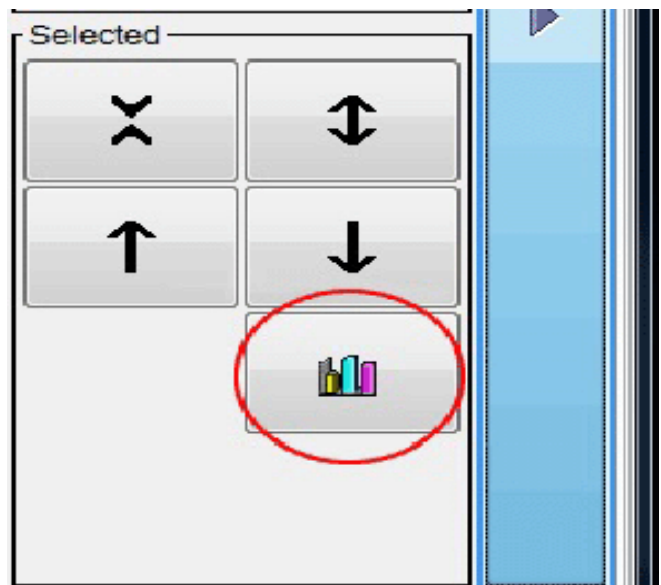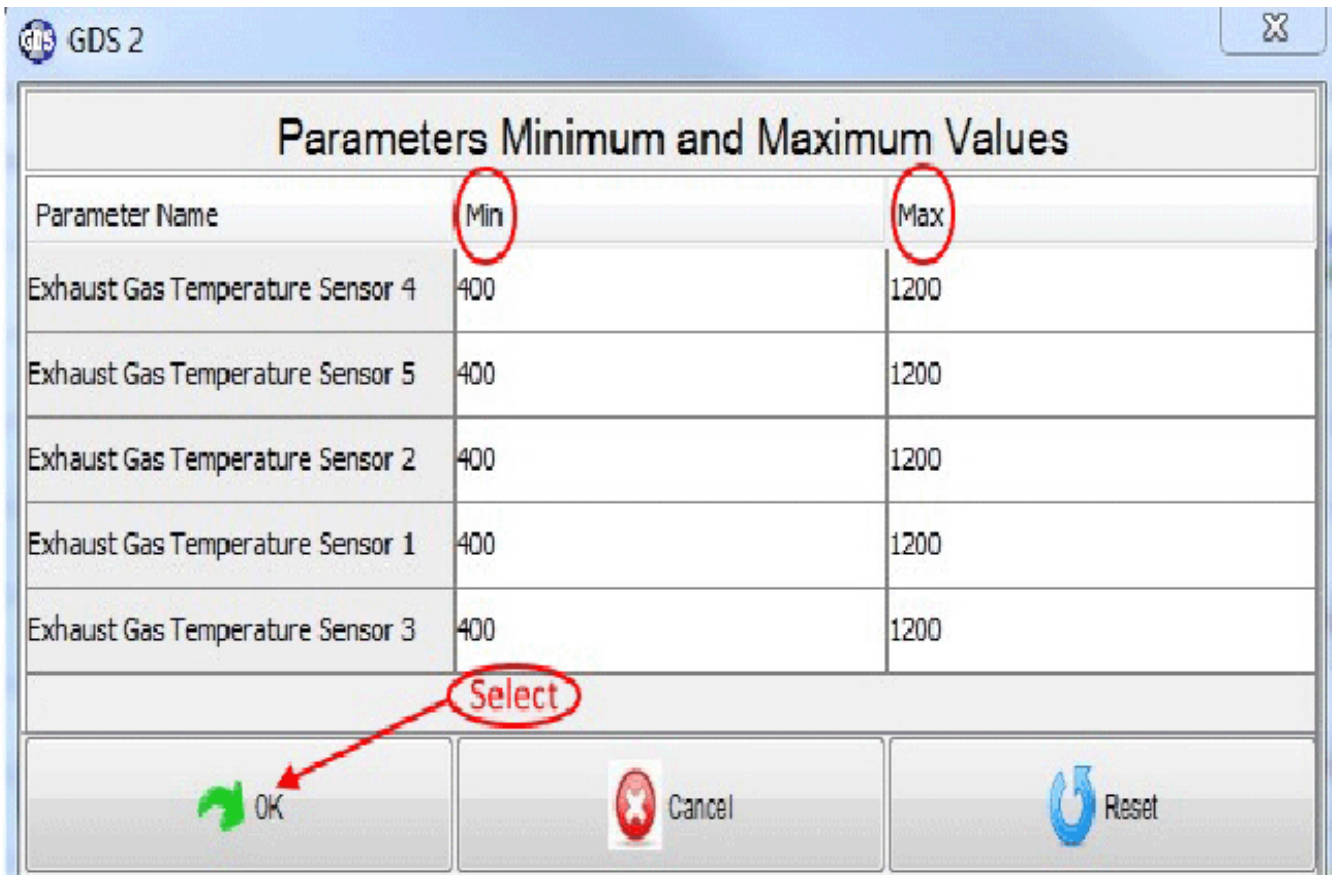| Parameter Name |
|---|
| Exhaust Gas Temperature Sensor 1 |
| Exhaust Gas Temperature Sensor 2 |
| Exhaust Gas Temperature Sensor 3 |
| Exhaust Gas Temperature Sensor 4 |
| Exhaust Gas Temperature Sensor 5 |

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6. Select the Line Graph tab.

749.55   789
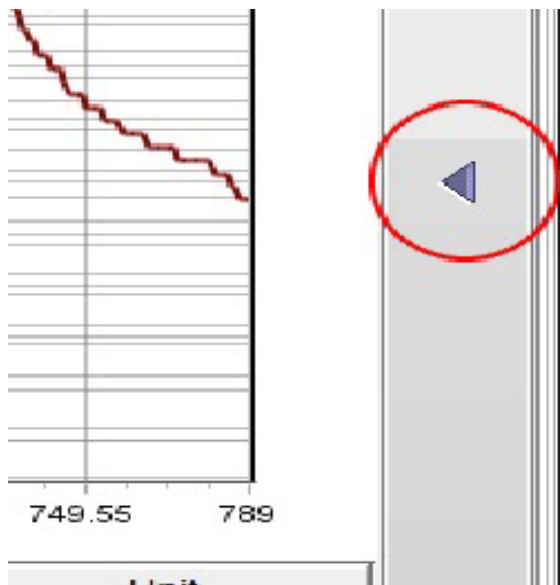
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Selected

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7. On the right side of the display, select the Show/ Hide Control arrow button.

8. Select the Change Scale button.

GDS 2

Parameters Minimum and Maximum Values

Parameter Name	Min	Max
Exhaust Gas Temperature Sensor 4	400	1200
Exhaust Gas Temperature Sensor 5	400	1200
Exhaust Gas Temperature Sensor 2	400	1200
Exhaust Gas Temperature Sensor 1	400	1200
Exhaust Gas Temperature Sensor 3	400	1200

Select

OK   Cancel   Reset

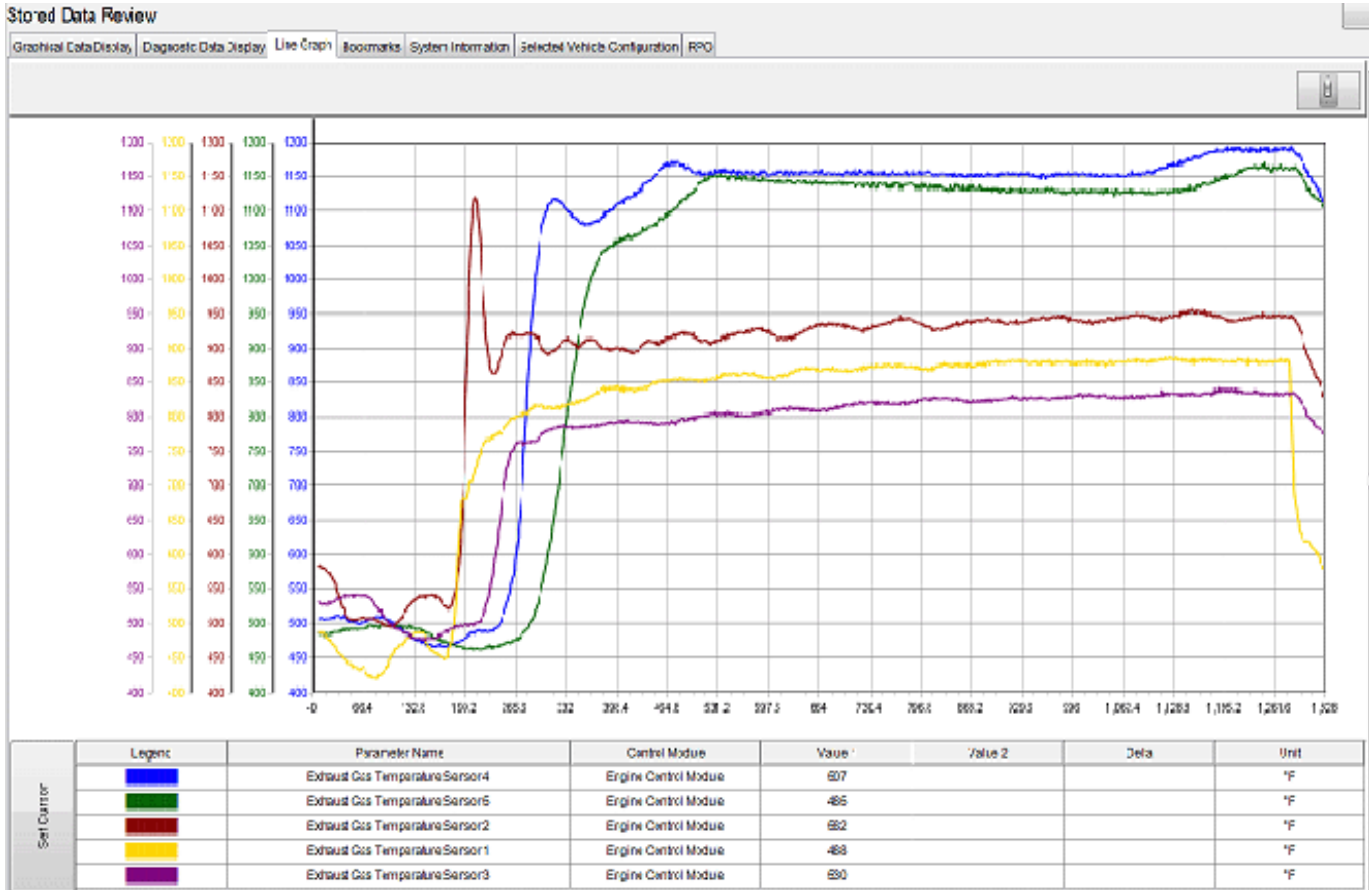4531058

Note: When selecting the temperature values, the parameters should be all on the same scale.

9. Under the Parameters Values, select the MIN and MAX parameters for graphing out the readings.

10. Select OK.
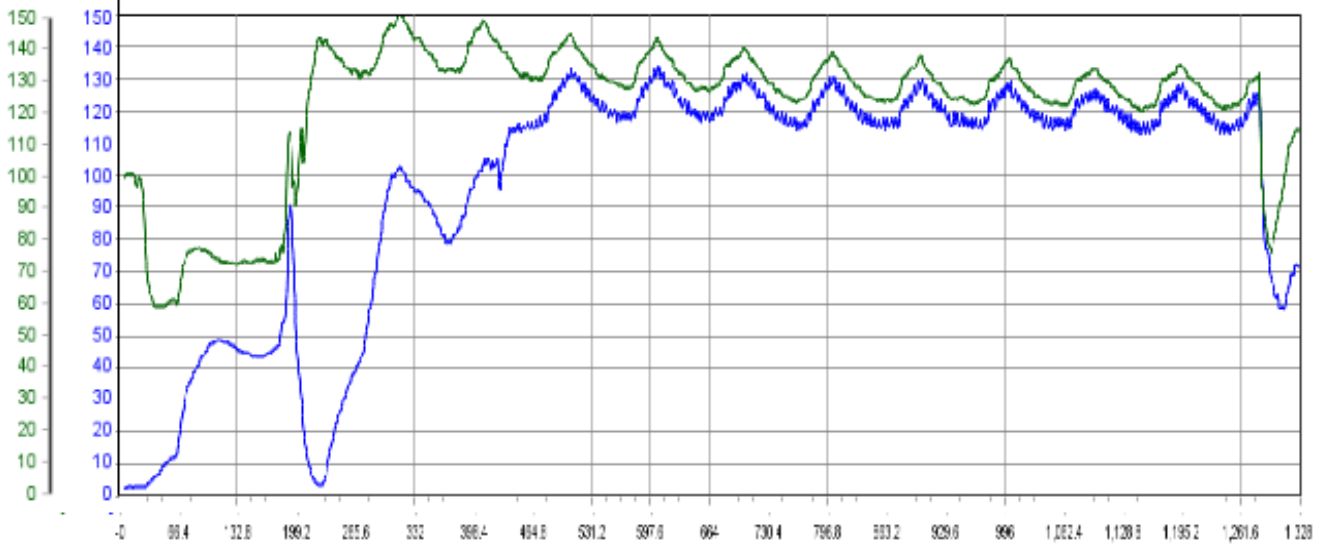
Graph Results

Graphed results of the exhaust temperatures during the
DPF Service Regeneration.

Recommended parameter values;

- Enter 400 under MIN.
- Enter 1200 under MAX.

Stored Data Review

Graphical Data Display | Diagnostic Data Display | Line Graph | Bookmarks | System Information | Selected Vehicle Configuration | R&D

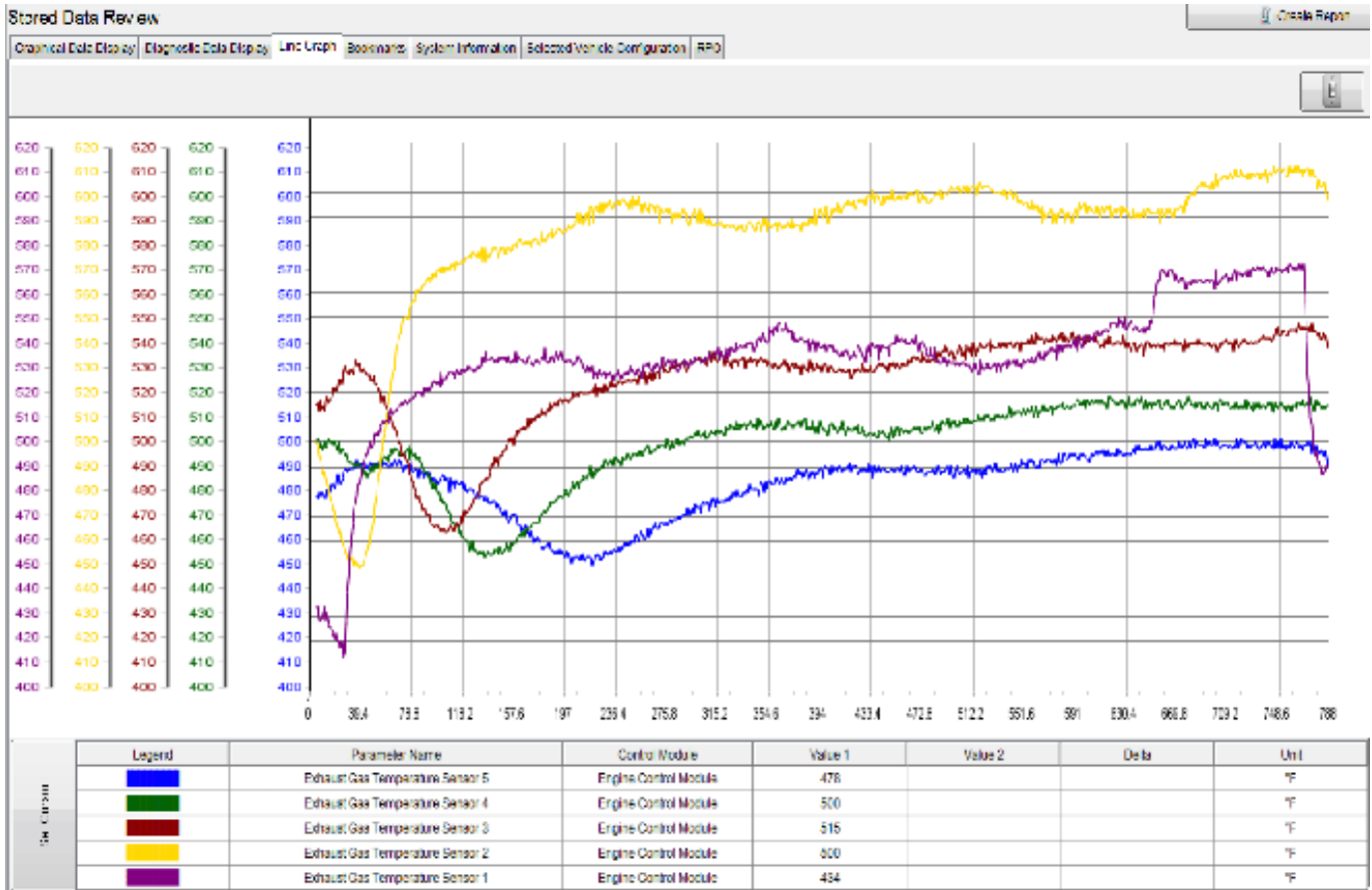| Legend	Parameter Name	Control Module	Value 1	Value 2	Delta	Unit
(blue)	NOx Concentration (NOx Sensor 2)	Engine Control Module	25			ppm
(green)	NOx Concentration (NOx Sensor 1)	Engine Control Module	99.4			ppm

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Note: NOx Sensor 2 may have higher readings than the NOx sensor 1 during a regeneration.

Graphed results of the NOx sensors during the DPF Service Regeneration.

Recommended parameter values;
- Enter 0 under MIN.
- Enter 200 under MAX.

Stored Data Review

Graphical Data Display | Diagnostic Data Display | Line Graph | Bookmarks | System Information | Selected Vehicle Configuration | RPO

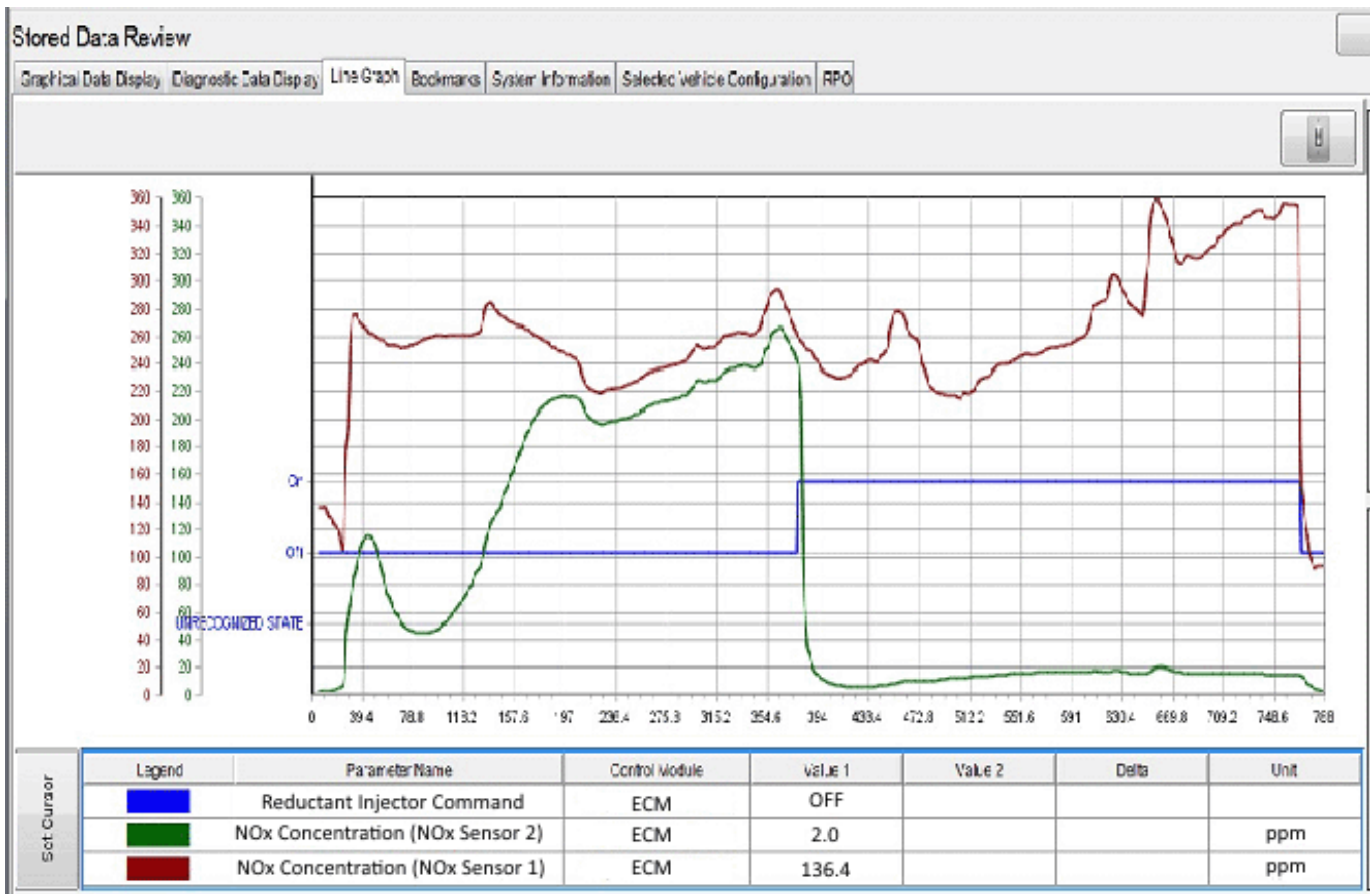| Legend	Parameter Name	Control Module	Value 1	Value 2	Delta	Unit
(blue)	Exhaust Gas Temperature Sensor 5	Engine Control Module	476			°F
(green)	Exhaust Gas Temperature Sensor 4	Engine Control Module	500			°F
(dark red)	Exhaust Gas Temperature Sensor 3	Engine Control Module	515			°F
(yellow)	Exhaust Gas Temperature Sensor 2	Engine Control Module	600			°F
(purple)	Exhaust Gas Temperature Sensor 1	Engine Control Module	484			°F

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Graphed results of the exhaust temperature readings during the Reductant System Malfunction Warning Service Bay test.

Recommended parameter values;

- Enter 400 under MIN.
- Enter 620 under MAX.

Stored Data Review

Graphical Data Display | Diagnostic Data Display | Line Graph | Bookmarks | System Information | Selected Vehicle Configuration | RPO

Legend	Parameter Name	Control Module	Value 1	Value 2	Delta	Unit
(blue)	Reductant Injector Command	ECM	OFF			
(green)	NOx Concentration (NOx Sensor 2)	ECM	2.0			ppm
(red)	NOx Concentration (NOx Sensor 1)	ECM	136.4			ppm

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Graphed results of the NOx sensor readings during the
a Reductant System Malfunction Warning Service
Bay test.

Recommended parameter values;

- Enter 0 under MIN.
- Enter 360 under MAX.

Version	1
Modified	

Additional Keywords 2.8, soot, fuel, NOx, Nitrogen
Oxide, O2, Regen, Regeneration, Fuel, SCR, LWN,
EGT, DOC, DPF, Exhaust, Particulate, Fluid, Quality,
Message, P2463, P20EE, P219D, P249E, P2BAA,
P2459, P144E, P144F