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Viewed:	2208		

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Title: 2021 A26 (A26B) - Intermittent Shutdown

Applies To: 2021 A26 ESN 4600000 - 4699999

CHANGE LOG

Please refer to the change log text box below for recent changes to this article:

12/17/2025 - Removal of IKNOW article reference on step 5, changed to push to 132 GUIDE session
08/06/2025 - IMP isolation kit parts information and installation instructions added. Indication to open a tech service case removed from final step.
06/11/2025 - Initial Article Release

PLEASE COMPLETE ALL PUBLISHED DIAGNOSTICS BEFORE PERFORMING THESE STEPS.

The diagnostics within this document are supplemental diagnostic steps only. This article is intended to be followed when all published diagnostics have been exhausted and there is no current repair direction or solution. Failure to follow published diagnostics can result in improper diagnostics being performed, and may also lead to extended downtime for the customer. Technical Service Support teams have created this article for a short-term solution while pending published diagnostics are enhanced and updated. Once those diagnostics have been updated, this article will be retired. Always reference published manuals, FCAPs, and GUIDE sessions before performing the steps below.

DESCRIPTION

This document will guide the user through diagnosing an intermittent shutdown complaint on a 2021 A26 (A26B), whether the vehicle is coming to a stop or sitting at idle.

SYMPTOM(s)

Diagnostic Trouble Code(s) & Dashboard Indicator Light(s):

- There should be no faults or MIL associated with this symptom.

Customer Observations or Concerns:

- Intermittent shutdown
  - Coming to a stop
  - At idle

SPECIAL TOOL(s) / SOFTWARE

Tool Description	Tool Number	Comments	Instructions
SDS	N/A	N/A	N/A

Tools Resource Center

SERVICE PARTS INFORMATION

Please consult your parts department for service part information. Ensure you are using the most current part numbers.

IMP Isolation Kit Parts

Part Description	Outside Part Source	Comments
5/16" Fuel Line Clamp 304 Stainless Steel, Adjustable 1/2 - 9/16 dia.	Amazon	Can be sourced from a local auto parts store. Recommend 304 stainless steel to prevent rust/corrosion.
Fuel Line 5/16 inch ID NBR Fuel Line Hose, Rubber.	Amazon	Can be sourced from a local auto parts store.
Adapter, M10X1.0 >> 5/16" Barb	Racetronix	Can be sourced from a local auto parts store. Recommend anodized aluminum to prevent corrosion.

DIAGNOSTIC STEP(s)

WARNING! To prevent property damage, personal injury, and / or death, park vehicle on a hard, flat surface, turn the engine off, set the parking brake, and install wheel chocks to prevent the vehicle from moving in either direction.

WARNING! To prevent property damage, personal injury, and / or death, if the vehicle must be raised, do not work under the vehicle supported only by jacks. Jacks can slip or fall over.

WARNING! To prevent personal injury and / or death, always wear safe eye protection when performing vehicle maintenance.

WARNING! To prevent property damage, personal injury, and / or death, keep flames or sparks away from vehicle and do not smoke while servicing the vehicle's batteries. Batteries expel explosive gases.

WARNING! To prevent property damage, personal injury, and / or death, remove the ground cable from the negative terminal of the battery box before disconnecting any electrical components. Always connect the ground cable last.

Step	Health report review.	Decision
#1	**Review the initial health report as well as telematics reports (if available) for any relevant DTCs related to engine performance:** Were any faults related to engine performance found, such as fuel-system, intake manifold pressure faults, misfire faults, or engine speed at idle faults?	**Yes**. Perform the published diagnostics for the associated fault code.
		No. Proceed to step 2.

Step	Verify ECM calibration	Decision
#2	**Confirm the ECM calibration is up to date:** Is the ECM calibration software ****TK*A or greater?	**Yes.** Proceed to step 3.

		No. Update the ECM calibration and then proceed to step 3.

Step	IMP sensor inspection.	Decision
#3	**Inspect the intake manifold pressure (IMP) sensor body for the Julian date code. See Image #1 for example:** Is the IMP date code 3152 or greater?	**Yes.** Proceed to step 4.
		No. Replace the IMP sensor with a date code greater than 3152. Then proceed to step 4.

Step	Inspect the flywheel timing mark.	Decision
#4	**Reference and follow the iKNow article IK1201498:** Was the IMP sensor replaced in the previous step? Did the IKNOW article require a shim to be installed on the crankshaft position sensor? **NOTE: Once the IKNOW article has been referenced, this article should continue to be followed. If the article leads to a flywheel replacement, DO NOT replace the flywheel.**	**Yes, the IMP sensor was replaced, and the article required a shim to be installed**. Re-test for the symptom. If the issue persists, proceed to step 5.
		No, the IMP sensor was not replaced, but the article required a shim to be installed. Re-test for the symptom. If the issue persists, proceed to step 5.
		No, the IMP sensor was replaced, but the article did not require a shim to be installed. Re-test for the symptom. If the issue persists, proceed to step 5.
		No, the IMP sensor was not replaced, nor did the CKP sensor require a shim to be installed. Proceed to step 5.

Step	Confirm base airflow.	Decision
#5	**Perform an Air Management Test (AMT).** **Select the halfway point between the VGT Actuator command to 60% and EGRV command to 100%, see Image #2 for selection point example:** Is MAF between 1200 - 1500, IMP between 10 - 20, and EBP between 20 - 40? **NOTE: To access a GUIDE session with no active fault, follow the steps below;**	**Yes.** Proceed to step 6.
		No.

	1. In Service Portals "Master Service Information", select "Service Information by VIN" at the bottom right of the selection table. 2. Enter the last 8 of the VIN in the "Chassis" field. 3. Search By "Fault Code Action Plan". 4. Enter the source address as "0", Fault type as "SPN132", and FMI as "16", then hit "search".	Perform a GUIDE session for SPN 132 FMI 16. If the symptom persists, proceed to step 7. **NOTE: If the GUIDE session leads to a NOX sensor replacement, do NOT replace the NOX sensor, as it's likely not the cause of the shutdown complaint.**

Step	Check for biased sensors.	Decision
#6	**Perform a 5-minute KOEO signal monitor session with SDS.** **Review the session and confirm the IMP sensor is reading 0, EBP centerline is equal to or less than 0.25 psi, and MAF sensor is reading less than 25 kg/hr without fluctuating. See Image #3 for KOEO example:** Are all sensors reading as intended?	**Yes.** Proceed to step 8.
		No. Proceed to step 7.

Step	Check for biased sensors	Decision
#7	**Disconnect and reconnect the identified biased sensor.** **Perform another 5-minute KOEO signal monitor session with SDS:** Is the previously biased sensor still reading biased?	**Yes.** Replace the identified sensor, and then re-test for the symptom. If the symptom persists, proceed to step 8. **NOTE: If replacing the EBP sensor, confirm the tube is free from restriction and/or damage.**
		No. Replace the connector body and pins on the identified sensor, and then re-test for the symptom. If the symptom persists, proceed to step 8.

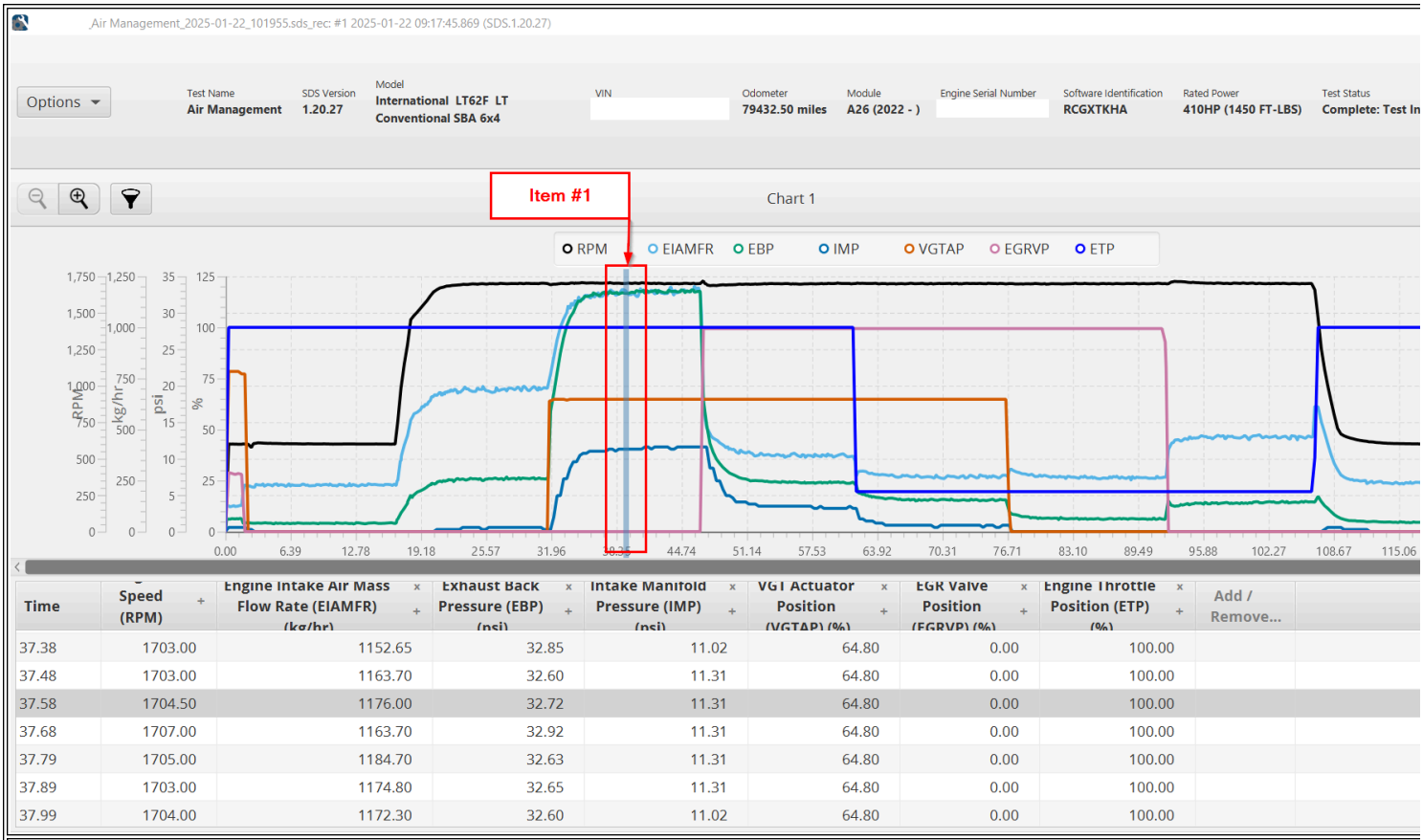
Step	Check for biased sensors.	Decision
#8	**Perform a 5-minute KOER signal monitor session with SDS.** **Review the session and confirm IMP is at or close to 0, and EBP is fairly steady and below 10 psi. See Image #4 for KOER example:** Are the sensors reading as intended, and not fluctuating rapidly?	**Yes.** Proceed to step 10.
		No.

		Proceed to step 9.

Step	Check for biased sensors	Decision
#9	**Disconnect and reconnect the identified biased sensor.** **Perform another 5-minute KOER signal monitor session with SDS:** Is the previously biased sensor still reading biased?	**Yes.** Replace the identified sensor, and then re-test for the symptom. If the symptom persists, proceed to step 10. **NOTE: If replacing the EBP sensor, confirm the tube is free from restriction and/or damage.**
		No. Replace the connector body and pins on the identified sensor, and then re-test for the symptom. If the symptom persists, proceed to step 10.

Step	Confirm engine performance.	Decision
#10	**Perform a 0-60 / Lugdown** **Review DPF Differential Pressure, Intake Manifold Pressure compared to desired, and Fuel Rail Pressure compared to desired:** Is DPF Differential Pressure below 0.5 psi, the Intake Manifold Pressure meeting or exceeding desired values, and the Fuel Rail Pressure following desired values? **NOTE: IMP and FRP may not exactly follow desired values as the transmission shifts gears, and the engine RPM drops drastically. The values should be reviewed while the engine RPM is climbing and the engine is under load.** **DPFDP example - Image #5** **IMP example - Image #6** **FRP example - Image #7**	**Yes**. With customer permission, install an IMP isolation kit. Review the parts information and kit installation instructions.
		No, DPFDP is above 0.5 psi. Remove the DOC and DPF for inspection. Inspect them per the re-use guidelines in the manual. If they pass for re-use, have the DOC cleaned, and the DPF cleaned and baked. Once completed, re-test for the symptom, and if the symptom persists, follow the "yes" result from this step.
		No, IMP is not meeting or exceeding desired values. Locate the source of low airflow. IK1201511 can be followed to assist with diagnostics.
		No, FRP is not following desired values. Locate the source of FRP issues. IK1500110 can be followed to assist with diagnostics.

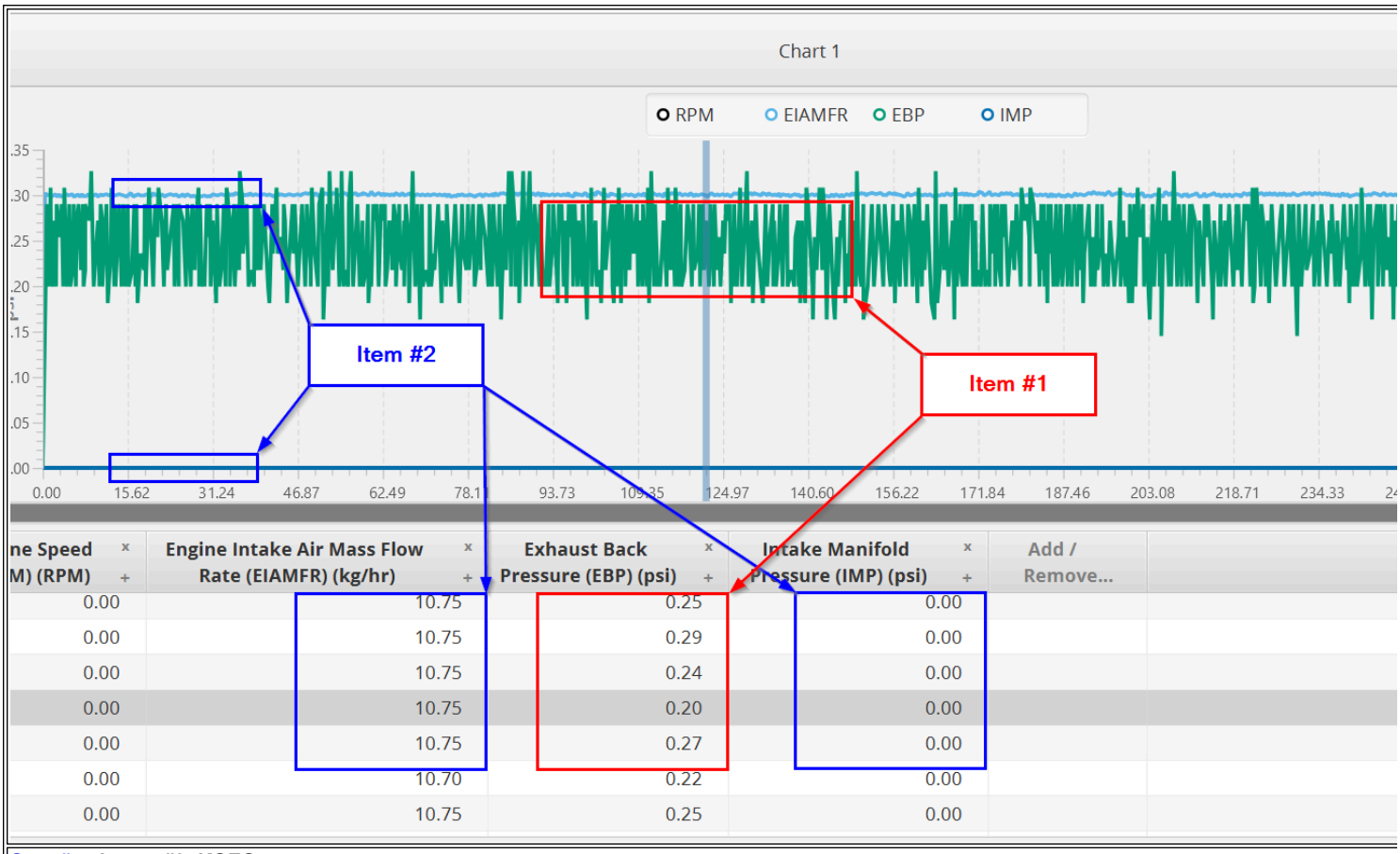
Step #2 - Image #1: IMP Date Code



Time	Speed (RPM)	Engine Intake Air Mass Flow Rate (EIAMFR) (kg/hr)	Exhaust Back Pressure (EBP) (psi)	Intake Manifold Pressure (IMP) (psi)	VGT Actuator Position (VGTAP) (%)	EGR Valve Position (EGRVP) (%)	Engine Throttle Position (ETP) (%)	Add / Remove...
37.38	1703.00	1152.65	32.85	11.02	64.80	0.00	100.00	
37.48	1703.00	1163.70	32.60	11.31	64.80	0.00	100.00	
37.58	1704.50	1176.00	32.72	11.31	64.80	0.00	100.00	
37.68	1707.00	1163.70	32.92	11.31	64.80	0.00	100.00	
37.79	1705.00	1184.70	32.63	11.31	64.80	0.00	100.00	
37.89	1703.00	1174.80	32.65	11.31	64.80	0.00	100.00	
37.99	1704.00	1172.30	32.60	11.02	64.80	0.00	100.00	

Step #4 - Image #2: AMT review selection point

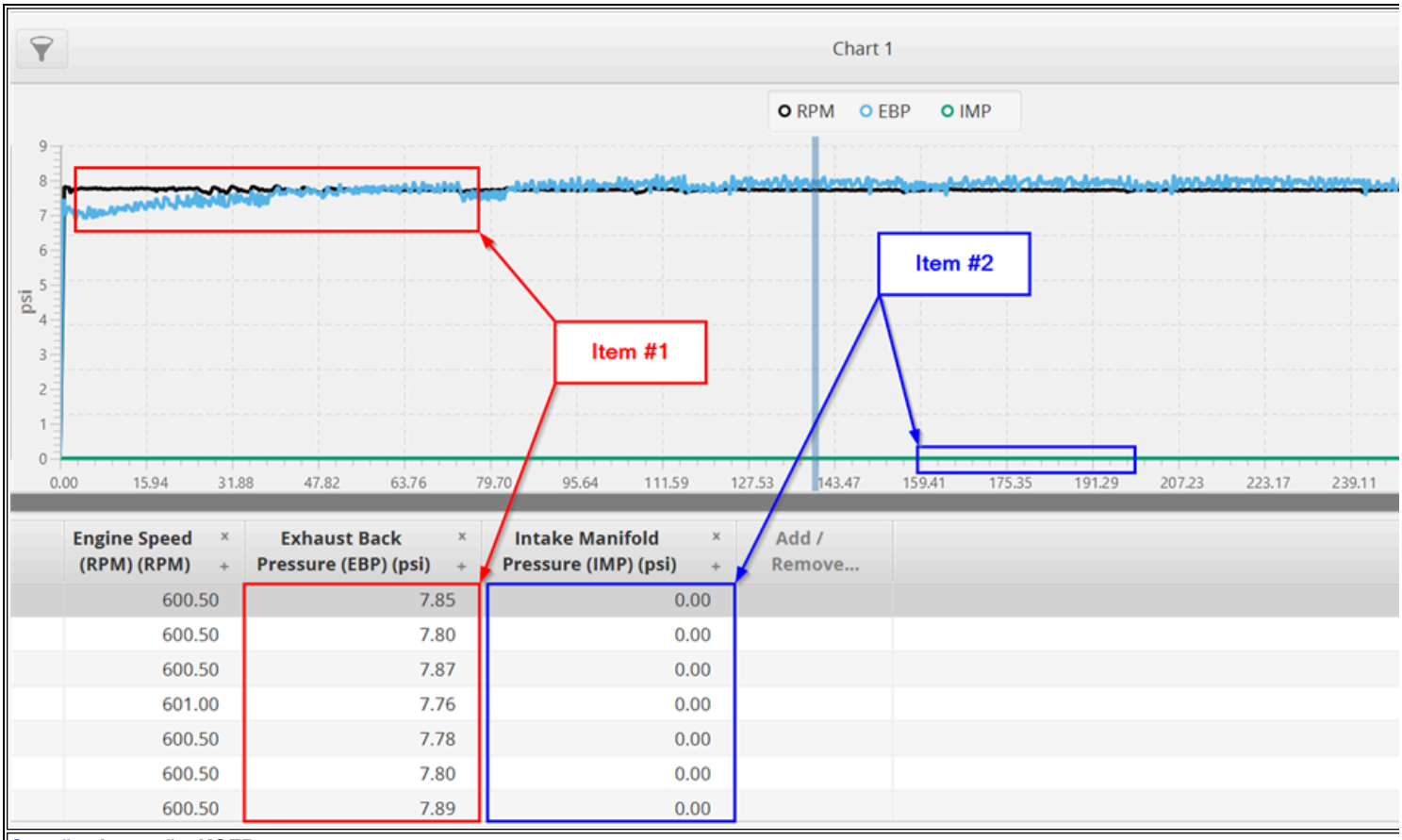
Item 1: AMT Selection Point



ne Speed M) (RPM)	Engine Intake Air Mass Flow Rate (EIAMFR) (kg/hr)	Exhaust Back Pressure (EBP) (psi)	Intake Manifold Pressure (IMP) (psi)	Add / Remove...
0.00	10.75	0.25	0.00	
0.00	10.75	0.29	0.00	
0.00	10.75	0.24	0.00	
0.00	10.75	0.20	0.00	
0.00	10.75	0.27	0.00	
0.00	10.70	0.22	0.00	
0.00	10.75	0.25	0.00	

Step #5 - Image #3: KOEO

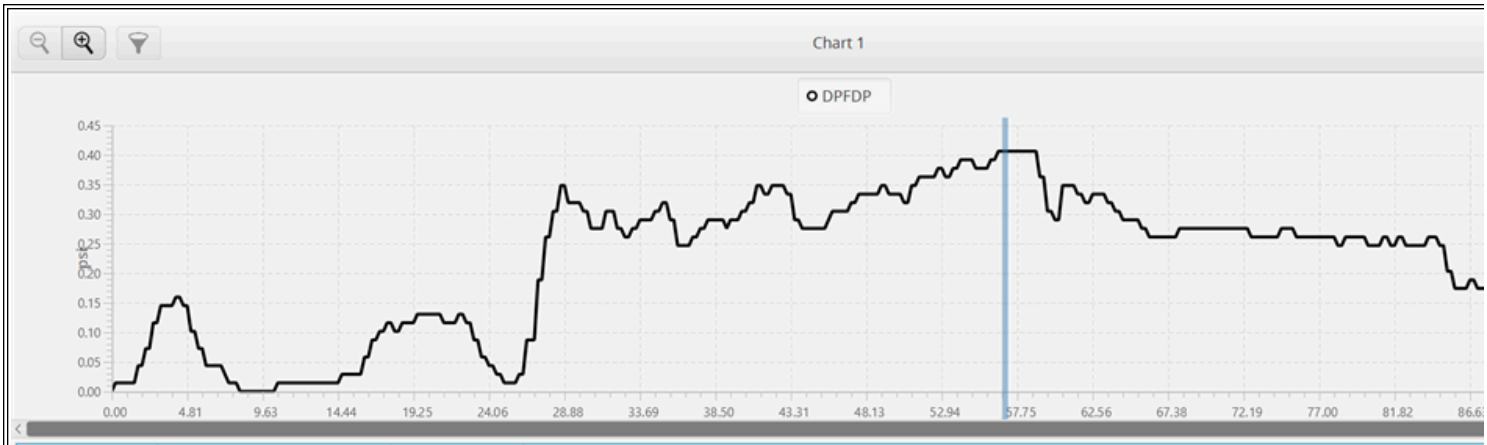
Item 1: Normal EBP reading
Item 2: Normal IMP and MAF values at KOEO



Engine Speed (RPM) (RPM)	Exhaust Back Pressure (EBP) (psi)	Intake Manifold Pressure (IMP) (psi)	Add / Remove...
600.50	7.85	0.00	
600.50	7.80	0.00	
600.50	7.87	0.00	
601.00	7.76	0.00	
600.50	7.78	0.00	
600.50	7.80	0.00	
600.50	7.89	0.00	

Step #7 - Image #4: KOER

Item 1: Normal EBP fluctuation.
Item 2: IMP should typically read 0 psi at idle.



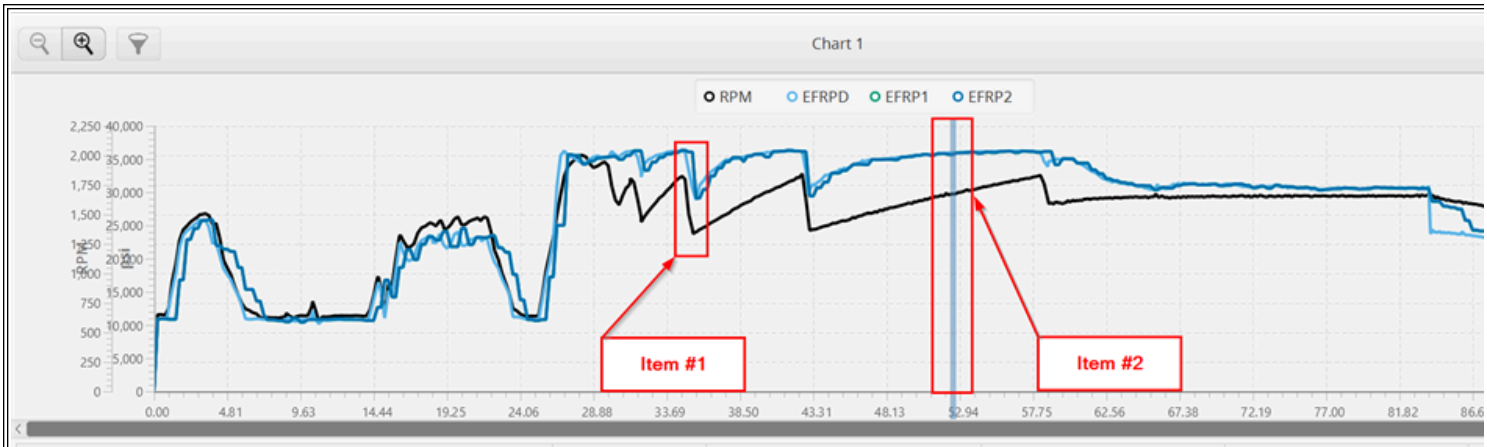
Time	DPF Differential Pressure (DPFDP) (psi)	Add / Remove...
54.98	0.38	
56.00	0.39	
56.51	0.41	
58.98	0.36	
59.50	0.30	
59.94	0.29	
60.46	0.35	

Step #9 - Image #5: DPF Differential Pressure

Time	Engine Speed (RPM) (RPM)	Intake Manifold Pressure Desired (IMPD) (psi)	Intake Manifold Pressure (IMP) (psi)	Add / Remove...
52.21	1665.50	27.85	29.30	
52.31	1671.00	27.85	29.30	
52.41	1673.50	27.85	29.30	
52.51	1672.00	27.85	29.30	
52.62	1675.00	27.85	29.30	
52.72	1685.50	27.85	29.30	
52.82	1686.00	27.85	29.30	

Step #9 - Image #6: Intake Manifold Pressure vs. Desired

Item 1: Example of IMP dropping below desired. Should be considered normal when engine RPM drops due to shift events.



Time	Engine Speed (RPM) (RPM)	Engine Fuel Rail Pressure Desired (EFRPD) (psi)	Engine Fuel Rail Pressure 1 (EFRP1) (psi)	Engine Fuel Rail Pressure 2 (EFRP2) (psi)
52.21	1665.50	35963.13	35629.99	35658.89
52.31	1671.00	35911.00	35629.99	35658.89
52.41	1673.50	35942.73	35629.99	35658.89
52.51	1672.00	35925.73	35917.24	35899.67
52.62	1675.00	35919.50	35917.24	35899.67
52.72	1685.50	35902.51	35917.24	35899.67
52.82	1686.00	35957.46	35917.24	35899.67

Step #9 - Image #7: Fuel Rail Pressure vs. Desired

Item 1: Example of FRP lagging slightly behind desired during shifting events.
Item 2: Recommended selection point. Final gear shift, engine under load.

REPAIR STEP(s)

Please see the service manual for current service and repair procedures.

IMP Isolation Kit Installation Instructions

/service_kb/DocTool/Documents/Published/IK1201516/Files/IMP Sensor Isolation Test.pdf

Return to step 10.

WARRANTY INFORMATION

Warranty Claim Coding:
Refer to the Warranty Coding Manual for Group and Noun Codes.

Standard Repair Time(s):
Refer to the SRT Manual for Repair Times

OTHER RESOURCES

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