KIN		GROUP Product Improvement	MODEL 2015MY Sorento (XMa) Optima (QF) 2014-2015MY Optima (TF) Sportage (SL)			
		NUMBER	DATE			
		PI1802W/X (Rev 1, 11/08/2018)	October 2018			
PRC	PRODUCT IMPROVEMENT CAMPAIGN					
SUBJECT: ENGINE REPLAC		CEMENT INSTRUCTIONS				
FOR DTC P		1326 (PI1802W/X)				

This bulletin has been revised to include additional information. New/revised sections of this bulletin are indicated by a black bar in the margin area.

This bulletin provides information related to the Technical Service Bulletin previously published in July 2018 (<u>PI1802</u>, Rev 2, 09/24/2018) titled "Knock Sensor Detection System - ECU Logic Improvement". Specifically, this bulletin provides instructions on which procedures to follow if, after installation of the KSDS, any one of the subject vehicles below returns to the dealer with Diagnostic Trouble Code ("DTC"), P1326.

- Some 2014MY Optima (TF) vehicles equipped with 2.4L GDI engines, manufactured at KMC from August 29, 2013 through April 25, 2014;
- All 2015MY Optima (TF/QF) vehicles equipped with 2.4L GDI and 2.0L Turbocharged GDI (T-GDI) engines;
- All 2014-2015MY Sportage (SL) vehicles equipped with 2.4L GDI and 2.0L Turbocharged GDI (T-GDI) engines;
- All 2015MY Sorento (XMa) vehicles equipped with 2.4L GDI engines, manufactured from January 3, 2014 through December 11, 2014.

If DTC P1326 is present, first check for any wiring signal interference following the procedure set forth below before determining whether an engine replacement is necessary. Based on the results of the Wiring Signal Interference Check, dealers are to perform either the Knock Sensor Wiring Repair or the Engine Long-Block Replacement according to the procedures in this TSB.

If the vehicle's engine is already seized or severely knocking, dealers are to perform the Engine Long-Block Replacement <u>and</u> the Wiring Signal Interference Check according to the procedures in this TSB.

Before conducting the procedure, verify the vehicle is included in the list of affected VINs.

* NOTICE

To ensure complete customer satisfaction, always remember to refer to WebDCS Warranty Coverage (validation) Inquiry Screen (Service \rightarrow Warranty Coverage \rightarrow Warranty Coverage Inquiry) for a list of any additional campaigns that may need to be performed on the vehicle before returning it to the customer.

File Under: < Product Improvement>

Circulate To:	I General Manager	Service Manager	I Parts Manager
Service Advisor	s 🛛 🖾 Technicians	Body Shop Manager	Fleet Repair

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Flow Chart:



Wiring Signal Interference Check Procedure:

- 1. Using the KDS, perform a Fault Code Search and confirm DTC P1326 is present.
 - If P1326 is present, proceed to the next step to perform the wiring signal interference check.
 - If the engine is seized or severely knocking, proceed to the engine replacement procedure on page 9.
- Start/warm up the engine and ensure <u>ENGINE OIL</u> is at operating temperature (176°F).



\mathcal{P}_{μ} for	Data Analysis 🖸				
< Stop	Graph	Selective Display	Actuation Test	>	
Sensor N	ame(167)	Value	Unit	Link Up 🖌	
Battery Voltage		13.3	V		
Battery Voltage after I	G Key	13.3	V		
Actual Engine Speed		653	RPM		
Engine Oil Temperatur	e	176.0	'F		

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3. From the KDS Home Screen, select S/W Management.

 Select Engine Control → Wiring Signal Interference Check.

 Ensure the engine is on and at idle and <u>ENGINE OIL</u> temperature is at 176°F degrees or higher. Select OK to proceed.



S/W Management	
Systems Components	Unfold All
Engine Control	Image: A start of the start
System Identification	
Resetting Adaptive Values	
Auto Detected Configuration Reset	
Evap. Leakage Test	
Read VIN	
Write VIN	
Cylinder Power Balance(Option)	
CVVT Test	
CKP CMP Signal Test	
Wiring Signal Interference Check	
ECU Mapping Verification	Ξ

Wiring Signal Interference Check			
Purpose	This function is to check wiring signal interference by measuring knock sensor values.		
Enable Condition	1. Engine On 2. Engine oil temp must be higher than 176'F (80'C) 3. Do not push accelerator pedal		
Concerned Component	-		
Concerned DTC	-		
Fail Safe	•		
Etc			
	ОК		

This function is to check wiring signal interference by measuring knock

• [Wiring Signal Interference Check]

•[Test Requirements]

1. Engine Status : Idle

sensor values.

5b. Select OK to proceed.

NOTE: This test should only be performed if Knock Sensor Detection System - ECU Logic Improvement (PI1802) has previously been completed.

	 Engine oil temp must be higher than 176'F (80'C) Do not depress accelerator pedal 			
A Ru	•[Warning] In the test after completing ECU u	pgrade.		
[0 [C	[OK] button : Go to next [Cancel] button : Go to main Screen			
	OK Cancel			

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5c. If the conditions are not met, a pop-up as shown will be displayed.

6. Enter vehicle mileage and RO number (VIN is automatically populated).

 Wiring Signal Interference Check test will begin and take about three (3) minutes to complete. NOTE: <u>Do not</u> push on the accelerator pedal.

> If the result is "OK", turn the engine off and proceed to the Engine Replacement procedure on page 9.

> If the result is "NOT OK", turn the engine off and proceed to <u>step 2</u> of the Knock Sensor (KS) Extension Harness Installation procedure on page 5.

NS FOR DIC F1326 (F11002W/A)				
Information				
The requirement below is not met!				
[Do not depress accelerator pedal]				
Press [OK] button and try again.				
ОК				
• [Wiring Signal Interference Check]				
Enter mileage and RO.				
[OK] button : Go to next				
[Cancel] button : Go to main screen				
VIN : 5XX (17 digits)				
Mileage : mile (up to 999,999)				
RO : (up to 12 digits)				

Cancel

[Wiring Signal Interference Check]

Measuring wiring signal interference...

ок

It will take about 3 mins.

Do not push accelerator pedal.

[Cancel] button : Go to main screen

0min 10sec

Cancel

• [Wiring Signal Interference Check]

UK				
Wiring signal interference is not present!				
VIN : 5XX				
Follow instructions in the TSB to complete the campaign.				
Press [OK] button to end the test.				
ок				
• [Wiring Signal Interference Check]				
NOT OK				
NOT OK Wiring signal interference is present!				
Wiring signal interference is present! VIN : 5XX				
Wiring signal interference is present! VIN : 5XX Install wire harness extension. Follow instructions in the TSB to complete the campaign.				
Wiring signal interference break j Wiring signal interference is present! VIN : 5XX Install wire harness extension. Follow instructions in the TSB to complete the campaign. Press [OK] button to end the test.				

KS Extension Harness Installation Procedure:

NOTE: Photos below are from a 15MY Optima (QF). Components and their location may vary in different models.

 Inspect the ECU harness (A) and verify if the Knock Sensor wiring extension harness (B) has previously been installed.

NOTE: To identify the extension harness (B), look for an external harness (B) which should be cable-tied to the existing wiring harness (A) leading by the intake manifold (C) to the knock sensor (D), as shown.

- If the extension harness (B) has been installed, no further action is required.
- If the extension harness (B) has not been installed, proceed to the next step.
- 2. Remove the air cleaner and duct assembly (E).





3. Disconnect the ECU connector (F).



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4. Cut the existing cable-tie (G) from the connector.



5. Remove the ECU connector cover (H) by carefully unclipping the two (2) tabs (I) and sliding the cover (H) towards the tabs (I).

6. Carefully remove the electrical tape (J) to expose the harness wires.

7. Remove the pin retainer (K).







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 Locate the three (3) knock sensor circuit terminals from the ECU connector (F). Refer to the "Schematic Diagrams → Engine Electrical System → Engine Control System → Schematic Diagrams" chapter of the applicable ETM on KGIS.

44. Knock Sensor Shielded Ground45. Knock Sensor Ground62. Knock Sensor Interface (Signal)

<u>Click here to see a video of</u> <u>terminal removal</u>.

Remove the three (3) terminals one at a time and insert the new terminals of the extension harness into the ECU connector (F). Reinstall pin retainer (K) and reassemble the connector (F).

Pin	Extension Wire Color			
44	Blue			
45	Black			
62	Red			

NOTE: Be sure to note the <u>rotational</u> <u>position</u> of the terminals during removal. They are <u>directional</u> and need to be reinstalled in the same "clock" position.

 Route the extension harness (B) along the existing harness (A) leading by the intake manifold (C) to the knock sensor (D), as shown.

F	(0)0003939763636363636363637677777777777777
	57565554535251504948474645444434241 433
QF/	4039383736333433323130292827262324
TF	<u>[[23]22]2]2]12]1]1]1]1]1]1]1]1]1]1]1]1]1]1</u>









***** IMPORTANT

The harness (B) must be routed above and secured to the harness protector (L1) and UNDER the Breather Hose (L2) and Camshaft Position Sensor (L3).

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11. Connect the extension harness (B) to the knock sensor (D).



- 12. Cut off and discard the three (3) <u>old</u> knock sensor circuit terminals and the <u>old</u> knock sensor connector and secure the remaining wires to the <u>new</u> extension harness using the supplied electrical tape. **NOTE**: Complete removal of the <u>old</u> knock sensor wires is not necessary. <u>Only remove the old terminals and connector</u>.
- Secure the extension harness at the connector (F) by replacing the cable-tie (G) removed in step 4 with a new supplied cable-tie and the electrical tape (J) removed in step 6 with new supplied electrical tape.



 Secure the extension harness (B) to the existing harness (A) using the supplied cable-ties. Tuck and secure any excess wiring of the extension harness near the ECU with cable-tie.



- 15. Reinstall all removed components in the reverse order of removal.
- 16. Erase the P1326 DTC with the KDS and start the engine to confirm proper operation.

Engine Replacement Procedure:

 Remove the engine assembly by referring to the "Engine And Transmission (Transaxle) Assembly → Engine And Transmission (Transaxle) Assembly → Repair procedures" chapter in the applicable Shop Manual on KGIS.

Refer to <u>TSB ENG190</u> for information regarding engine replacement practices.



- 2. After removal of the engine from the vehicle, remove all components that will need to be transferred by referring to the applicable Shop Manual on KGIS.
- 3. Place the new engine block on an engine stand.
- 4. Install all removed components from the old engine block onto the new engine block utilizing <u>all parts from Service Kit I and II</u>. Be advised of notes below.

Notes:

High Pressure Pump & Roller Tappet:

- <u>Refer to TSB ENG083 for special</u> <u>attention and handling procedures of</u> <u>GDI-specific components.</u>
- When installing the high pressure pump and roller tappet onto the new engine, apply engine oil to the roller tappet, and O-rings of the high pressure pump.

Tightening torques of pump bolts: 9.4 – 10.9 lb.ft (12.8 – 14.7 N.m, 1.3 – 1.5 kgf.m)

Tightening torques of pipe flare nut: 19.5 – 23.9 lb.ft (26.5 – 32.4 N.m, 2.7 – 3.3 kgf.m)



***** NOTICE

Refer to <u>TSB ENG083</u> for gasoline direct injection (GDI) specific information, including related warnings and cautions for handling high fuel pressure system components.

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Delivery Pipe:

- <u>Refer to TSB ENG083 for special</u> <u>attention and handling procedures of</u> <u>GDI-specific components.</u>
- Prior to installing the delivery pipe, be sure to replace all of the injector O-rings and injector retainers.
- Prior to installing the delivery pipe, apply engine oil to the injector Orings.
- When installing the delivery pipe, use caution not to damage the tip of the injector.
- Be sure to replace the delivery pipe retaining bolts and torque them in the sequence shown.

Tightening torque of bolts: 13.7 – 17.4 lb.ft (18.6 – 23.5 N.m,

1.9 – 2.4 kgf.m)



***** NOTICE

Combustion seals must be compressed after installation and before attempting to install into the cylinder head. Use SST 09353 2B000 (refer to <u>TSB ENG083</u>).

Dipstick Tube & Dipstick:

- Prior to installing the new tube, lubricate the o-ring located at the bottom of the tube with engine oil.
- Install the red dipstick included in Service Kit I.

Tightening torque of bolt: 5.8 – 8.7 lb.ft (7.8 – 11.8 N.m, 0.8 - 1.2 kgf.m)

Intake Manifold:

- Prior to installation, replace the intake manifold gaskets.
- Torque bolts in the sequence shown.

Tightening torque of bolts: 13.7 – 17.4 lb.ft (18.6 – 23.5 N.m, 1.9 – 2.4 kgf.m)





Exhaust Manifold:

- All engines supplied under this Product Improvement Campaign have the exhaust manifold studs configured for SULEV engines.
- Using the pictures to the right, check the exhaust manifold stud location and quantity. Relocate as required for ULEV engines and obtain one (1) extra from the removed engine.
- Prior to installation, replace the exhaust manifold gasket and front muffler gasket.
- Torque nuts in the sequence shown.

Tightening torque of nuts: 36.2 – 39.7 lb.ft (49.0 – 53.9 N.m, 5.0 – 5.5 kgf.m)

*For 15MY Sorento (XMa) vehicles only: check the underhood emissions label and record whether the label references ULEV or SULEV. This information is needed to select/order the correct replacement engine.

• <u>On Turbo engines</u>, replace the turbocharger oil feed line and gaskets.

Tightening torque of oil feed line bolt: 8.7 – 13.0 lb.ft (11.8 – 17.7 N.m, 1.2 – 1.8 kgf.m) Tightening torque of oil feed line nuts: 5.8 - 8.7 lb.ft (7.8 – 11.8 N.m, 0.8 - 1.2 kgf.m) Tightening torque of oil drain line nuts and bolts: 5.8 - 8.7 lb.ft (7.8 – 11.8 N.m, 0.8 - 1.2 kgf.m)

• Torque exhaust manifold nuts in the sequence shown.

Tightening torque of nuts: 36.2 – 39.7 lb.ft (49.0 – 53.9 N.m, 5.0 – 5.5 kgf.m)

SULEV (7 studs)





KIA	KIA MOTORS CORPORATION VEHICLE EMISSION CONTROL INFORMATION							
Conforms to regulations :			2015 MY					
U.S.EPA : T2B5 LDV		OB	D :	CAII	Fuel :	Gasolin	18	
California :	ULEV	PC	OBD :		CAII	Fuel :	Gasoline	
Group : EXMXVE2.44PE Evap. : EXMXR01300RE			+	No a	DFI/H djustmar	IO2S(2)/W	U-TWC/T	WC
[WARNING] Loaded I/M tr must be control Otherwise, a	esting of p jucted on	ermanent a four-wh ed test pro	four-wheel drive	eel d sper must	rive or tr ed synch be perfo	action cont ronized dyr rmed.	trol-equipp namomete	ed vehicles



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Oil Cooler Tube Assembly:

New engines may be supplied with a different oil cooler. Use steps below to determine the need for a replacement oil cooler tube assembly.

- If the new engine's (bigger) oil cooler (A) does not match the old engine's (smaller) oil cooler (B), replace the oil cooler tube assembly with the improved part. See parts table on page 15.
- If the new engine's (bigger) oil cooler (A) matches the old engine's (bigger) oil cooler (A), reuse the old engine's oil cooler tube assembly.
- If the new engine's (smaller) oil cooler (B) matches the old engine's (smaller) oil cooler (B), reuse the old engine's oil cooler tube assembly.



Drive Plate Bolts:

• Replace all seven (7) drive plate (AT) bolts.

Tightening torque of nuts: 86.8 – 93.9 lb.ft (117.7 – 125.5 N.m, 12.0 – 13.0 kgf.m)



Drive Plate Bolt (A/T)

Torque Converter

 If the torque converter has moved from the fully inserted position, carefully push inward while rotating the torque converter until it is recessed approximately 9/16 - 5/8" (14 - 16mm) (☑) into the transaxle case when reinstalling the automatic transaxle.



Not Fully Inserted



Fully Inserted

5. Reinstall the assembled engine and transmission/transaxle into the vehicle. Be sure to:

Be sure to:

- Fill crankcase with 5W-30 oil (~5.8 quarts).
- Fill and bleed the cooling system with 50/50 coolant or mixture appropriate for area.
- Pressurize the fuel system before starting the vehicle.
- Reset engine adaptive values and perform steering angle sensor calibration.

Refer to <u>TSB ENG190</u> for information regarding engine replacement practices.

6. Verify proper operation of the vehicle with road test, and <u>erase any stored DTCs</u> (e.g., EPS, ESC, and TPMS) that may have been set by this procedure. Verify no leaks exist and ensure engine oil and coolant are at their proper level.

If any DTCs are still active, follow any related diagnosis and repair as needed.

AFFECTED VEHICLE RANGE:

Model	Production Date Range
15MY Sorento (XMa) (2.4)	January 3, 2014 through December 11, 2014
14MY Optima (TF) (2.4)	August 29, 2013 through April 25, 2014
14-15MY Sportage (SL) (2.4 & 2.0T)	September 30, 2013 through April 8, 2015
15MY Optima (QF/TF) (2.4 & 2.0T)	April 16, 2014 through October 2, 2015

REQUIRED TOOL:

Tool Name	Tool Part No.	Figure	Comments
Torque Wrench Socket	09314 3Q100		
Injector Combustion Seal Ring Installer	09353 2B000		Refer to <u>TSB ENG083</u> for detailed usage instructions
Pin Tool	91400 00000QQK		Auto-shipped to Dealers

REQUIRED PARTS:

Part	MV	Model	Part N	Figuro	
Name	Name Name Nod		2.4GDI	2.0T-GDI	rigule
	2014-		21101 2GK06QQKR	-	
2018 Engine	2015	SL	21101 2GK36QQKR	21101 2GK37QQKR	
Long		QF	21101 2GK06QQKR	21101 2GK08QQKR	
DIOCK	2015	XMa <u>ULEV &</u> <u>SULEV</u>	21101 2GK11QQKR	-	

Part Name	Engine	Part Number	Figure
Service Kit I	2.4GDI	21111 2GK50QQK	
	2.0T-GDI	21111 2GK60QQK	
Service Kit II	2.4GDI and 2.0T-GDI	21111 2GK70QQK	

Part Name	Engine	Part Number	Figure
Drive Plate Bolts	2.4GDI and 2.0T-GDI	23311 25050	•••••
Oil Cooler Tube Assembly	2.4GDI	25470 2G050QQK	1 V
(replacement is conditional, refer to page 12)	2.0T-GDI	25470 2G650QQK	
KS Extension Harness	2.4GDI and 2.0T-GDI	91400 2T000QQK	

WARRANTY INFORMATION (PI1802<u>W1</u>, MIL ON WITH P1326):

N Code:	N99	С	Code:	C99	

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
				(PI1802 W1)			21111 2GK50QQK	1
				2.4L GDI 2WD		84	21111 2GK70QQK	1
				MIL ON with P1326, KSDS	180A12R0	M/H	23311 25050	7
				Pass, & Engine Replacement			(ULEV or SULEV) 21101 2GK11QQKR	1
Sor.	Sor. 5 21020	R21020 2G0100(PI1802W1) 2.4L GDI 2WD MIL ON with P1326, KSDS Wire Harness Inspection Fail, Install180A12R2R21020 2G0100(PI1802W1)	0.8 M/H	91400 2T000QQK	1			
(XMa)	ĸ		(PI1802 W1)			21111 2GK50QQK	1	
				2.4L GDI AWD		86	21111 2GK70QQK	1
				MIL ON with P1326, KSDS	180A12R1	M/H	23311 25050	7
	(PI1802 W1) 2.4L GDI AWD MIL ON with P1326, KSDS Wire Harness Inspection Fail KSDS Extension Harness Install		Pass, & Engine Replacement			(ULEV or SULEV) 21101 2GK11QQKR	1	
		180A12R3	0.8 M/H	91400 2T000QQK	1			

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Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
				(PI1802 W1)	•		21111 2GK50QQK	1
				2.4L GDI	8.4	21111 2GK70QQK	1	
				Wire Harness Inspection	TOUATORT	M/H	23311 25050	7
				Pass, & Engine Replacement			21101 2GK06QQKR	1
Opt.	Opt. (QF) R 23	23060	0	(PI1802 W1) 2.4L GDI MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180A16R3	0.8 M/H	91400 2T000QQK	1
(QF)		2G400		(PI1802 W1)			21111 2GK60QQK	1
			2.0L T-GDI MIL ON with P1326 KSDS 1804	180A16P0	8.6	21111 2GK70QQK	1	
				Wire Harness Inspection	TOUATORU	M/H	23311 25050	7
				Pass, & Engine Replacement			21101 2GK08QQKR	1
				(PI1802 W1) 2.0L T-GDI MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180A16R2	0.8 M/H	91400 2T000QQK	1
				(PI1802 W1)			21111 2GK50QQK	1
				2.4L GDI MIL ON with P1326 KSDS	180111R0	8.4	21111 2GK70QQK	1
				Wire Harness Inspection	10011110	M/H	23311 25050	7
Opt.	Opt.	23060	0	Pass, & Engine Replacement			21101 2GK06QQKR	1
(TF) R	2G400	0	(PI1802 W1) 2.4L GDI MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180111R5	0.8 M/H	91400 2T000QQK	1	

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Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.	
				(PI1802 W1)	•		21111 2GK50QQK	1	
				2.4L GDI 2WD	40044000	7.7	21111 2GK70QQK	1	
				WIL ON with P1326, KSDS Wire Harness Inspection	180112R0	M/H	23311 25050	7	
				Pass, & Engine Replacement			21101 2GK36QQKR	1	
						(PI1802 W1) 2.4L GDI 2WD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	0.9 M/H	91400 2T000QQK	1
				(PI1802 W1)			21111 2GK50QQK	1	
				2.4L GDI AWD	2.4L GDI AWD ON with P1326, KSDS 180112R2 /ire Harness Inspection	8.1	21111 2GK70QQK	1	
				Wire Harness Inspection		M/H	23311 25050	7	
	Spo 23060			Pass, & Engine Replacement			21101 2GK36QQKR	1	
Spo.		060	(PI1802 W1) 2.4L GDI AWD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180112R7	0.9 M/H	91400 2T000QQK	1		
(SL)	ĸ	2G400	2G400 0	(PI1802 W1)	180112R3		21111 2GK60QQK	1	
				2.0L T-GDI 2WD		7.7	21111 2GK70QQK	1	
				Wire Harness Inspection		M/H	23311 25050	7	
				Pass, & Engine Replacement			21101 2GK37QQKR	1	
			(PI1802 W1) 2.0L T-GDI 2WD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180112R8	0.9 M/H	91400 2T000QQK	1		
				(PI1802 W1)			21111 2GK60QQK	1	
				2.0L T-GDI AWD	19011204	8.1	21111 2GK70QQK	1	
				Wire Harness Inspection	10011214	M/H	23311 25050	7	
				Pass, & Engine Replacement			21101 2GK37QQKR	1	
				(PI1802 W1) 2.0L T-GDI AWD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180112R9	0.9 M/H	91400 2T000QQK	1	

WARRANTY INFORMATION (PI1802<u>X1</u>, ENGINE SEIZED/SEVERE KNOCKING): <u>N Code: N99_</u>C Code: C99

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
				(PI1802 X1)			21111 2GK50QQK	1
				Engine Seized / Severe Knocking, Techline		8.4	21111 2GK70QQK	1
					180A12R8	0.4 M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Pass			(ULEV or SULEV) 21101 2GK11QQKR	1
				(PI1802 X1)	180A12R9	9 8.6 M/H	21111 2GK50QQK	1
				Engine Seized / Severe			21111 2GK70QQK	1
				Knocking, Techline			23311 25050	7
				Replacement, KSDS Wire Harness Inspection Pass			(ULEV or SULEV) 21101 2GK11QQKR	1
Sor.	R	21020	0	(PI1802 X1) 2.4L GDI 2WD Engine Seized / Severe			21111 2GK50QQK	1
(XMa)		2G010	GO10 GO10				21111 2GK70QQK	1
				Knocking, Techline	180A12RA	8.9 M/LI	23311 25050	7
				Replacement, KSDS Wire		(ULEV or SULEV) 21101 2GK11QQKR	1	
				KSDS Wire Harness Install			91400 2T000QQK	1
				(PI1802 X1)			21111 2GK50QQK	1
				Engine Seized / Severe			21111 2GK70QQK	1
				Knocking, Techline	180A12RB	9.1 M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Fail			(ULEV or SULEV) 21101 2GK11QQKR	1
	KSDS Wire Harness Install				91400 2T000QQK	1		

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
	. , , , , , , , , , , , , , , , , , , ,			(PI1802 X1)			21111 2GK50QQK	1
				2.4L GDI Engine Seized / Severe		Q /	21111 2GK70QQK	1
				Knocking, Techline 180A16F	180A16R9	0.4 M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Pass			21101 2GK06QQKR	1
				(PI1802 X1)			21111 2GK60QQK	1
				Engine Seized / Severe		8.7	21111 2GK70QQK	1
				Knocking, Techline Authorized Engine	180A16R8	M/H	23311 25050	7
			0	Replacement, KSDS Wire Harness Inspection Pass			21101 2GK08QQKR	1
Opt.	pt. R 23060 QF) R 2G400	23060		(PI1802 X1)	2 X1)		21111 2GK50QQK	1
(QF)		0	2.4L GDI Engine Seized / Severe Knocking, Techline Authorized Engine		в 8.9 М/Н	21111 2GK70QQK	1	
				180A16RB		23311 25050	7	
				Replacement, KSDS Wire			21101 2GK06QQKR	1
				KSDS Wire Harness Install			91400 2T000QQK	1
				(PI1802 X1) 2.0L T-GDI Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire			21111 2GK60QQK	1
							21111 2GK70QQK	1
					180A16RA	9.2 M/H	23311 25050	7
						21101 2GK08QQKR	1	
				KSDS Wire Harness Install			91400 2T000QQK	1
				(PI1802 X1) 2.4LGDI			21111 2GK50QQK	1
				Engine Seized / Severe	10011100	8.4	21111 2GK70QQK	1
				Authorized Engine	180111RA	M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Pass			21101 2GK06QQKR	1
Opt. (TF)	Opt. R 2	23060 2G400	0	(PI1802 X1)			21111 2GK50QQK	1
				2.4L GDI Engine Seized / Severe		8.9 M/H	21111 2GK70QQK	1
				Knocking, Techline Authorized Engine	180111RF		23311 25050	7
				Replacement, KSDS Wire			21101 2GK06QQKR	1
				KSDS Wire Harness Install			91400 2T000QQK	1

Model	Claim		Qty.	Repair	Labor	Op	Replacement	Qty.
	туре	P/N		(PI1802 X1)	Op Code	Ime	21111 2GK5000K	1
				2.4L GDI 2WD Engine Seized / Severe			21111 2GK7000K	1
				Knocking, Techline	180112RA	7.7 M/H	23311 25050	7
				Replacement, KSDS Wire			21101 2GK3600KR	
				Harness Inspection Pass (PI1802 X1)			21111 20K5000K	1
				2.4L GDI AWD			21111 2GK30QQK	1
				Knocking, Techline	180112RC	8.1 M/H	23311 25050	7
				Authorized Engine Replacement, KSDS Wire			23311 23030	1
				Harness Inspection Pass (PI1802 X1)			211012GK36QQKR	1
				2.0L T-GDI 2WD			21111 2GK60QQK	1
				Knocking, Techline	180112RD	7.7 M/H	21111 2GK70QQK	1
				Authorized Engine Replacement, KSDS Wire		,	23311 25050	/
			Harness Inspection Pass			21101 2GK37QQKR	1	
				2.0L T-GDI AWD			21111 2GK60QQK	1
			Engine Seized / Severe Knocking, Techline	180112RE	8.1	21111 2GK70QQK	1	
				Authorized Engine Replacement KSDS Wire		IVI/H	23311 25050	7
			Harness Inspection Pass			21101 2GK37QQKR	1	
				(PI1802 X1) 2.4L GDL2WD			21111 2GK50QQK	1
Spo.	R	23060 2G400	23060 0 2G400 0	Engine Seized / Severe		0.0	21111 2GK70QQK	1
(02)		20400		Authorized Engine	180112RF	8.3 M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Install			21101 2GK36QQKR	1
							91400 2T000QQK	1
				(PI1802 X1) 2.4L GDLAWD		8.7 M/H	21111 2GK50QQK	1
				Engine Seized / Severe			21111 2GK70QQK	1
				Authorized Engine	180112RH		23311 25050	7
				Replacement, KSDS Wire Harness Inspection Fail.			21101 2GK36QQKR	1
				KSDS Wire Harness Install			91400 2T000QQK	1
				(PI1802 X1) 2 0L T-GDL2WD			21111 2GK60QQK	1
				Engine Seized / Severe		0.0	21111 2GK70QQK	1
				Authorized Engine	180112RI	8.3 M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Fail.			21101 2GK37QQKR	1
			KSDS Wire Harness Install			91400 2T000QQK	1	
			(PI1802 X1) 2.0L T-GDLAWD			21111 2GK60QQK	1	
				Engine Seized / Severe		07	21111 2GK70QQK	1
			Knocking, Techline Authorized Engine	180112RJ	8.7 M/H	23311 25050	7	
			Replacement, KSDS With Harness Inspection Fail	Replacement, KSDS Wire Harness Inspection Fail			21101 2GK37QQKR	1
			KSDS Wire Harness Install			91400 2T000QQK	1	

NOTE: Refer to Warranty Bulletin 2018-10 for details regarding coolant and substitute transportation reimbursement requirements.

<u>Use sublet code 'X3'</u> with a maximum allowed amount of \$19.80 for "ENGINE R&R" engine oil reimbursement.

If the replacement of the Oil Cooler Tube Assembly was required, please manually enter the applicable Oil Cooler Tube Assembly part number to the claim's related parts section.

Dispose of old parts in accordance with local, state, and Federal regulations.

***** NOTICE

VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference <u>PI1802W/X*</u> when accessing the WebDCS system.

Appendix 1 (Warranty Claim Authorization)

	Scenario	Description	Action Required
1	Campaign - TSB # PI1802W/X Case for Warranty Authorization NO INSPECTION	Wiring Signal Interference Check cannot be completed due to engine seizure or other engine failure (won't run long enough to complete the test)	 TL PWA required for all dealers – Video of condition and WRTY143 form required* Video requirement examples below are for illustration purposes, individual requirements will vary based upon the condition reported: Video should be continuous and show the VIN (most convenient VIN plate) and pan to show the engine condition For engine seizures, attempt to turn over engine with breaker bar in video For hole in engine block, show hole in video

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Appendix 2 (Video Capture & Upload)

Capturing a video is often helpful in assisting the Kia Techline Agent in determining a proper diagnosis strategy. Once a TechLine case is open, the following procedure will guide you through the video capture and upload.

The Chrome^M S browser should be used to access the Techline portal. Follow the steps below to clear the default browser if it is other than Chrome^M.

For KDS Tab 10.1 Tablets:

- 1. Select "Settings" from the App Screen.
- 2. Select the "General" tab at the top.
- 3. Select "Default Applications".
- 4. If "Internet" is the default browser, select the CLEAR button.

If "Chrome" is the default browser, further action is not required.

5. When opening the Techline portal, select "Chrome" and select Always".



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Chrome	Better Open With	Internet	
	JUST 0	INCE ALWAYS	

s.

Application manager

Default applications

Application settings

Calendar

Camera

Contacts

Email

Internet

View app information and manage app settings including storage, data usage, and permissions.

os for certain tasks

 \times

26

Software update

🛜 Wi-Fi

Bluetooth

Airplane mode

Smart Manager

Applications

6

More connection settin...

Data usage

Tap here to update the firmware to the latest version

and use the latest features.

SUBJECT: ENGINE REPLACEMENT INSTRUCTIONS FOR DTC P1326 (PI1802W/X)

For KDS Tab S2 Tablets:

- 1. Select "Settings" from the App Screen.
- 2. Select "Applications".
- 3. Select "Default Applications".

4. Select "Browser app".

♪ Music Applications Weather Sound Notifications Browser app \times Software update Tap here to update the firmware to the latest version Default app selection and use the latest features. Ask befo ng default a Wi-Fi Set as default Bluetooth Home screen Airplane mode Device assistance app Device assistance apps provide more options and information about each screen. Data usage More connection settin.. 0 Smart Manager

5. Ensure "Chrome" is selected.



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Setting Your Video Size to "Limit to Email"

1. Select "Camera" from the App Screen.



2. Select the Settings icon.

3. Select the Video Camera icon.

4. Ensure "Limit to email" is selected.







Attaching Video to a Techline Case

1. Open K-Support in the device Chrome™ browser or select the "Techline" button on KDS home page.

https://ksupport.kiausa.com

- Open your existing Techline case for the 2. vehicle requiring a video capture by selecting the case number.
- Select "Attachment". 3.

Select "Add Files". 4.

5. Select "Camcorder" and the video camera will open.

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 Start by recording the VIN. Ensure sun glare is not reflecting off windows or other objects.

Without stopping the recording, capture the area of the vehicle displaying the issue. i.e.;

- Engine Noise record the engine.
- Hole In Block record the side of the engine with the damage.
- Seized Engine record a technician trying to turn the engine over with a breaker bar.



***** NOTICE

NOTE: Ensure the video size is set to "Limit to email" (see page 24). <u>Only</u> <u>record the VIN and the engine exhibiting the concern.</u> Any additional information will increase the size of the video and make it difficult to upload or download.

- 7. Stop the video when you captured what is needed. Select "OK" to use this capture or "RETRY" to capture the video again.
- 8. Ensure a description of the recording. For example, engine knock or smoke from exhaust.
- 9. Select "Submit Case".

10. Select "Yes" when the confirmation message below appears.

Note: Selecting anything other than "Yes" will not save the video capture.

