		GROUP	MODEL			
		Product Improvement	See Model List on Page 1			
		NUMBER	DATE			
		PI1802W/X (Rev 7, 01/15/2020)	October 2018			
	PRODUCT IMPROVEMENT CAMPAIGN					
SUBJECT:						
	FOR DIC P	1326 (PI1802W/X)				

***** NOTICE

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 6, 01/31/2019) 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.

Year	Model	Engine	Production Date
2014	Optima (TF)	2.4L GDI	8/29/13 – 4/25/14
2015-2018	Optima (TF/QF/JF/JFa)	2.4L & 2.0L T-GDI	4/16/14 – 7/11/18
2014-2018	Sportage (SL/QL)	2.4L & 2.0L T-GDI	9/30/13 – 4/5/18
2015-2018	Sorento (XMa/UMa)	2.4L & 2.0L T-GDI	1/3/14 – 3/7/18

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, if the engine noise inspection result confirms it, 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 **and** the Wiring Signal Interference Check according to the procedures in this TSB.

A <u>Vehicle Diagnosis Number (VDN)</u> must be created with DTC P1326, prior to performing PI1802W/X. If a VDN is not created, Warranty claim submission issues may occur.

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.

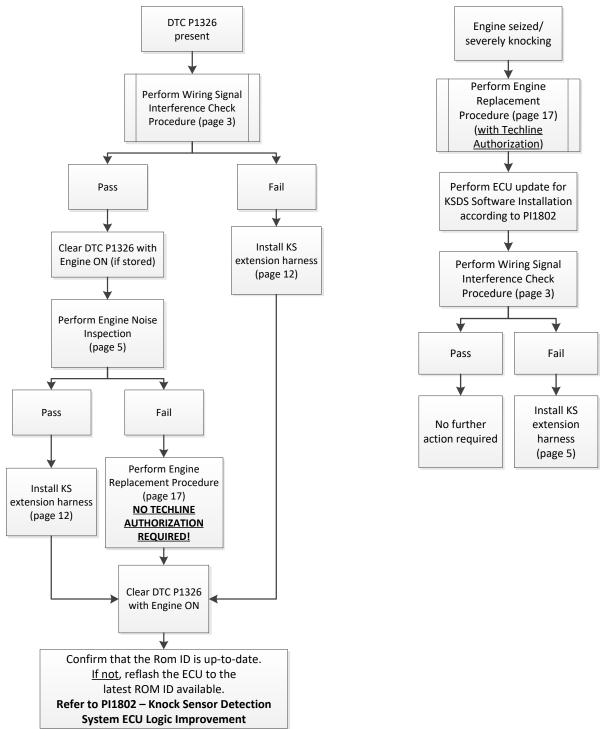
File Under: < Product Improvement>

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

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

Flow Chart:



Note: If any concerns arise after completing the flow chart, open a Techline case online.

***** IMPORTANT

ALL claims for engine or harness replacement without the required diagnostic inspection/results or authorization are subject to claim chargeback/denial without exception.

Wiring Signal Interference Check Procedure:

- 1. Using the KDS <u>(connected to the</u> <u>internet)</u>, 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 17 (with Techline authorization per Flow Chart).
- Start/warm up the engine and ensure <u>ENGINE OIL</u> is at operating temperature (176°F).

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

4. Select Engine Control \rightarrow Wiring Signal Interference Check.



P	, E I	Data A	Analysis	(5	
<	Stop	Graph	Selective Display	Actuation	Test	>
	Sensor N	ame(167)	Value	Unit		Link Up 🖌
Batt	ery Voltage		13.3	s v		
Batt	ery Voltage after I	G Key	13.3	s v		
Actual Engine Speed		653	RPM			
Engi	ne Oil Temperatur	e	176.0) 'F		





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

 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.

• Wiring Signal Interfe	rence 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

2. Engine oil temp must be higher than 176'F (80'C)

3. Do not depress accelerator pedal

Run the test after completing ECU upgrade.

• [Wiring Signal Interference Check]

•[Test Requirements]

1. Engine Status : Idle

[OK] button : Go to next [Cancel] button : Go to main Screen

sensor values.

A [Warning]

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.

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

	ОК		Cancel	
Information				
The requirem	nent below is not met!			
[Do not depr	ess accelerator pedal]		
Press <mark>[OK]</mark> bu	utton and try again.			
		OK		

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

Enter mileage and R	0.
[OK] button : Go to n	ext
[Cancel] button : Go	to main screen
VIN : 5XX Mileage :	(17 digits) mile (up to 999,999)
RO :	(up to 12 digits)

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

- 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.
- [Wiring Signal Interference Check]
 Measuring wiring signal interference...
 It will take about 3 mins.
 Do not push accelerator pedal.
 [Cancel] button : Go to main screen
 Omin 10sec

 [Wiring Signal Interference Check]

 [Wiring signal interference check]
 Wiring signal interference is not present!
 VIN : 5XX
 Follow instructions in the TSB to complete the campaign.
 Press [OK] button to end the test.

 [Wiring Signal Interference Check]

 (Cancel)
 - NOT OK

 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.

If the result is "OK", <u>clear DTC P1326</u> and then proceed to the Engine Noise Inspection procedure on page 5.

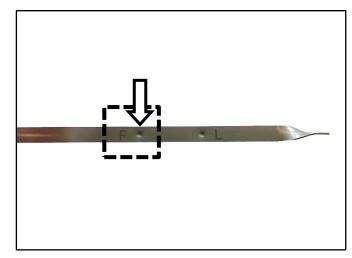


DTC P1326 must be cleared in order to perform the Engine Noise Inspection Procedure.

 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 12.

Engine Noise Inspection Procedure:

- 1. Prior to inspection, ensure the KDS is fully charged and is connected to the internet every day to ensure the latest update is received and installed.
 - Engine oil level should be at the "FULL" mark. Top off with 5W-30 if required.
 - Test requires the engine to be in satisfactory running condition and able to idle normally.
 - Engine coolant temperature should be above minimum test temperature: 185°F (85°C).



If the engine's running condition is poor due to issues unrelated to a connecting rod knocking noise (faulty sensors, intake/exhaust manifold leak, catalytic converter, etc.), diagnose and repair prior to performing this inspection procedure. If the engine cannot be tested or has other major concerns, see Warranty Claim Authorization information on page 40.

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

2. With the engine off, remove the dipstick (A).

***** NOTICE

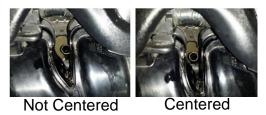
Engine cover removed in images for demonstration-only purposes.

3. Insert the engine noise tester SST adapter (B) into the dipstick tube then start and idle the engine.

***** NOTICE

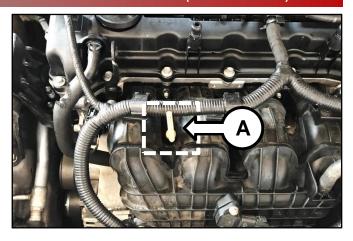
To avoid false readings, ensure the adapter (B) is properly inserted into the dipstick tube and that the tube is not in contact with the intake manifold.

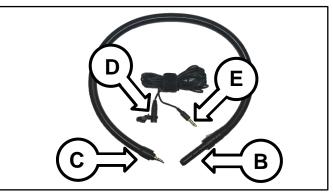
If the dipstick tube is not centered and is close to or touching the manifold, carefully adjust (bend) and center the dipstick tube with a pry bar.

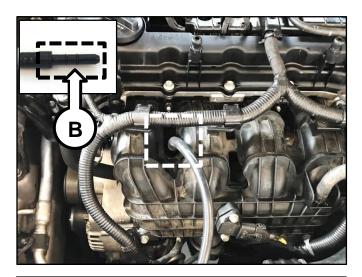


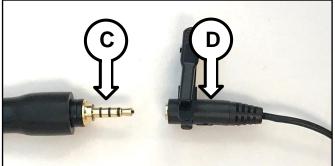
Click here for a video tutorial of the Inspection Procedure.

 Connect the 3.5 mm male end of the engine noise tester SST (C) to the 3.5 mm female end of the extension cable (D).









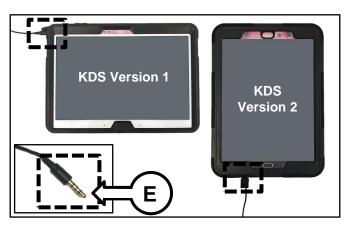
5. Attach the SST clip of the extension cable (D) to the hood latch.

* NOTICE

Make sure to route the extension cable away from moving parts (pulleys, fan, and belts and be careful not to get it pinched between door and body or window, etc.).

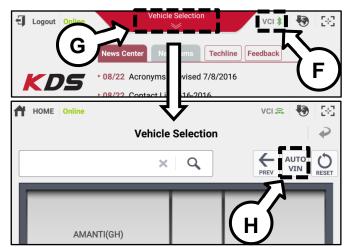
 Connect the 3.5 mm male end (E) of the extension cable to the headphone port located at the upper left corner (KDS version 1.0) or at the bottom of the tablet (KDS version 2.0).

7. Connect the VCI-II to the OBD-II connector and launch the KDS application from the KDS tablet home page.





8. Confirm communication with VCI (F) and then configure the vehicle (G) using the **AUTO VIN** (H) feature.



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

9. Swipe up the "More" tab from the lower screen of the KDS and select "Special Inspection".



If the vehicle model/model year does not qualify for this campaign, a message will pop up; if so, verify that the vehicle is included in the list of affected VINs.

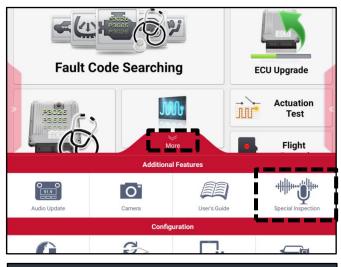
- 10. Complete the vehicle information form on the screen:
 - Mileage
 - RO number
 - Select "Verify" to verify the VIN

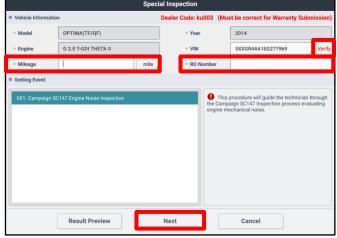
Note: VIN must be verified with the "Verify" function in order to proceed to the next step.

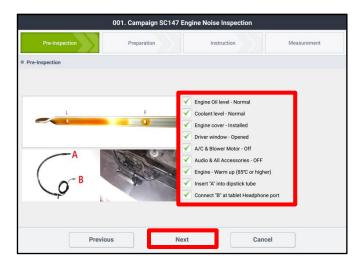
Select "Next" to continue.

- 11. Confirm that all of the pre-inspection items listed on the screen are true:
 - Engine Oil Level Normal
 - Coolant Level Normal
 - Engine Cover Installed
 - Driver Window Opened
 - A/C & Blower Motor OFF
 - Audio & All Accessories OFF
 - Engine Warm up (185°F or higher)
 - Insert "A" into dipstick tube
 - Connect "B" part at tablet headphone port

Select "Next" after checking items mentioned above.







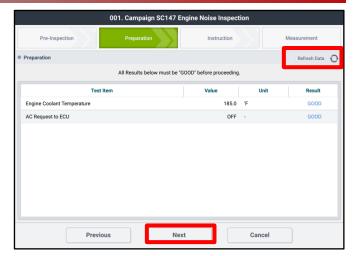
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SUBJECT: ENGINE REPLACEMENT INSTRUCTIONS FOR DTC P1326 (PI1802W/X)

- 12. The program will automatically check the engine sensors' data. Select the "Next" button if all the conditions are satisfied.
 - Engine Coolant Temperature: 185°F or higher
 - A/C Request to ECU: OFF

Note: If the test item result is "NOT GOOD", correct the condition then select "Refresh Data".

13. Follow the instructions on the screen then select "Next".



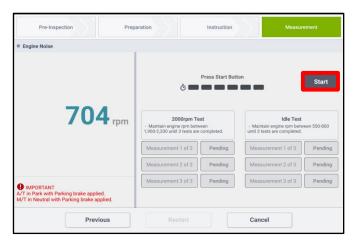
	001. Campaign SC147 E	Engine Noise Inspection	
Pre-Inspection	Preparation	Instruction	Measurement
Instruction			
- Inspection should be performed in all is available: - Make sure tubing is not kinked or pin - Open the driver's window. Run enging windows Make sure Engine Noise Inspection 1 table	ched. e noise inspection tool through	200pm 3 Times 200pm 3 Times 9 Test Procedure 9 Step 1 - Inspection tool prepar 9 Step 2 - 2000 rpm test (2000rpr 9 Step 3 - Idle test (550–800rpm	vm)
 Do not tap or pinch Engine Noise Ins measurement. 	pection Tool during		
 Engine should be at normal operating higher than 85 degrees Celsius. 	temperature and must be		
 Enable the tablet mute function so th audio notifications are disabled. 	at the touch tone and all other		
Previou	s Ne	xt Ca	incel

14. Prior to the initial measurement, the program will automatically check if the engine noise tester is installed and operating correctly at engine idle and perform an internal diagnosis.

Begin the second part of the engine noise tester check by selecting "Start".



If the measured noise level is too low or abnormally high, an engine noise tester inspection message will pop up. Check and correct as necessary and start again.



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

 With the vehicle in Park (A/T) / Neutral (M/T), increase and maintain the engine speed at 2,000-3,000 RPM for thirty (30) seconds.

> The program will automatically proceed to the next step when the engine noise tester is ready.

* NOTICE

Once the RPM is in the specified range, the time count (green bars) will be initialized.

Pre-Inspection	Preparation	Instruction	Measur	
Engine Noise	-			
2806	řpm 2000rp	Maintain engine rpm between Ö 2000rpm Test - Maintain engine rpm between 1.3002.200 until 3 tests are completed.		Start een 550-800
	Measurement 1 of	3 Pending	Measurement 1 of 3	Pending
	Measurement 2 of	9 Pending	Measurement 2 of 3	Pending
IMPORTANT A/T in Park with Parking brake applied. M/T in Neutral with Parking brake appli	Measurement 3 of	Pending	Measurement 3 of 3	Pending
Previou	s Restart		Cancel	

- With the vehicle in Park (A/T) / Neutral (M/T), begin the "2000rpm Test" by increasing and maintaining engine speed between 1,900-2,100 (2.4L) or 1,900-2,200 (2.0T) RPM until all three (3) measurements are complete.
- 17. When the "2000rpm Test" is complete, release the accelerator pedal so that engine maintains idle state for the "Idle Test".
- The "Idle Test" will automatically begin. Keep the engine at idle and wait until all three (3) measurements are complete.

Pre-Inspection	Preparation	Instruction	Measur	ement	
Engine Noise	Pr Č	erforming Measureme	nt 3 of 3.	Start	
2022	 Maintain engine rpm 	2000rpm Test - Maintain engine rpm between 1,900-2,200 until 3 tests are completed.		Idle Test - Maintain engine rpm between 550-800 until 3 tests are completed.	
	Measurement 1 of	3 Completed	Measurement 1 of 3	Pending	
	Measurement 2 of	3 Completed	Measurement 2 of 3	Pending	
IMPORTANT VT in Park with Parking brake applied I/T in Neutral with Parking brake app		3 Processing	Measurement 3 of 3	Pending	
Previo	us Restart		Cancel		

Pre-Inspection	Preparation	Instruction	Measu			
Engine Noise						
740	Performing Measurement 1 of 3. Č					
712		2000rpm Test - Maintain engine rpm between 1,900-2,200 until 3 tests are completed.		Idle Test - Maintain engine rpm between 550-800 until 3 tests are completed.		
	Measurement 1 of 3	Completed	Measurement 1 of 3	Processing		
	Measurement 2 of 3	Completed	Measurement 2 of 3	Pending		
IMPORTANT A/T in Park with Parking brake applied. M/T in Neutral with Parking brake appli	Measurement 3 of 3	Completed	Measurement 3 of 3	Pending		
Previou	Restart		Cancel			

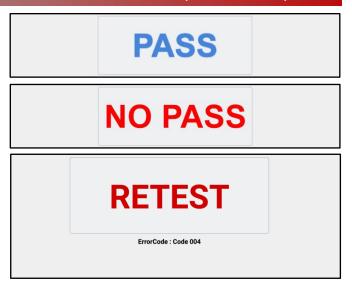
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SUBJECT: ENGINE REPLACEMENT INSTRUCTIONS FOR DTC P1326 (PI1802W/X)

- After the completion of the engine noise inspection, the KDS will automatically generate/display a "PASS" or "NO PASS" result.
 - If the inspection result is "PASS", proceed to the KS Extension Harness Installation procedure on page 12.
 - If the inspection result is "NO PASS," proceed to the engine replacement procedure on page 17.
 - If the inspection result is "RETEST" with an error code, see Adapter Error Code chart in Appendix 4 on page 45 for corrective action then repeat the inspection procedure starting from step 9.
- 20. Select "Finish" to complete the engine noise inspection. Ensure the KDS is connected to the internet and the "Special Inspection" KDS application is open to automatically submit the results to the Kia Server. To save and/or print the results as PDF, select "Print".

If the KDS is not connected to the internet, up to five (5) results will stay pending in the queue until the KDS is connected to the internet with the "Special Inspection" application open.

Note: The five (5) pending results must be submitted before a sixth (6th) test can be conducted.



Pre-Inspection	1	Preparation	Ins	truction	м		
Result:							
VIN : 5XXGR4A61EG2 Date : 20170530	77969	Engin	e Inspection results				
		D					
		P	ASS				
		Finish	F	Print			
	L	Finish	F	Print			
			cial Inspection	Print		_	_
Result Preview				Print			
			cial Inspection		rt VIN or RO numi	bet.	٩
	VIN	Spe	cial Inspection		ert VIN or RO num RO Number	ber.	Q
Date 2015 🖌 1	VIN	Spectrosp	cial Inspection	icle, Please Inse			
Date 2015 1 Date	VIN KNDPCCA6XE7564	Spectroscopy 2017 05 05 Model 1358 SPORTAGE(SL	cial Inspection 24 To searh veh Year Engine	icle, Please inse	RO Number	Result	Sent
Date 2015 1 Date 2017-05-24 14:44:32	VIN KNDPCCA6XE7564	Spectroscopy 2017 05 05 Model 1358 SPORTAGE(SL	24 To searb veh Year Engine 2012 G 2.0 T-GDI	idle, Please inse Mileage 51223	RO Number Y7889	Result GOOD	Sent
Date 2015 1 Date 2017-05-24 14:44:32	VIN KNDPCCA6XE7564	Spectroscopy 2017 05 05 Model 1358 SPORTAGE(SL	24 To searb veh Year Engine 2012 G 2.0 T-GDI	idle, Please inse Mileage 51223	RO Number Y7889	Result GOOD	Sent
Date 2015 1 Date 2017-05-24 14:44:32	VIN KNDPCCA6XE7564 KNDPCCA6XE7564	Sper 2017 05 Model 4156 SPORTAGE(SL 41358 SPORTAGE(SL 41358 SPORTAGE(SL	24 To searb veh Year Engine 2012 G 2.0 T-GDI	icle, Please inse Mileage 51223 12335	RO Number Y7889 Y654	Result GOOD	Sent

21. Disconnect the engine noise tester from the KDS and carefully remove the adapter (B) from the dipstick tube by grasping the engine noise tester adapter.

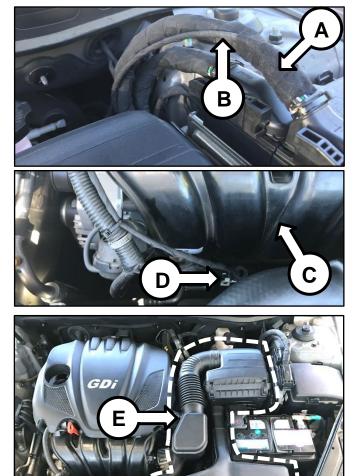
KS Extension Harness Installation Procedure:

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.

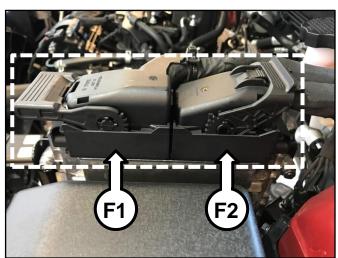
- If the extension harness (B) has been installed, open a Techline case online.
- If the extension harness (B) has not been installed, proceed to the next step.
- 2. Remove the air cleaner and duct assembly (E).



 Disconnect the ECU connector* (figure F1 <u>or</u> F2) (*see IMPORTANT note below).

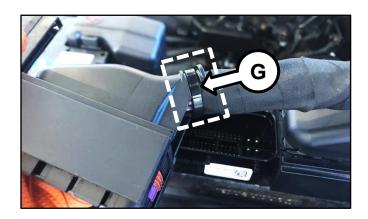


Location of the ECU connector may vary from model to model. Refer to the table on page 13 for the ECU connector number and the applicable ETM Manual on KGIS for the location of the ECU connector.

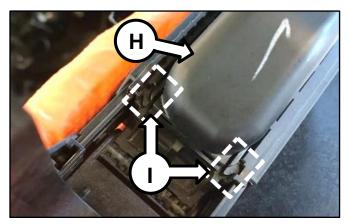


MY	Model	Engine	ECU Connector Number
2014-2015	TF	2.4	С200-В
2015	QF	2.4	С200-В
2015	QF	2.0T	С100-В
2016-2018	JF/JFa	2.4	C200-A
2010-2016	JFa	2.0T	C100-A
2015	XMa	2.4	С300-В
2016-2018	UMa	2.4	C100-A
2010-2018	UMa	2.0T	C200-A
2014-2016		2.4	CHGG-BG
2014-2016	SL	2.0T	CHTG-BG
2017-2018	QL	2.4	C100-A
2017-2018	QL	2.0T	C200-A

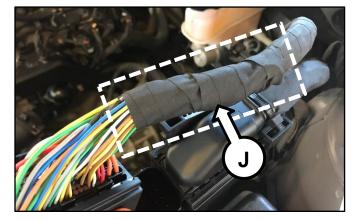
4. Cut the existing cable-tie (G) from the connector.



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



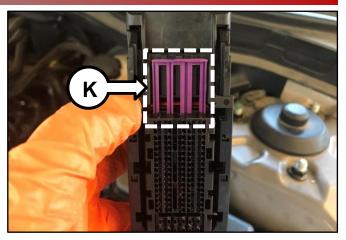
6. Carefully remove the electrical tape (J) to expose the harness wires.



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

7. Remove the pin retainer (K).



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

QF, TF, XMa, and SL						
Pin	Wire					
44	Knock Sensor Shielded Ground					
45	Knock Sensor Ground					
62	Knock Sensor Interface (Signal)					

	UMa, JF, JFa, and QL						
Pin	Wire						
61	Knock Sensor Shielded Ground						
62	Knock Sensor Ground						
63	Knock Sensor Interface (Signal)						

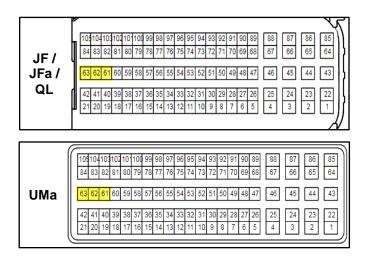
<u>Click here to see a video of</u> <u>terminal removal</u>.

***** IMPORTANT

Location of the ECU connector may vary from model to model. Refer to the table on page 6 for the ECU connector number and the applicable ETM Manual on KGIS for the location of the ECU connector.

QF / TF	8978889848382818079787777879 1708988676865643 <mark>62</mark> 61605958 453525150494944740 <mark>44344</mark> 434241 43 738333343323130292827282524 0191817164514131211100887
------------	--

VM - /	91 74	90 73	89 72	88 71	_	_	_		83 66					78 61	77 60	76 59	75 58	[6	5
XMa / SL	57	56			53									44				[4	3
	40	39	38			35	34			_	30	29	28	27		25	24		2	1
	23	22	21	20	19	18	1/	16	15	14	13	12	11	10	9	8	1	L		



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).

	QF, TF, XMa, and SL						
Pin	Extension Wire Color						
44	Blue						
45	Black						
62	Red						
	UMa, JF, JFa, and QL						
Pin	Extension Wire Color						
61	Blue						
62	Black						
63	Red						



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

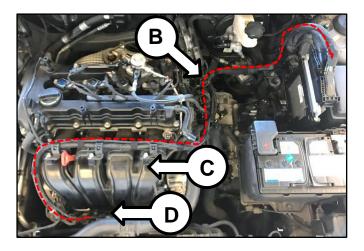
 Route the extension harness (B) along the existing harness (A) leading by the intake manifold (C) to the knock sensor (D), <u>exactly</u> as shown.

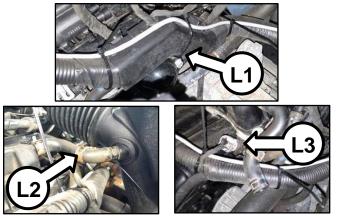
***** IMPORTANT

The harness (B) <u>must be</u> routed exactly as shown to prevent related DTCs.

***** 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).

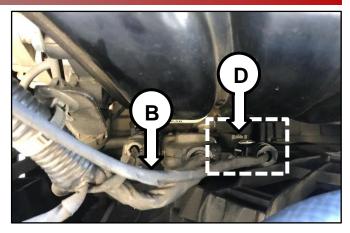




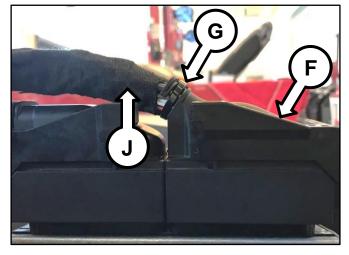
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SUBJECT: ENGINE REPLACEMENT INSTRUCTIONS FOR DTC P1326 (PI1802W/X)

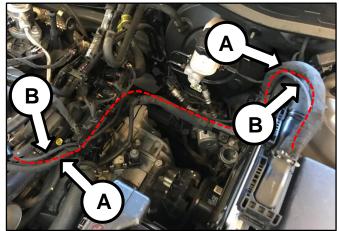
11. Connect the extension harness (B) to the knock sensor (D).



- 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.

Tightening torque for Knock Sensor: 13.7 – 17.4 lb.ft (18.6 – 23.5 N.m, 1.9 – 2.4 kgf.m)

Notes:

High Pressure Pump & Roller Tappet:

- <u>Refer to TSB ENG083</u> for special attention and handling procedures of GDI-specific components.
- 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)

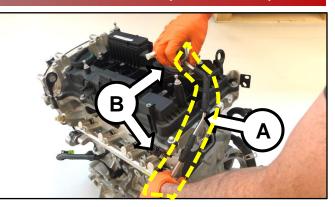


***** NOTICE

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.

High Pressure Fuel Pipe:

 Properly position the <u>new</u> fuel pipe (A) and then <u>hand-tighten</u> both flare nuts (B).



2. Install the pipe retaining bracket and bolt (C) and torque to specifications.



If the bracket and bolt are missing, order and install a new bracket and bolt.

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

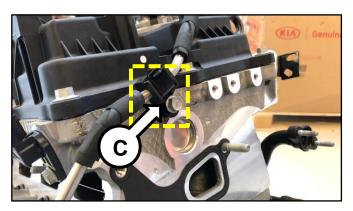
3. Using a click-type/electronic torque wrench and SST 09314-3Q100, torque both flare nuts (B) to specifications.

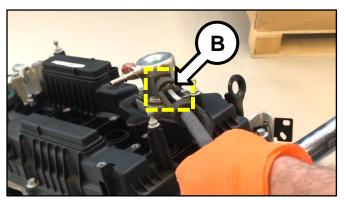
Tightening torque (flare nuts): 19.5 – 23.9 lb.ft (26.5 – 32.4 N.m, 2.7 – 3.3 kgf.m)

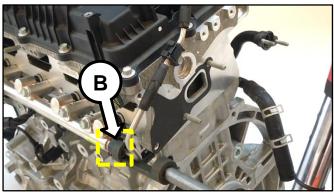
<u>Click here to see a video tutorial of high</u> <u>pressure fuel pipe install (includes high</u> <u>pressure pump install).</u>

***** IMPORTANT

The high pressure fuel pipe bracket and bolt must be installed and properly torqued prior to torqueing the high pressure fuel pipe flare nuts.







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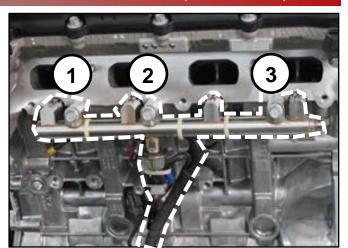
SUBJECT: ENGINE REPLACEMENT INSTRUCTIONS FOR DTC P1326 (PI1802W/X)

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.

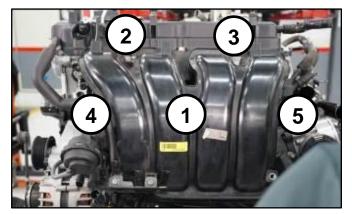
Tightening torque of bolt: 5.8 – 8.7 lb.ft (7.8 – 11.8 N.m, 0.8 - 1.2 kgf.m)

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)





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

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)

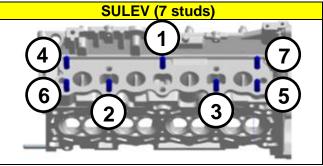
*For 15MY Sorento (XMa) vehicles only: check the underhood emissions label and record whether the label references ULEV or SULEV. This information is needed to select/order the correct replacement engine.

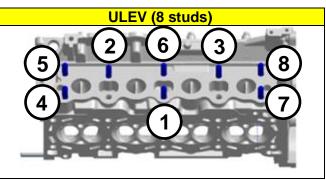
• <u>On Turbo engines</u>, replace the turbocharger oil feed line and gaskets.

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)

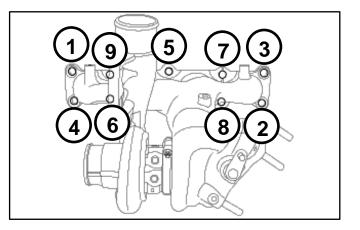
• Torque exhaust manifold nuts in the sequence shown.

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





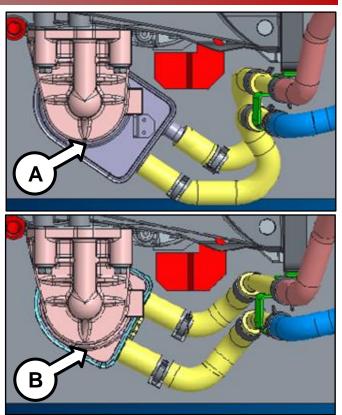
KIA	KIA MOTORS CORPORATION VEHICLE EMISSION CONTROL INFORMATION						
Conforms to r	agulations :		2015	MY			
U.S.EPA: T2	B5 LDV	OB	D: CAII	Fuel :	Gasolin	e	
California : U	LEV PC	OB	D: CAII	Fuel :	Gasolin	8	
Group : EXMXVE2.44PE Evap. : EXMXR01300RE		1	DFI/H No adjustmer	IO2S(2)/W		WC A402	
	ng of permanent ed on a four-whe	eel drive	speed synch	ronized dyn		ed vehicle	



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 24.
- 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.

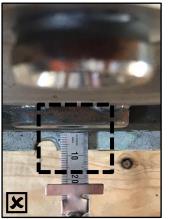
Tightening torque of nuts: 86.8 – 93.9 lb.ft (117.7 – 125.5 N.m, 12.0 – 13.0 kgf.m)



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



5. Reinstall the assembled engine and transmission/transaxle into the vehicle.

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. Confirm that the Rom ID is up-to-date. If not, reflash the ECU to the latest ROM ID available. Refer to PI1802 Knock Sensor Detection System ECU Logic Improvement
- Verify proper operation of the vehicle with road test, and <u>with the engine ON (running)</u>, <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
14MY Optima (TF)	August 29, 2013 through April 25, 2014
15-18MY Optima (TF/QF/JF/JFa)	April 16, 2014 through July 11, 2018
14-18MY Sportage (SL/QL)	September 30, 2013 through April 5, 2018
15-18MY Sorento (XMa/UMa)	January 3, 2014 through March 7, 2018

REQUIRED TOOL:

	To al Dawt Na	Figure	Commonto.
Tool Name	Tool Part No.	Figure	Comments
Torque Wrench Socket	09314 3Q100		Refer to <u>TSB ENG083</u> for
Injector Combustion Seal Ring Installer	09353 2B000		detailed usage instructions
Pin Tool	9140000000Q		For replacements, contact Snap-On Business Solutions at (888) 542-1011.
Click-Type or Electronic Torque Wrench	N/A	(hi-1-)))))))))))))))))))))))))))))))))))	Locally Sourced
Engine Noise Tester SST	GIT1XTDCP005	R	Auto-shipped to Dealers in June 2017 for SC147 For replacements, contact Snap-On Business Solutions at (888) 542-1011.

REQUIRED PARTS:

Part	MY	Model	Part N	Figuro			
Name		Woder	2.4L GDI	2.0L T-GDI	Figure		
	14-15	TF	21101 2GK06QQKR	-			
	14-16	SL	21101 2GK36QQKR	21101 2GK37QQKR			
		QF	21101 2GK06QQKR	21101 2GK08QQKR			
Engine Long	15	XMa <u>ULEV &</u> <u>SULEV</u>	21101 2GK11QQKR	-			
Block	17-18	QL	21101 2GK35QQKR	21101 2GK39QQKR	A RELY OF COMPANY		
	16-17	UMa	21101 2GK31QQKR	21101 2GK32QQKR			
	18	Uivia	21101 2GK33QQKR	ZIIUIZGKJZQQKK	and the second se		
	16-18	JF, JFa	21101 2GK34QQKR	21101 2GK32QQKR			

Models	Part Name	Engine	Part Number	Figure
TF, SL, QF,	Service Kit I	2.4L GDI	21111 2GK50QQK	
ХМа		2.0L T-GDI	21111 2GK60QQK	

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Models	Part Name	Engine	Part Number	Figure
UMa, QL, JF,	Service Kit I	2.4L GDI	21111 2GK51QQK	
JFa	Service Kit I	2.0L T-GDI	21111 2GK52QQK	LODD LODD
TF, SL, QF, XMa		2.4L GDI and 2.0L T-GDI	21111 2GK70QQK	
UMa, QL,	Service Kit II	2.4L GDI	21111 2GK71QQK	
JF, JFa		2.0L T-GDI	21111 2GK72QQK	
TF, SL, QF, XMa	KS Extension	2.4L GDI and 2.0L T-GDI	*91400 2T100QQK	
UMa, QL, JF, JFa	Harness	2.4L GDI and 2.0L T-GDI	91400 2T010QQK	
	Drive Plate Bolts	2.4L GDI and 2.0L T-GDI	23311 25050	•••••
All	Oil Cooler Tube Assembly	2.4L GDI	25470 2G050QQK	
	(replacement is conditional, refer to page 21)	2.0L T-GDI	25470 2G650QQK	

*NOTE: <u>Old</u> part number 91400 2T<u>0</u>00QQK has been superseded by <u>new</u> part number 91400 2T<u>1</u>00QQK.

WARRANTY INFORMATION (PI1802<u>W1</u>, MIL ON WITH P1326): N Code: N99 C Code: C99

N Coue.		Code: C99				_		
Model	Claim	Causal P/N	Qty.	Repair	Labor Op	Ор	Replacement	Qty.
	Туре			Description (PI1802 W1) 2.4L GDI 2WD MIL ON with P1326, KSDS Wire Harness Inspection Pass, Engine	Code 180A12R4	1.1 M/H	P/N *91400 2T100QQK	1
				Noise Inspection Pass, & KSDS Extension Harness Install (PI1802 W1)			21111 2GK50QQKR	1
				2.4L GDI 2WD		0.7	21111 2GK70QQKR	1
				MIL ON with P1326, KSDS Wire Harness Inspection Pass, Engine	180A12R0 8.7 M/H		23311 25050	7
				Noise Inspection Fail, & Engine Replacement			(ULEV or SULEV) 21101 2GK11QQKRR	1
Sor. (XMa)	Р	21020	21020 0 2G010 0	(PI1802 W1) 2.4L GDI 2WD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180A12R2	0.8 M/H	*91400 2T100QQK	1
2.4L	R 2020 2G010	2G010			(PI1802 W1) 2.4L GDI AWD MIL ON with P1326, KSDS Wire Harness Inspection Pass, Engine Noise Inspection Pass, & KSDS Extension Harness Install	180A12R5	1.1 M/H	*91400 2T100QQK
				(PI1802 W1)			21111 2GK50QQK	1
				2.4L GDI AWD MIL ON with P1326, KSDS Wire		8.9	21111 2GK70QQK	1
				Harness Inspection Pass, Engine	180A12R1	M/H	23311 25050	7
			Noise Inspection Fail, & Engine Replacement			(ULEV or SULEV) 21101 2GK11QQKR	1	
			(PI1802 W1) 2.4L GDI AWD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180A12R3	0.8 M/H	*91400 2T100QQK	1	

*NOTE: <u>Old</u> part number 91400 2T<u>0</u>00QQK has been superseded by <u>new</u> part number 91400 2T<u>1</u>00QQK.

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

		Onunal		Devicin		0	Denlessment		
Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.	
			(PI1802W1) 2.4L GDI MIL ON with P1326, KSDS Wire Harness Inspection Pass, Engine Noise Inspection Pass, & KSDS Extension Harness Install	180A16R5	1.1 M/H	*91400 2T100QQK	1		
				(PI1802 W1)		21111 2GK50QQK	1		
Opt.	Р	R 23060 2G400	060 0	2.4L GDI MIL ON with P1326, KSDS Wire		8.7	21111 2GK70QQK	1	
(QF) 2.4L	ĸ		2G400	0	Harness Inspection Pass, Engine	180A16R1	о.7 М/Н	23311 25050	7
				Noise Inspection Fail, & Engine			21101 2GK06QQKR	1	
				Replacement (PI1802 W1) 2.4L GDI MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180A16R3	0.8 M/H	*91400 2T100QQK	1	
				(PI1802 W1) 2.0L T-GDI MIL ON with P1326, KSDS Wire Harness Inspection Pass, Engine Noise Inspection Pass, & KSDS Extension Harness Install	180A16R4	1.1 M/H	*91400 2T100QQK	1	
			23060 2G400 0	(PI1802 W1)			21111 2GK60QQK	1	
Opt. (QF)	R	23060		2.0L T-GDI MIL ON with P1326, KSDS Wire		8.9	21111 2GK70QQK	1	
2.0L T		2G400		Harness Inspection Pass, Engine	180A16R0	M/H	23311 25050	7	
				Noise Inspection Fail, & 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 2T100QQK	1	
				(PI1802 W1) 2.4L GDI MIL ON with P1326, KSDS Wire Harness Inspection Pass, Engine Noise Inspection Pass, & KSDS Extension Harness Install	180111RK	1.1 M/H	*91400 2T100QQK	1	
Ort				(PI1802 W1)			21111 2GK50QQK	1	
Opt. (TF)	R	23060	0	2.4L GDI MIL ON with P1326, KSDS Wire	40044450	8.7	21111 2GK70QQK	1	
2.4L		26400		Harness Inspection Pass, Engine	180111R0	M/H	23311 25050	7	
			Noise Inspection Fail, & Engine Replacement			21101 2GK06QQKR	1		
				(PI1802 W1) 2.4L GDI MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180111R5	0.8 M/H	*91400 2T100QQK	1	

*NOTE: <u>Old</u> part number 91400 2T000QQK has been superseded by <u>new</u> part number 91400 2T100QQK.

Model	Claim	Causal	Qty.	Repair	Labor Op	Ор	Replacement	Qty.
modol	Туре	P/N	ς.γ.	Description	Code	Time	P/N	~ .y.
				(PI1802 W1) 2.4L GDI 2WD MIL ON with P1326, KSDS Wire Harness Inspection Pass, Engine Noise Inspection Pass, & KSDS Extension Harness Install	180112RK	1.2 M/H	*91400 2T100QQK	1
				(PI1802 W1)			21111 2GK50QQK	1
				2.4L GDI 2WD MIL ON with P1326, KSDS Wire	e 180112R0	8.0	21111 2GK70QQK	1
				Harness Inspection Pass, Engine		M/H	23311 25050	7
				Noise Inspection Fail, & Engine Replacement			21101 2GK36QQKR	1
Spo.	6	23060	23060 2G400 0	(PI1802 W1) 2.4L GDI 2WD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180112R5	0.9 M/H	*91400 2T100QQK	1
(SL) 2.4L	P =	2G400		400	(PI1802 W1) 2.4L GDI AWD MIL ON with P1326, KSDS Wire Harness Inspection Pass, Engine Noise Inspection Pass, & KSDS Extension Harness Install	180112RM	1.2 M/H	*91400 2T100QQK
				(PI1802 W1)			21111 2GK50QQK	1
				2.4L GDI AWD MIL ON with P1326, KSDS Wire	10011000	8.4	21111 2GK70QQK	1
				Harness Inspection Pass, Engine	180112R2	M/H	23311 25050	7
				Noise Inspection Fail, & Engine Replacement			21101 2GK36QQKR	1
				(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 2T100QQK	1

*NOTE: <u>Old</u> part number 91400 2T<u>0</u>00QQK has been superseded by <u>new</u> part number 91400 2T<u>1</u>00QQK.

Model	Claim	Causal P/N	Qty.	Repair	Labor Op	Op Time	Replacement P/N	Qty.	
	Type				Description (PI1802W1) 2.0L T-GDI 2WD MIL ON with P1326, KSDS Wire Harness Inspection Pass, Engine Noise Inspection Pass, & KSDS Extension Harness Install	Code 180112RN	1.2 M/H	*91400 2T100QQK	1
				(PI1802 W1)			21111 2GK60QQK	1	
				2.0L T-GDI 2WD MIL ON with P1326, KSDS Wire	e 180112R3	8.0	21111 2GK70QQK	1	
				Harness Inspection Pass, Engine		M/H	23311 25050	7	
				Noise Inspection Fail, & Engine Replacement			21101 2GK37QQKR	1	
Spo.		R 23060 2G400	23060	(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 2T100QQK	1	
(SL) 2.0L T	R		2G400 0		2G400	(PI1802 W1) 2.0L T-GDI AWD MIL ON with P1326, KSDS Wire Harness Inspection Pass, Engine Noise Inspection Pass, & KSDS Extension Harness Install	180112RO	180112RO 1.2 M/H	*91400 2T100QQK
				(PI1802 W1)			21111 2GK60QQK	1	
				2.0L T-GDI AWD MIL ON with P1326, KSDS Wire	40044004	8.4	21111 2GK70QQK	1	
				Harness Inspection Pass, Engine	180112R4	M/H	23311 25050	7	
			Noise Inspection Fail, & 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 2T100QQK	1	

*NOTE: <u>Old</u> part number 91400 2T<u>0</u>00QQK has been superseded by <u>new</u> part number 91400 2T<u>1</u>00QQK.

		Coursel	[Deveir		0	Device evenes		
Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.	
				(PI1802W1) 2.4L GDI 2WD MIL ON with P1326, KSDS Wire Harness Inspection Pass, Engine Noise Inspection Pass, & KSDS Extension Harness Install	180A32RJ	1.1 M/H	91400 2T010QQK	1	
							21111 2GK51QQK	1	
				(PI1802 W1) 2.4L GDI 2WD			21111 2GK71QQK	1	
				MIL ON with P1326, KSDS Wire	180A32R0	8.7	23311 25050	7	
				Harness Inspection Pass, Engine Noise Inspection Fail, & Engine Replacement	100/102110	M/H	(16-17MY) 21101 2GK31QQKR (18MY) 21101 2GK33QQKR	1	
Sor.		23060 2G401		0	(PI1802 W1) 2.4L GDI 2WD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180A32R4	0.8 M/H	91400 2T010QQK	1
(UMa) 2.4L	R				(PI1802 W1) 2.4L GDI AWD MIL ON with P1326, KSDS Wire Harness Inspection Pass, Engine Noise Inspection Pass, & KSDS Extension Harness Install	180A32RK	1.1 M/H	91400 2T010QQK	1
							21111 2GK51QQK	1	
				(PI1802 W1) 2.4L GDI AWD			21111 2GK71QQK	1	
				MIL ON with P1326, KSDS Wire	180A32R1	9.0	23311 25050	7	
				Harness Inspection Pass, Engine Noise Inspection Fail, & Engine Replacement	100,1021(1	M/H	(16-17MY) 21101 2GK31QQKR (18MY) 21101 2GK33QQKR	1	
			(PI1802 W1) 2.4L GDI AWD MIL ON with P1326, KSDS W Harness Inspection Fail, KSD Extension Harness Install		180A32R5	0.8 M/H	91400 2T010QQK	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) 2.0L T-GDI 2WD MIL ON with P1326, KSDS Wire Harness Inspection Pass, Engine Noise Inspection Pass, & KSDS Extension Harness Install	180A32RL	1.1 M/H	91400 2T010QQK	1
				(PI1802 W1) 2.0L T-GDI 2WD			21111 2GK52QQK	1
				MIL ON with P1326, KSDS Wire	180A32R2	8.7	21111 2GK72QQK	1
				Harness Inspection Pass,		M/H	23311 25050	7
				Engine Noise Inspection Fail, & Engine Replacement			21101 2GK32QQKR	1
Sor.		23060 2G401	· · · · /	(PI1802 W1) 2.0L T-GDI 2WD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180A32R6	0.8 M/H	91400 2T010QQK	1
(UMa) 2.0L T	R			G401 0	(PI1802 W1) 2.0L T-GDI AWD MIL ON with P1326, KSDS Wire Harness Inspection Pass, Engine Noise Inspection Pass, & KSDS Extension Harness Install	180A32RM	1.1 M/H	91400 2T010QQK
				(PI1802 W1) 2.0L T-GDI AWD			21111 2GK52QQK	1
				MIL ON with P1326, KSDS Wire	180A32R3	9.0	21111 2GK72QQK	1
				Harness Inspection Pass,	180A32R3	M/H	23311 25050	7
				Engine Noise Inspection Fail, & Engine Replacement			21101 2GK32QQKR	1
				(PI1802 W1) 2.0L T-GDI AWD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180A32R7	0.8 M/H	91400 2T010QQK	1

Model	Claim	Causal	Qty.	Repair	Labor Op	Ор	Replacement	Qty.
Widdei	Туре	P/N	œty.	Description	Code	Time	P/N	QLY.
				(PI1802 W1) 2.4L GDI 2WD MIL ON with P1326, KSDS Wire Harness Inspection Pass, Engine Noise Inspection Pass, & KSDS Extension Harness Install	180114RK	1.1 M/H	91400 2T010QQK	1
				(PI1802 W1)			21111 2GK51QQK	1
				2.4L GDI 2WD MIL ON with P1326, KSDS Wire	180114R0	8.7	21111 2GK71QQK	1
				Harness Inspection Pass,		M/H	23311 25050	7
				Engine Noise Inspection Fail, & Engine Replacement			21101 2GK35QQKR	1
Spo.	E.	23060 2G401		(PI1802 W1) 2.4L GDI 2WD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180114R5	0.8 M/H	91400 2T010QQK	1
(QL) 2.4L	R		· · · · · / /	2G401	(PI1802 W1) 2.4L GDI AWD MIL ON with P1326, KSDS Wire Harness Inspection Pass, Engine Noise Inspection Pass, & KSDS Extension Harness Install	180114RM	1.1 M/H	91400 2T010QQK
				(PI1802 W1) 2.4L GDI AWD			21111 2GK51QQK	1
				MIL ON with P1326, KSDS Wire	180114R2	9.0	21111 2GK71QQK	1
				Harness Inspection Pass,	180114RZ	M/H	23311 25050	7
				Engine Noise Inspection Fail, & Engine Replacement			21101 2GK35QQKR	1
				(PI1802 W1) 2.4L GDI AWD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180114R7	0.8 M/H	91400 2T010QQK	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) 2.0L T-GDI 2WD MIL ON with P1326, KSDS Wire Harness Inspection Pass, Engine Noise Inspection Pass, & KSDS Extension Harness Install	180114RN	1.1 M/H	91400 2T010QQK	1
				(PI1802 W1) 2.0L T-GDI 2WD	40044450		21111 2GK52QQK	1
				MIL ON with P1326, KSDS Wire		8.7	21111 2GK72QQK	1
				Harness Inspection Pass,	180114R3	M/H	23311 25050	7
				Engine Noise Inspection Fail, & Engine Replacement	×		21101 2GK39QQKR	1
Spo.	-	23060 2G401	· · · · ·	(PI1802 W1) 2.0L T-GDI 2WD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180114R8	0.8 M/H	91400 2T010QQK	1
(QL) 2.0L T	R			G401 ⁰	(PI1802 W1) 2.0L T-GDI AWD MIL ON with P1326, KSDS Wire Harness Inspection Pass, Engine Noise Inspection Pass, & KSDS Extension Harness Install	180114RO	1.1 M/H	91400 2T010QQK
				(PI1802 W1)			21111 2GK52QQK	1
				2.0L T-GDI AWD MIL ON with P1326, KSDS Wire	10011404	9.0	21111 2GK72QQK	1
				Harness Inspection Pass,	180114R4	M/H	23311 25050	7
				Engine Noise Inspection Fail, & Engine Replacement			21101 2GK39QQKR	1
				(PI1802 W1) 2.0L T-GDI AWD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180114R9	0.8 M/H	91400 2T010QQK	1

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.		
	<u> </u>		(PI1802 W1) 2.4L GDI MIL ON with P1326, KSDS Wire Harness Inspection Pass, Engine Noise Inspection Pass, & KSDS Extension Harness Install	•	1.1 M/H	91400 2T010QQK	1			
Opt.		23060	060		(PI1802 W1) 2.4L GDI			21111 2GK51QQK	1	
(JF)	R	23080 2G401	0	MIL ON with P1326, KSDS Wire	40044200	8.7	21111 2GK71QQK	1		
2.4L				Harness Inspection Pass,	180113R0	M/H	23311 25050	7		
				Engine Noise Inspection Fail, & Engine Replacement			21101 2GK34QQKR	1		
			(PI1802 W1) 2.4L GDI MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180113R5	0.8 M/H	91400 2T010QQK	1			
				(PI1802 W1) 2.4L GDI MIL ON with P1326, KSDS Wire Harness Inspection Pass, Engine Noise Inspection Pass, & KSDS Extension Harness Install	180A33R4	1.1 M/H	91400 2T010QQK	1		
Opt.		22060		(PI1802 W1)			21111 2GK51QQK	1		
(JFa)	R			2.4L GDI MIL ON with P1326, KSDS Wire		8.7	21111 2GK71QQK	1		
2.4L		20101				Harness Inspection Pass,	180A33R0	M/H	23311 25050	7
					Engine Noise Inspection Fail, & Engine Replacement			21101 2GK34QQKR	1	
				(PI1802 W1) 2.4L GDI MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180A33R2	0.8 M/H	91400 2T010QQK	1		
				(PI1802 W1) 2.0L T-GDI MIL ON with P1326, KSDS Wire Harness Inspection Pass, Engine Noise Inspection Pass, & KSDS Extension Harness Install	180A33R5	1.1 M/H	91400 2T010QQK	1		
Opt.	Opt. (JFa) R			(PI1802 W1)			21111 2GK52QQK	1		
(JFa)		23060 2G401	0	2.0L T-GDI MIL ON with P1326, KSDS Wire	1001000	8.7	21111 2GK72QQK	1		
2.0L T			Harness Inspection Pass,	180A33R1	M/H	23311 25050	7			
				Engine Noise Inspection Fail, & Engine Replacement			21101 2GK32QQKR	1		
				(PI1802 W1) 2.0L T-GDI MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180A33R3	0.8 M/H	91400 2T010QQK	1		

WARRANTY INFORMATION (PI1802<u>X1</u>, ENGINE SEIZED/SEVERE KNOCKING): N Code: N99 C Code: C99

Model	Claim Type	Code. C99 Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.		
				(PI1802 X1) 2.4L GDI 2WD Engine Seized / Severe			21111 2GK50QQK 21111 2GK70QQK	1		
						Knocking, Techline Authorized Engine	180A12R8	8.4 M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Pass			(ULEV or SULEV) 21101 2GK11QQKR	1		
				(PI1802 X1)			21111 2GK50QQK	1		
				2.4L GDI 2WD Engine Seized / Severe			21111 2GK70QQK	1		
						Knocking, Techline	180A12RA	8.9 M/H	23311 25050	7
				Authorized Engine Replacement, KSDS Wire Harness Inspection Fail,			(ULEV or SULEV) 21101 2GK11QQKR	1		
Sor. (XMa)	R	21020	KSDS Wire Harness Install			*91400 2T100QQK	1			
2.4L	IX.	2G010 0	2G010 (PI1802 X1) 2.4L GDI AWD			21111 2GK50QQK	1			
				Engine Seized / Severe	18041780	8.6 M/H	21111 2GK70QQK	1		
				Knocking, Techline Authorized Engine			23311 25050	7		
			Replacement, KSDS Wire Harness Inspection Pass			(ULEV or SULEV) 21101 2GK11QQKR	1			
				(PI1802 X1)			21111 2GK50QQK	1		
				2.4L GDI AWD Engine Seized / Severe			21111 2GK70QQK	1		
		Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Fail,	Knocking, Techline	180A12RB	9.1 M/H	23311 25050	7			
					(ULEV or SULEV) 21101 2GK11QQKR	1				
				KSDS Wire Harness Install			*91400 2T100QQK	1		

*NOTE: <u>Old</u> part number 91400 2T000QQK has been superseded by <u>new</u> part number 91400 2T100QQK.

		0				0	Denlessment	
Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
				(PI1802 X1) 2.4L GDI			21111 2GK50QQK	1
				Engine Seized / Severe Knocking, Techline	Techline 180A16R9 d Engine	8.4 M/H	21111 2GK70QQK	1
				Authorized Engine Replacement, KSDS Wire		101/11	23311 25050	7
Opt.		22000		Harness Inspection Pass			21101 2GK06QQKR	1
(QF) 2.4L	R	23060 2G400	0	(PI1802 X1) 2.4L GDI			21111 2GK50QQK	1
2.46				Engine Seized / Severe			21111 2GK70QQK	1
				Knocking, Techline Authorized Engine	180A16RB	8.9 M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Fail,			21101 2GK06QQKR	1
				KSDS Wire Harness Install			*91400 2T100QQK	1
				(PI1802 X1) 2.0L T-GDI			21111 2GK60QQK	1
				Engine Seized / Severe		8.7	21111 2GK70QQK	1
		23060 2G400	0	Knocking, Techline Authorized Engine	Knocking, Techline 180A16R8 Authorized Engine	M/H	23311 25050	7
Opt.				Replacement, KSDS Wire Harness Inspection Pass			21101 2GK08QQKR	1
(QF)	R			(PI1802 X1)			21111 2GK60QQK	1
2.0L T				2.0L T-GDI Engine Seized / Severe			21111 2GK70QQK	1
				Knocking, Techline Authorized Engine 180A16	180A16RA	9.2 M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Fail,			21101 2GK08QQKR	1
				KSDS Wire Harness Install			*91400 2T100QQK	1
				(PI1802 X1) 2.4L GDI			21111 2GK50QQK	1
				Engine Seized / Severe	40044454	8.4	21111 2GK70QQK	1
				Knocking, Techline Authorized Engine	180111RA	M/H	23311 25050	7
Opt.				Replacement, KSDS Wire Harness Inspection Pass			21101 2GK06QQKR	1
(TF)	R	23060 2G400	0	(PI1802 X1)			21111 2GK50QQK	1
2.4L				2.4L GDI Engine Seized / Severe			21111 2GK70QQK	1
				Knocking, Techline Authorized Engine	180111RF	8.9 M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Fail,			21101 2GK06QQKR	1
			KSDS Wire Harness Install			*91400 2T100QQK	1	

*NOTE: Part number 91400 2T000QQK has been superseded by a new part number 91400 2T100QQK.

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

Model Spo. (SL) 2.4L Type P/N UV Description Op Code Time P/N UV 201101263000K 1 201900 2.4L GD12VD 2019102K1 2111126K5000K 1 2110126K3600KR 1 213112650 7 2110126K3600K 1 2110126K3600KR 1 2331125050 7 2110126K3600K 1 210126K3000K 1 2331125050 7 2110126K3600K 1 2.4L GD12WD Engine Sized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Inspection Pass 2111126K5000K 1 2111122K7000K 1 2331126550 7 2111122K7000K 1 2331126550 7 2111122K7000K 1 2331126550 7 2111122K7000K 1 2331126550 7 21111122K7000K 1 233		Claim	Causal		Repair	Labor	Ор	Replacement	
Spo. (SL) 2.4L R 23060 2G400 0 1 180112RA Replacement, KSDS Wire Hamess Inspection Pass 7,7 MH 7,7 MH 21111 2GK70QQK 1 Spo. (SL) 2.4L R 23060 2G400 0 1 21111 2GK70QQK 1 VIII 120K70QQK 1 23311 25650 7 21101 2GK36QQKR 1 VIII 120K70QQK 1 2311 25650 7 21101 2GK36QQKR 1 VIII 120K70QQK 1 21111 2GK36QQKR 1 21111 2GK36QQKR 1 VIII 120K70QQK 1 21101 2GK36QQKR 1 21101 2GK36QQKR 1 VIII 120K70QQK 1 21101 2GK36QQKR 1 21101 2GK36QQKR 1 VIII 120K70QQK 1 21111 2GK70QQK 1 21111 2GK30QK 1 VIIII 120K70QK 1 21111 2GK30QK 1 21111 2GK30QK 1 VIIII 120K70QK 1 21111 2GK30QK 1 21111 2GK30QK 1 VIIII 120K70QK 1 21111 2GK30QK 1 211111 2GK30QK 1 <	Model			Qty.	Description				Qty.
Spo. (SL) 2.4L R 23060 2.50. 0 1 80112RA Authoraced Engine Replacement, KSDS Wire Harness Inspection Pass 180112RA (PI1802X1) 7,7 MH 21111 2GK70QQK 1 Spo. (SL) 2.4L R 23060 2.6400 0 1 180112RA Authoraced Engine Replacement, KSDS Wire Harness Inspection Pass 180112RF 7,7 MH 21111 2GK70QQK 1 Spo. (SL) 2.4L R 23060 2.6400 0 1 180112RF 8,4 MH 21111 2GK70QQK 1 Spo. (SL) 2.4L R 23060 2.6400 0 1 180112RF 8,4 MH 21111 2GK70QQK 1 Spo. (SL) 2.4L CPI1802X11 1 180112RC 8,4 MH 21111 2GK70QQK 1 Replacement, KSDS Wire Harness Inspection Pass 180112RL 8,7 MH 21111 2GK70QQK 1 10112RD Replacement, KSDS Wire Harness Inspection Pass 180112RL 8,7 MH 21111 2GK70QQK 1 11112GK70QQK 1 21111 2GK70QQK 1 21111 2GK70QQK 1 11112GK70QQK 1 21111 2GK70QQK 1 21111 2GK70QQK								21111 2GK50QQK	1
Spo. (SL) 2.4L R 23060 2.500 0 0 Authorized Engine Hamess Inspection Pass 100112RF 21101 2GK360QKR 1 Spo. (SL) 2.4L R 23060 0 0 10012000000000000000000000000000000000					Engine Seized / Severe	40044004	7.7	21111 2GK70QQK	1
Spo. (SL) 2.4L R 23060 2G400 0 Image: Constraint of the constrain					Authorized Engine	180112RA	M/H	23311 25050	7
Spo. (SL) 2.4L R 23060 2.G400 0 Example Hamess inspection Fail, KDS Wire Hamess install 180112RF 8.3 MH 21111 2GK70QQK 1 2.4L R 23060 2.G400 0 1 180112RF 8.3 MH 8.3 MH 8.3 MH 8.3 MH 8.3 MH 8.3 MH 8.3 MH 1 23311 25050 7 2.4L G101 AWD Replacement, KSDS Wire Hamess inspection Pais 180112RC 8.1 MH 1 1111 2GK70QQK 1 1 CAL GDI AWD Engine Sized / Severe Knocking, Techine Authorized Engine 180112RC 8.1 MH 1 21111 2GK50QQK 1 21101 2GK30QQR 1 21111 2GK70QQK 1 21111 2GK70QQK 1 21101 2GK30QQR 1 21111 2GK70QQK 1 21111 2GK70QQK 1 23311 25050 7 Performes sinstall 8.7 MH 21111 2GK70QQK 1 23311 25050 7 Performes sinstall 180112RH 8.7 MH 21111 2GK70QQK 1 20.1 T-GD 2WD Engine Sized / Severe Knocking, Techine Authorized Engine Replacement, KS								21101 2GK36QQKR	1
Spo. (SL) 2.4L R 23060 2G400 0 Engine Saized / Severe Authorized Engine Perlacement, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Install 180112RF 8.4 MH 21111 2GK70QQK 1 23311 25050 7 7 21101 2GK36QQKR 1 23311 25050 7 7 21101 2GK36QQKR 1 21111 2GK70QQK 1 21111 2GK70QXK 1 21111 2GK70QXK 1 211111 2								21111 2GK50QQK	1
Spo. (SL) 2.4L R 23060 2G400 0 Authorized Engine Hamess Inspection Fail, KSDS Wire Hamess Inspantion 12.4.4 GDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Hamess Inspection Pail, KSDS Wire Hamess Inspection Replacement, KSDS Wire Hamess Inspection Pail, KSDS Wire Hamess Inspection Replacement, KSDS Wire Hamess Inspection Pail, Replacement, KSDS Wire Hamess Inspection Pail, Replacement, KSDS Wire Hamess Inspection Pail, Replacement, KSDS Wire Hamess Inspection Pail, Replac					Engine Seized / Severe			21111 2GK70QQK	1
Spo. (SL) 2.4L R 23060 2G400 0 Replacement, KSDS Wire Hamess Install 21101 2GK36QQKR 1 (P11802X1) 2.4L (P11802X1) (P11802X1) 1.4L *91400 2T100QQK 1 (P11802X1) 2.4L 2.4L GD1 AWD Engine Seized / Severe Authorized Engine (P11802X1) 180112RC 8.1 NH 21101 2GK36QQKR 1 (P11802X1) 2.4L GD1 AWD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Hamess Inspection Pass 180112RL 8.1 NH 21101 2GK36QQKR 1 (P11802X1) 2.4L GD1 AWD Engine Seized / Severe Knocking, Techline Authorized Engine 180112RL 8.7 NH 7.7 21101 2GK36QQKR 1 (P11802X1) 2.0L T-OD1 2WD Engine Seized / Severe Knocking, Techline Authorized Engine 180112RL 8.7 NH 21111 2GK70QK 1 (SL) 2.0L T-OD1 2WD Engine Seized / Severe Knocking, Techline Authorized Engine 180112RL 8.3 NH 211101 2GK37QQKR 1 (P11802X1) 2.0L T-GD1 2WD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Hamess Inspection Fail, KSDS Wire Hamess Install 180112RL 8.1 NH 8.1 21111 2GK70QQK 1 (P11802X1) 2.0L T-GD1 2WD Engine Seized / Se						180112RF		23311 25050	7
Spo. (SL) 2.4L R 23060 (SL) 2.4L 0 KSDS Wire Hamess Install *91400 2T100QQK 1 2.4L P 24.G DI WD 2.4L GDI WD 180112RC 8.1 21111 2GK50QQK 1 2.4L B1012RC B11 23311 25050 7 21101 2GK30QQK 1 2.4L GDI WD Engine Seized / Severe Hamess Inspection Pass 180112RC 8.1 21111 2GK70QQK 1 2.4L GDI WD Engine Seized / Severe Hamess Inspection Fail, KSDS Wire Hamess Inspection Fail, KSDS Wire Hamess Inspection Fail, KSDS Wire Hamess Install 180112RH 8.7 21101 2GK30QK 1 21101 2GK30QK 1 23311 25050 7 21101 2GK30QK 1 21101 2GK30QK 1 2311 25050 7 21101 2GK30QK 1 2101 2GK30QK 1 2311 25050 7 21101 2GK30QK 1 2101 2GK30QK 1 2.0 L T-GDI 2WD 7.7 7.7 21111 2GK70QK 1 2.0 L T-GDI 2WD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Hamess Inspection Fail, CUI T-GDI 2WD <td< td=""><td></td><td></td><td></td><td></td><td>Replacement, KSDS Wire</td><td></td><td>-</td><td>21101 2GK36QQKR</td><td>1</td></td<>					Replacement, KSDS Wire		-	21101 2GK36QQKR	1
2.4L 2.34L 2.4L 01 1(1182X1) 2.4L 2.4L 014VD 2.4L 014VD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Pass 180112RC 8.1 MH 21111 2GK50QQK 1 2.4L 014VD 2.4L 014VD 23311 25050 7 2.4L 014VD 2.4L 014VD 23311 25050 7 2.4L 014VD 2.4L 014VD 23311 25050 7 2.4L 014VD Engine Seized / Severe Authorized Engine Replacement, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Install 180112RH 8.7 WH 21111 2GK70QQK 1 2.0L T-GD1 2WD Engine Seized / Severe Knocking, Techline Authorized Engine 180112RH 8.7 WH 21111 2GK70QQK 1 2.0L T-GD1 2WD Fengine Seized / Severe Knocking, Techline Authorized Engine 180112RH 8.3 MH 21111 2GK70QQK 1 2.0L T-GD1 2WD Fengine Seized / Severe Knocking, Techline Authorized Engine 180112RH 8.4 MH 21111 2GK70QQK 1 2.0L T-GD1 2WD Fengine Seized / Se		Б	23060	0				*91400 2T100QQK	1
Spo. 2.0L T R 23060 2G400 0 0 1 180112RC Muthorized Engine Replacement, KSDS Wire Harress Inspection Pass 8.1 M/H 21111 2GK70QQK 1 100112R1 2.4L GD AWD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harress Inspection Fail, KSDS Wire Harress Install 180112RH 8.1 M/H 21111 2GK70QQK 1 21101 2GK36QQKR 1 21111 2GK70QQK 1 21111 2GK70QQK 1 1111 2GK70QQK 1 21111 2GK70QQK 1 21111 2GK70QQK 1 1111 2GK70QQK 1 21111 2GK70QQK 1 21111 2GK70QQK 1 1111 2GK70QQK 1 20.1 T-GD1 2WD 1 21111 2GK70QQK 1 1111 2GK70QQK 1 21111 2GK70QQK 1 21111 2GK70QQK 1 1111 2GK70QQK 1 21111 2GK70QQK 1 21111 2GK70QQK 1 1111 2GK70QQK 1 20.1 T-GD1 2WD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harress Inspection Pass 8.1 M/H 21111 2GK70QQK 1 1111 2GK70QQK1 1 21111 2GK70QQK 1		ĸ	2G400	0				21111 2GK50QQK	1
Spo. (SL) 2.0LT R 23060 2G400 2 4 Authorized Engine Replacement, KSDS Wire Harness Inspection Pass 180112RH 8.7 M/H 21111 2GK36QQKR 1 (P11802X1) 2.44, EDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Install 180112RH 8.7 M/H 8.7 M/H 21111 2GK36QQKR 1 (P11802X1) 2.0L T-GDI 2WD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Pass 180112RD 7.7 M/H 21111 2GK30QKR 1 (P11802X1) 2.0L T-GDI 2WD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Pass 180112RD 8.3 M/H 21111 2GK37QQKR 1 (P11802X1) 2.0L T-GDI 2WD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Pass 180112RI M/H 8.3 M/H 21111 2GK37QQKR 1 20.1 T-GDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Pass 180112RL M/H 8.1 M/H 21111 2GK37QQKR 1 (P11802X1) 2.0L T-GDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Pass 180112RL M/H 8.7 M					Engine Seized / Severe	40044000	8.1	21111 2GK70QQK	1
Spo. (SL) 2.0L T R 23060 2G400 0 1 1 2011 12 CK36UQKR 1 V P11802X1) 4.2.4L GD1 AWD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Install 180112RH 8.7 MH 8.7 MH 21111 2GK36QQKR 1 V P11802X1) 2.0L T-GD1 2WD 180112RH 8.7 MH 21111 2GK36QQKR 1 V P11802X1) 2.0L T-GD1 2WD 180112RD 7.7 MH 21111 2GK37QQKR 1 V P11802X1) 2.0L T-GD1 2WD 180112RD 7.7 MH 21111 2GK37QQKR 1 V P11802X1) 2.0L T-GD1 2WD 180112RD 8.3 MH 21111 2GK0QQK 1 V P11802X1) 2.0L T-GD1 2WD 8.3 MH 21111 2GK0QQK 1 21111 2GK0QQK 1 V P11802X1) 2.0L T-GD1 2WD 180112RI 8.3 MH 211111 2GK0QQK 1 V P11802X1) 2.0L T-GD1 AWD 180112RI 8.1 MH 211111 2GK0QQK 1 V P11802X1) 2.0L T-GD1 AWD 180112RL 8.1 MH 211111 2GK0QQK 1 <td< td=""><td></td><td></td><td></td><td></td><td>Authorized Engine</td><td>180112RC</td><td></td><td>23311 25050</td><td>7</td></td<>					Authorized Engine	180112RC		23311 25050	7
Spo. (SL) R 23060 2G400 0 P[1802X1) 2.4L GD1 AWD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Install 180112RH 8.7 MH 21111 2GK30QQK 1 8.7 21101 2GK36QQKR 1 21011 2GK36QQKR 1 *91400 2T100QQK 1 *91400 2T100QQK 1 2.0L T-GD1 2WD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Pass 180112RD 7,7 MH 21111 2GK70QQK 1 21101 2GK37QQKR 1 23311 25050 7 21101 2GK37QQKR 1 20L T-GD1 2WD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Pass 180112RI 8.3 MH 21111 2GK70QQK 1 21101 2GK37QQKR 1 21101 2GK37QQKR 1 20L T-GD1 AWD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Pasi 180112RL 8.1 MH 21111 2GK70QQK 1 21101 2GK37QQKR 1 21101 2GK37QQKR 1 21111 2GK70QQK 1 20L T-GD1 AWD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness								21101 2GK36QQKR	1
Spo. (SL) 2.0LT R 23060 2G400 0 1 Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Fail, KSDS Wire Hamess Install 180112RH 8.7 WH 21111 2GK70QQK 1 XSpo. (SL) 2.0LT R 23060 2G400 0 (P11802X1) 2.0L T-GDI 2WD 180112RD 8.7 WH 21111 2GK70QQK 1 XSpo. (SL) 2.0LT R 23060 2G400 0 (P11802X1) 2.0L T-GDI 2WD 180112RD 7.7 WH 21111 2GK70QQK 1 XSpo. (SL) 2.0LT R 23060 2G400 0 (P11802X1) 2.0L T-GDI 2WD 180112RI 8.3 WH 21111 2GK70QQK 1 2.0L T-GDI 2WD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Install 180112RI 8.3 WH 21111 2GK70QQK 1 2.0L T-GDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Pass 180112RL 8.1 WH 21111 2GK70QQK 1 21101 2GK37QQKR 1 21111 2GK70QQK 1 21111 2GK70QQK 1 2.0L T-GDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Pass <td></td> <td></td> <td></td> <td></td> <td>(PI1802X1)</td> <td></td> <td></td> <td>21111 2GK50QQK</td> <td>1</td>					(PI1802 X1)			21111 2GK50QQK	1
Spo. (SL) R 23060 2G400 0 1 Authorized Engine Replacement, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Install 180112RD M/H 21101 2GK36QQKR 1 (PI1802X1) 2.0L T-GDI 2WD Engine Seized / Severe Knocking, Techline Harness Inspection Pass 180112RD 7.7 M/H 21111 2GK60QQK 1 2311 25050 7 21101 2GK37QQKR 1 2.0L T-GDI 2WD Harness Inspection Pass 180112RD 7.7 M/H 21111 2GK60QQK 1 2.0L T-GDI 2WD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Install 180112RI 8.3 M/H 21111 2GK60QQK 1 2.0L T 0 (PI1802X1) 2.0L T-GDI 2WD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Install 180112RI 8.3 M/H 21111 2GK60QQK 1 2.0L T-GDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Pass 180112RE 8.1 M/H 21111 2GK60QQK 1 21101 2GK37QQKR 1 2101 2GK37QQKR 1 21111 2GK60QQK 1 21101 2GK37QQKR 1 1 21111 2GK60QQK 1					Engine Seized / Severe			21111 2GK70QQK	1
Spo. (SL) 23060 23060 0 Replacement, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Install 180112RD 7.7 MH 21111 2GK36QQKR 1 Spo. (SL) R 23060 0 (PI1802X1) 180112RD 7.7 MH 21111 2GK36QQKR 1 20.1 T-GDI 2WD Engine Seized / Severe Knocking, Techline Authorized Engine 180112RD 7.7 MH 21111 2GK30QQKR 1 21011 2GK37QQKR 1 23311 25050 7 7 Replacement, KSDS Wire Harness Inspection Pass 180112RI 8.3 MH 21111 2GK30QQKR 1 2.0 L T-GDI 2WD Engine Seized / Severe Knocking, Techline Authorized Engine Beplacement, KSDS Wire Harness Install 180112RI 8.3 MH 21111 2GK60QQK 1 2.0 L T-GDI 2WD Engine Seized / Severe Knocking, Techline Authorized Engine 180112RI 8.3 MH 21111 2GK60QQK 1 2.0 L T-GDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine 180112RL 8.1 MH 21111 2GK60QQK 1 21101 2GK37QQKR 1 21101 2GK37QQKR 1 21101 2GK37QQKR 1 2.0 L T-GDI AWD						180112RH		23311 25050	7
Spo. (SL) 23060 23060 0 R 23060 0 Replacement, KSDS Wire Harness Inspection Pass 180112RD 8.3 M/H 21111 2GK70QQK 1 2.0L T-GDI 2WD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Pass 180112RD 7.7 M/H 21111 2GK70QQK 1 2.0L T-GDI 2WD Figure Seized / Severe Knocking, Techline Authorized Engine 180112RI 8.3 M/H 21111 2GK60QQK 1 2.0L T-GDI 2WD Engine Seized / Severe Knocking, Techline Authorized Engine 180112RI 8.3 M/H 23311 25050 7 2.0L T-GDI 2WD Engine Seized / Severe Knocking, Techline Authorized Engine 180112RI 8.3 M/H 23311 25050 7 21101 2GK37QQKR 1 21101 2GK37QQKR 1 21111 2GK60QQK 1 2.0L T-GDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine 180112RE 8.1 M/H 21111 2GK60QQK 1 21101 2GK37QQKR 1 21101 2GK37QQKR 1 21111 2GK60QQK 1 2.0L T-GDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine 180112RJ 8.7 M/H <td></td> <td></td> <td>Replacement, KSDS Wire</td> <td></td> <td>21101 2GK36QQKR</td> <td>1</td>					Replacement, KSDS Wire			21101 2GK36QQKR	1
Spo. (SL) R 23060 2G400 0 0								*91400 2T100QQK	1
Spo. (SL) R 23060 2G400 0 Image: Constraint of the constraint of								21111 2GK60QQK	1
Spo. (SL) 2.0L T R 23060 2G400 0 0 Image: Constraint of the constr					Engine Seized / Severe		7.7	21111 2GK70QQK	1
Spo. (SL) R 23060 0 1 2:0L T R 23060 0 1 2:0L T R 23060 0 1 2:0L T R 23060 0 1 1:01 2GK37QQKR 1 1 1 2:0L T R 23060 0 1 1:01 2GK37QQKR 1 1 1 2:0L T R 23060 7 21101 2GK37QQKR 1 1:01 2GK37QQKR 1 1 1 1 2:0L T Replacement, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Inspection Pass 8.3 21111 2GK70QQK 1 2:0L T-GDI AWD 1 1 21111 2GK70QQK 1 1 2:0L T-GDI AWD 1 1 23311 25050 7 1 2:0L T-GDI AWD 1 1 23311 25050 7 1 2:0L T-GDI AWD 1 1 21101 2GK37QQKR 1 </td <td></td> <td></td> <td></td> <td></td> <td>Authorized Engine</td> <td>180112RD</td> <td></td> <td>23311 25050</td> <td>7</td>					Authorized Engine	180112RD		23311 25050	7
Spo. (SL) 2.0L T R 23060 2G400 0 Image: Constraint of the constra								21101 2GK37QQKR	1
Spo. (SL) R 23060 2G400 0 Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Fail, 2.0L T 180112RI 8.3 M/H 21111 2GK70QQK 1 2.0L T R 23060 2G400 0 Feiglacement, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Install 180112RI 8.3 M/H 21111 2GK70QQK 1 2.0L T CPI1802X1) 2.0L T-GDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Pass 180112RE 8.1 M/H 21111 2GK60QQK 1 21101 2GK37QQKR 1 23311 25050 7 21101 2GK37QQKR 1 (PI1802X1) 2.0L T-GDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Pass 180112RJ 8.7 M/H 21111 2GK70QQK 1 21101 2GK37QQKR 1 23311 25050 7 21101 2GK37QQKR 1 2011 T-GDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine 180112RJ 8.7 M/H 21111 2GK70QQK 1 21101 2GK37QQKR 1 23311 25050 7 21101 2GK37QQKR 1					(PI1802 X1)			21111 2GK60QQK	1
Spo. (SL) 2.0L T R 23060 2G400 0 Authorized Engine Replacement, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Install 180112RI M/H 23311 25050 7 2.0L T R 23060 2G400 0 (PI1802X1) 2.0L T-GDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine 180112RE M/H 21101 2GK37QQKR 1 21101 2GK37QQKR 1 21111 2GK60QQK 1 21101 2GK37QQKR 1 21111 2GK60QQK 1 20.0 T-GDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine 180112RJ 8.7 M/H 21111 2GK70QQK 1 21101 2GK37QQKR 1 21101 2GK37QQKR 1 21101 2GK37QQKR 1					Engine Seized / Severe			21111 2GK70QQK	1
Spo. (SL) R 23060 2G400 0 Replacement, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Install 21101 2GK37QQKR 1 2.0L T 2G400 0 (PI1802X1) 2.0L T-GDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Pass 180112RE 8.1 M/H 21111 2GK60QQK 1 21101 2GK37QQKR 1 21111 2GK60QQK 1 21101 2GK37QQKR 1 21111 2GK60QQK 1 21101 2GK37QQKR 1 21111 2GK60QQK 1 21111 2GK60QQK 1 21111 2GK60QQK 1 21111 2GK60QQK 1 21111 2GK70QQK 1 21111 2GK70QQK 1 21101 2GK37QQKR 1 21101 2GK37QQKR 1 21101 2GK37QQKR 1 21101 2GK37QQKR 1 21101 2GK37QQKR <td></td> <td></td> <td></td> <td></td> <td>0,</td> <td>180112RI</td> <td></td> <td>23311 25050</td> <td>7</td>					0 ,	180112RI		23311 25050	7
Spo. (SL) 2.0L T R 23060 2G400 0 KSDS Wire Harness Install *91400 2T100QQK 1 2.0L T G400 0 (PI1802X1) 2.0L T-GDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine 180112RE 8.1 M/H 21111 2GK60QQK 1 21101 2GK37QQKR 1 23311 25050 7 21101 2GK37QQKR 1 (PI1802X1) 2.0L T-GDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine 180112RJ 8.7 M/H 21111 2GK60QQK 1 21101 2GK37QQKR 1 2.0L T-GDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine 180112RJ 8.7 M/H 21111 2GK70QQK 1 21101 2GK37QQKR 1 21101 2GK37QQKR 1 1					Replacement, KSDS Wire			21101 2GK37QQKR	1
2.0L T 2G400 (PI1802X1) 2.0L T-GDI AWD 1 2.0L T-GDI AWD Engine Seized / Severe 180112RE 8.1 21111 2GK60QQK 1 23311 25050 7 21101 2GK37QQKR 1 1 (PI1802X1) 2.0L T-GDI AWD 180112RE 8.1 21101 2GK37QQKR 1 (PI1802X1) 2.0L T-GDI AWD 1 21101 2GK37QQKR 1 (PI1802X1) 2.0L T-GDI AWD 1 21111 2GK60QQK 1 2.0L T-GDI AWD Engine Seized / Severe 8.7 21111 2GK70QQK 1 2.0L T-GDI AWD Engine Seized / Severe 8.7 21111 2GK70QQK 1 2.0L T-GDI AWD Engine Seized / Severe 8.7 21111 2GK70QQK 1 2.0L T-GDI AWD Engine Seized / Severe 8.7 21111 2GK70QQK 1 2.0L T-GDI AWD Engine Replacement, KSDS Wire 180112RJ 8.7 21111 2GK37QQKR 1 21101 2GK37QQKR 1 1 1012GK37QQKR 1 1		Б	23060	0				*91400 2T100QQK	1
Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Pass180112RE8.1 M/H21111 2GK70QQK123311 25050721101 2GK37QQKR1(PI1802X1) 2.0L T-GDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Fail,180112RJ8.7 M/H21111 2GK70QQK121111 2GK70QQK1		ĸ	2G400	0	· · · · · · · · · · · · · · · · · · ·			21111 2GK60QQK	1
Authorized Engine Replacement, KSDS Wire Harness Inspection PassM/1123311 25050721101 2GK37QQKR1(PI1802X1) 2.0L T-GDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine180112RJ8.7 M/H21111 2GK60QQK123311 25050721101 2GK37QQKR121111 2GK70QQK121111 2GK70QQK121111 2GK70QQK121111 2GK70QQK121101 2GK37QQKR1					Engine Seized / Severe	40044005	8.1	21111 2GK70QQK	1
Harness Inspection Pass21101 2GK37QQKR1(PI1802X1)(PI1802X1)2.0L T-GDI AWD2.0L T-GDI AWDEngine Seized / Severe21111 2GK60QQK1Knocking, Techline180112RJ8.7Authorized EngineM/H23311 250507Replacement, KSDS WireHarness Inspection Fail,21101 2GK37QQKR1					Authorized Engine	180112RE		23311 25050	7
(PI1802X1) 2.0L T-GDI AWD Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Fail,180112RJ21111 2GK60QQK121111 2GK70QQK121111 2GK70QQK121111 2GK70QQK121111 2GK70QQK121111 2GK70QQK121111 2GK70QQK1								21101 2GK37QQKR	1
Engine Seized / Severe Knocking, Techline Authorized Engine180112RJ21111 2GK70QQK18.7 M/H23311 25050721101 2GK37QQKR1					(PI1802 X1)			21111 2GK60QQK	1
Authorized Engine 180112RJ M/H 2331125050 7 Replacement, KSDS Wire Harness Inspection Fail, 211012GK37QQKR 1					Engine Seized / Severe			21111 2GK70QQK	1
Replacement, KSDS Wire 21101 2GK37QQKR 1 Harness Inspection Fail, 21101 2GK37QQKR 1						180112RJ		23311 25050	7
					Replacement, KSDS Wire			21101 2GK37QQKR	1
					KSDS Wire Harness Install			*91400 2T100QQK	1

*NOTE: <u>Old</u> part number 91400 2T<u>0</u>00QQK has been superseded by <u>new</u> part number 91400 2T<u>1</u>00QQK.

	Claim	Caugal		Demoir		0.2	Donlocoment	
Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			(PI1802 X1)			21111 2GK51QQK	1
				2.4L GDI 2WD			21111 2GK71QQK	1
				Engine Seized / Severe	40040004	8.4	23311 25050	7
				Knocking, Techline Authorized Engine	180A32RA	M/H	(16-17MY) 21101 2GK31QQKR	
				Replacement, KSDS Wire			(18MY)	1
				Harness Inspection Pass			21101 2GK33QQKR	
				(PI1802 X1)			21111 2GK51QQK	1
				2.4L GDI 2WD			21111 2GK71QQK	1
				Engine Seized / Severe Knocking, Techline		8.9	23311 25050 (16-17MY)	7
				Authorized Engine	180A32RB	0.9 M/H	21101 2GK31QQKR	
				Replacement, KSDS Wire		-	(18MY)	1
Sor.				Harness Inspection Fail,			21101 2GK33QQKR	
(UMa)	R	23060	0	KSDS Wire Harness Install			91400 2T010QQK	1
2.4L		2G401		(PI1802 X1) 2.4L GDI AWD			21111 2GK51QQK 21111 2GK71QQK	1
				Engine Seized / Severe			23311 25050	7
				Knocking, Techline	180A32RE	8.7 M/H	(16-17MY)	
				Authorized Engine		101/11	21101 2GK31QQKR	1
				Replacement, KSDS Wire Harness Inspection Pass			(18MY) 21101 2GK33QQKR	
				(PI1802 X1)			21111 2GK51QQK	1
				2.4L GDI AWD			21111 2GK71QQK	1
				Engine Seized / Severe			23311 25050	7
				Knocking, Techline	180A32RF	9.2	(16-17MY)	
				Authorized Engine Replacement, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Install		M/H	21101 2GK31QQKR (18MY)	1
							21101 2GK33QQKR	
							91400 2T010QQK	1
				(PI1802 X1) 2.0L T-GDI 2WD			21111 2GK52QQK	1
				Engine Seized / Severe Knocking, Techline	180A32RC	8.4	21111 2GK72QQK	1
				Authorized Engine	100/102110	M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Pass			21101 2GK32QQKR	1
				(PI1802 X1) 2.0L T-GDI 2WD			21111 2GK52QQK	1
				Engine Seized / Severe			21111 2GK72QQK	1
				Knocking, Techline Authorized Engine	180A32RD	8.9 M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Fail,			21101 2GK32QQKR	1
Sor. (UMa)	R	23060	0	KSDS Wire Harness Install			91400 2T010QQK	1
2.0L T	IX.	2G401	0	(PI1802 X1) 2.0L T-GDI AWD			21111 2GK52QQK	1
				Engine Seized / Severe	40040000	8.7	21111 2GK72QQK	1
				Knocking, Techline Authorized Engine	180A32RG	M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Pass			21101 2GK32QQKR	1
				(PI1802 X1) 2.0L T-GDI AWD			21111 2GK52QQK	1
				Engine Seized / Severe		_	21111 2GK72QQK	1
				Knocking, Techline Authorized Engine	180A32RH	9.2 M/H	23311 25050	7
				Replacement, KSDS Wire			21101 2GK32QQKR	1
				Harness Inspection Fail, KSDS Wire Harness Install			91400 2T010QQK	1

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	Claim	Causal		Repair	Labor	Ор	Replacement	
Model	Туре	P/N	Qty.	Description	Op Code	Time	P/N	Qty.
				(PI1802 X1) 2.4L GDI 2WD			21111 2GK51QQK	1
				Engine Seized / Severe	40044404	8.4	21111 2GK71QQK	1
				Knocking, Techline Authorized Engine	180114RA	M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Pass			21101 2GK35QQKR	1
				(PI1802 X1)			21111 2GK51QQK	1
				2.4L GDI 2WD Engine Seized / Severe			21111 2GK71QQK	1
				Knocking, Techline Authorized Engine	180114RF	8.9 M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Fail,			21101 2GK35QQKR	1
Spo.	R	23060	0	KSDS Wire Harness Install			91400 2T010QQK	1
(QL) 2.4L	ĸ	2G401	0	(PI1802 X1) 2.4L GDI AWD			21111 2GK51QQK	1
				Engine Seized / Severe	400444DC	8.7	21111 2GK71QQK	1
				Knocking, Techline Authorized Engine	180114RC	M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Pass			21101 2GK35QQKR	1
				(PI1802 X1)			21111 2GK51QQK	1
				2.4L GDI AWD Engine Seized / Severe			21111 2GK71QQK	1
				Knocking, Techline Authorized Engine	180114RH	9.2 M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Fail,			21101 2GK35QQKR	1
				KSDS Wire Harness Install			91400 2T010QQK	1
				(PI1802 X1) 2.0L T-GDI 2WD			21111 2GK52QQK	1
				Engine Seized / Severe	40044400	8.4	21111 2GK72QQK	1
				Knocking, Techline Authorized Engine	180114RD	M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Pass			21101 2GK39QQKR	1
				(PI1802 X1)			21111 2GK52QQK	1
				2.0L T-GDI 2WD Engine Seized / Severe			21111 2GK72QQK	1
				Knocking, Techline Authorized Engine	180114RI	8.9 M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Fail,			21101 2GK39QQKR	1
Spo.	R	23060	0	KSDS Wire Harness Install			91400 2T010QQK	1
(QL) 2.0L T	ĸ	2G401	0	(PI1802 X1) 2.0L T-GDI AWD			21111 2GK52QQK	1
				Engine Seized / Severe	10011405	8.7	21111 2GK72QQK	1
				Knocking, Techline Authorized Engine	180114RE	M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Pass			21101 2GK39QQKR	1
				(PI1802 X1)			21111 2GK52QQK	1
				2.0L T-GDI AWD Engine Seized / Severe			21111 2GK72QQK	1
				Knocking, Techline Authorized Engine	180114RJ	9.2 M/H	23311 25050	7
				Replacement, KSDS Wire		IVI/H	21101 2GK39QQKR	1
				Harness Inspection Fail, KSDS Wire Harness Install			91400 2T010QQK	1

							•	
Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
				(PI1802 X1) 2.4L GDI	•		21111 2GK51QQK	1
				Engine Seized / Severe		8.4	21111 2GK71QQK	1
				Knocking, Techline 180113RA Authorized Engine	M/H	23311 25050	7	
Opt.				Replacement, KSDS Wire Harness Inspection Pass			21101 2GK34QQKR	1
(JF)	R	23060 2G401	0	(PI1802 X1)			21111 2GK51QQK	1
2.4L				2.4L GDI Engine Seized / Severe			21111 2GK71QQK	1
				Knocking, Techline Authorized Engine	180113RF	8.9 M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Fail,			21101 2GK34QQKR	1
				KSDS Wire Harness Install			91400 2T010QQK	1
				(PI1802 X1) 2.4L GDI			21111 2GK51QQK	1
				Engine Seized / Severe Knocking, Techline	180A33RA	8.4	21111 2GK71QQK	1
				Authorized Engine	TOUASSRA	M/H	23311 25050	7
Opt.				Replacement, KSDS Wire Harness Inspection Pass			21101 2GK34QQKR	1
(JFa) 2.4L	R	23060 2G401	0	(PI1802 X1) 2.4L GDI			21111 2GK51QQK	1
2.4L				Engine Seized / Severe			21111 2GK71QQK	1
				Knocking, Techline Authorized Engine	180A33RB	8.9 M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Fail,			21101 2GK34QQKR	1
				KSDS Wire Harness Install			91400 2T010QQK	1
				(PI1802 X1) 2.0L T-GDI			21111 2GK52QQK	1
				Engine Seized / Severe Knocking, Techline	180A33RC	8.7	21111 2GK72QQK	1
				Authorized Engine	100,55110	M/H	23311 25050	7
Opt.				Replacement, KSDS Wire Harness Inspection Pass			21101 2GK32QQKR	1
(JFa)	R	23060 2G401	0	(PI1802 X1) 2.01. T-CDI			21111 2GK52QQK	1
2.0L T				2.0L T-GDI Engine Seized / Severe			21111 2GK72QQK	1
				Knocking, Techline Authorized Engine	180A33RD	9.2 M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Fail,			21101 2GK32QQKR	1
			KSDS Wire Harness Install				91400 2T010QQK	1

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

<u>Old</u> part number 91400 2T000QQK has been superseded by <u>new</u> part number 91400 2T100QQK. See <u>Parts Bulletin 91-</u> 914 0003 for details.

Use sublet code 'X3' 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.

ALL claims for engine or harness replacement without the required diagnostic inspection/results or authorization are subject to claim chargeback/denial without exception.

* 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.

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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

Appendix 2 (Video Capture & Upload)

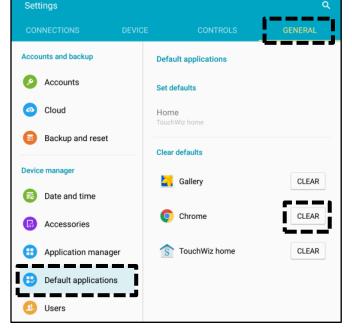
Capturing a video is often helpful in assisting the Kia Techline Agent in determining a proper diagnosis strategy. Once a TechLine case is open, the following procedure will guide you through the video capture and upload.

The Chrome[™] O browser should be used to access the Techline portal. Follow the steps below to clear the default browser if it is other than Chrome[™].

For KDS Tab 10.1 Tablets:

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

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



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

Open with		
Chrome	Better Open With	Internet
	JUST	ONCE ALWAYS

s.

Application manager

Application settings

Calendar

Camera

Contacts

Email

Default applications

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

os for certain tasks

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26

Software update

🛜 Wi-Fi

Bluetooth

Airplane mode

More connection settin...

More connection settin...

Smart Manager

Applications

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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)

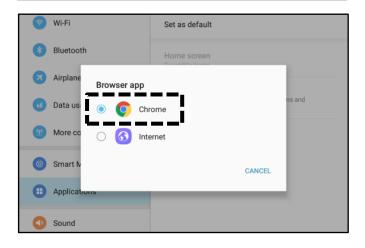
For KDS Tab S2 Tablets:

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

4. Select "Browser app".

Internet Smart Manager 6 ♪ 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

5. Ensure "Chrome" is selected.



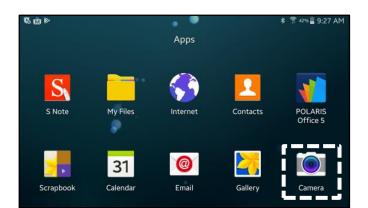
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Setting Your Video Size to "Limit to Email"

1. Select "Camera" from the App Screen.



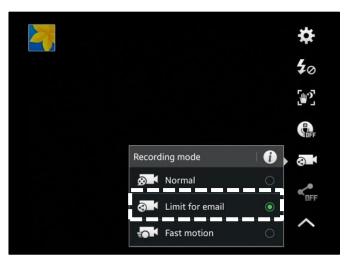
2. Select the Settings icon.

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.



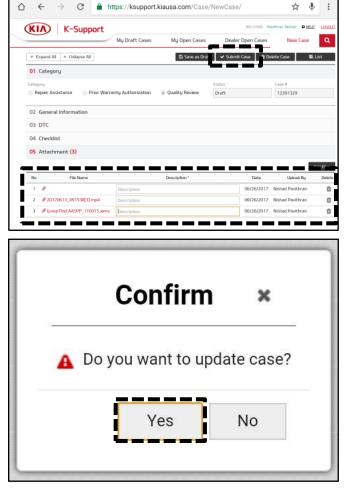
***** NOTICE

NOTE: Ensure the video size is set to "Limit to email" (see page 4). <u>Only record</u> <u>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.



Appendix 3 (Engine Noise Adapter Threshold)

Code	Concern	Action
RETEST Code 001	Any measured value out of range / below lower limit	Contact GIT America
RETEST Code 002	Any measured value out of range / over upper limit	Contact GIT America
RETEST Code 003	Difference between minimum and maximum of 2000 RPM <u>or</u> Idle RPM measured value out of range	Perform Retest three (3) more times. If Error Code 003 still displays after the third attempt, contact GIT America.
RETEST Code 004	Difference between minimum and maximum of 2000 RPM <u>and</u> Idle RPM measured value out of range	Perform Retest three (3) more times. If Error Code 004 still displays after the third attempt, contact GIT America.
RETEST Code 005	The adapter/extension cable is unplugged or damaged after test started	Perform Retest three (3) more times. If Error Code 005 still displays after the third attempt, contact GIT America.

GIT America can be contacted at (888) 542-4371.