

GROUP	MODEL
Product Improvement	See Model List on Page 1
NUMBER	DATE
PI1802W/X (Rev 2. 01/28/2018)	October 2018

# PRODUCT IMPROVEMENT CAMPAIGN

SUBJECT:

ENGINE REPLACEMENT INSTRUCTIONS FOR DTC P1326 (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 (PI1802, Rev 5, 12/20/2018) titled "Knock Sensor Detection System - ECU Logic Improvement". Specifically, this bulletin provides instructions on which procedures to follow if, after installation of the KSDS, any one of the subject vehicles below returns to the dealer with Diagnostic Trouble Code ("DTC"), P1326.

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 the Engine Long-Block Replacement according to the procedures in this TSB.

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

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.

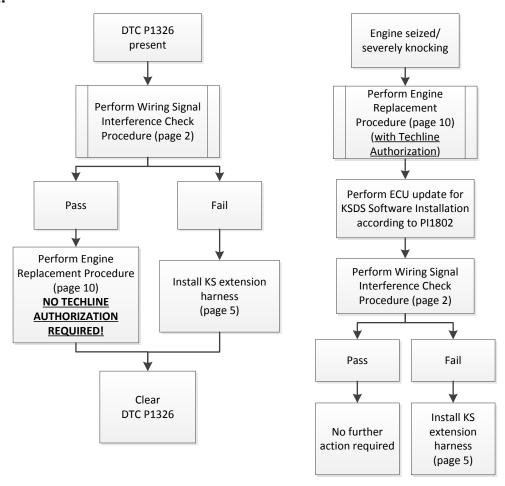
## \* NOTICE

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: ☐ General Manager ☐ Service Manager ☐ Parts Manager ☐ Service Advisors ☐ Technicians ☐ Body Shop Manager ☐ Fleet Repair

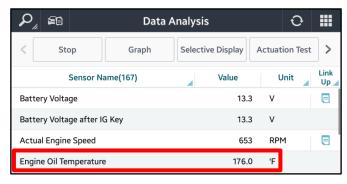
#### Flow Chart:



### Wiring Signal Interference Check Procedure:

- Using the KDS (connected to the internet), 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 10.
- 2. Start/warm up the engine and ensure **ENGINE OIL** is at operating temperature (176°F).





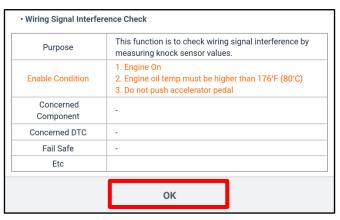
3. From the KDS Home Screen, select S/W Management.



4. Select Engine Control → Wiring Signal Interference Check.

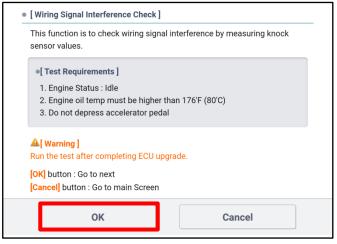


 Ensure the engine is on and at idle and <u>ENGINE OIL</u> temperature is at 176°F degrees or higher. Select OK to proceed.



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.

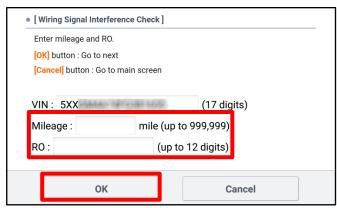


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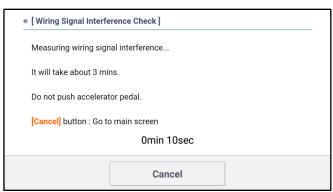
5c. If the conditions are not met, a pop-up as shown will be displayed.



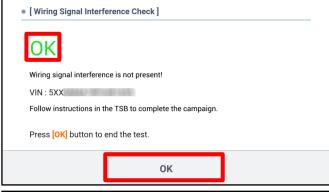
6. Enter vehicle mileage and RO number (VIN is automatically populated).



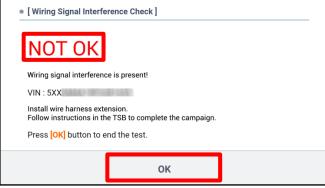
7. Wiring Signal Interference Check test will begin and take about three (3) minutes to complete. **NOTE**: <u>Do not</u> push on the accelerator pedal.



 If the result is "OK", turn the engine off and proceed to the Engine Replacement procedure on page 10.



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



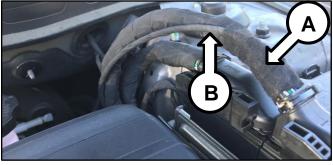
#### **KS Extension Harness Installation Procedure:**

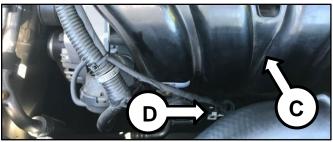
NOTE: Photos below are from a 15MY Optima (QF). Components and their location may vary in different models.

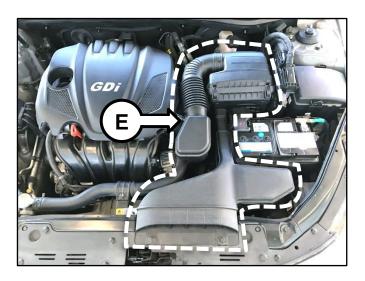
 Inspect the ECU harness (A) and verify if the Knock Sensor wiring extension harness (B) has previously been installed.

**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.

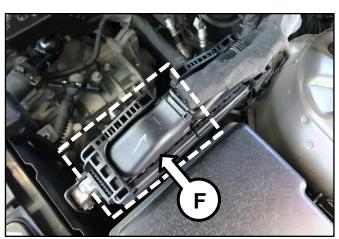
- If the extension harness (B) has been installed, open a Techline case online.
- If the extension harness (B) has not been installed, proceed to the next step.
- 2. Remove the air cleaner and duct assembly (E).







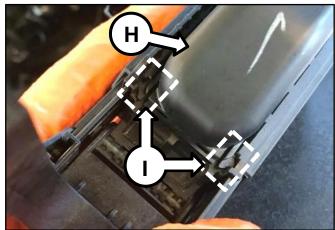
3. Disconnect the ECU connector (F).



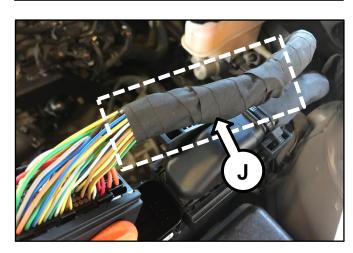
4. Cut the existing cable-tie (G) from the connector.



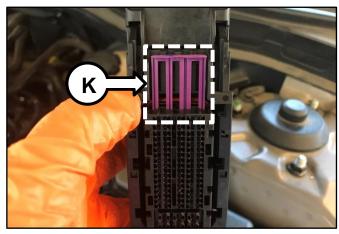
5. Remove the ECU connector cover (H) by carefully unclipping the two (2) tabs (I) and sliding the cover (H) towards the tabs (I).



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



7. Remove the pin retainer (K).



Locate the three (3) knock sensor circuit 8. terminals from the ECU connector (F). Refer to the "Schematic Diagrams -> Engine Electrical System → Engine Control System → Schematic Diagrams" chapter of the applicable ETM on KGIS.

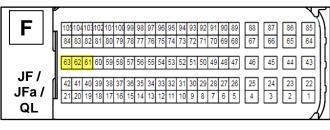
QF, TF, XMa, and SL			
Pin Wire			
44 Knock Sensor Shielded Ground			
45	45 Knock Sensor Ground		
62	62 Knock Sensor Interface (Signal)		

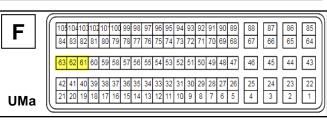
F	(9)9089888788888848382818079787777775 (74737277)7069686766666686 <mark>62</mark> 616065658
QF/ TF	[5755]55[53[53[53]55]50]49]48]47]45 <mark>345[44]</mark> 43[42]41] [4](3) [40][39][38][37][33[35][34][33[32][31][30][29][28][27][25][25][24] [23][22][20][19][18][17][16][18][14][13][12][11][10][9][8][7]

F	91 90 89 88 87 86 85 84 83 82 81 80 79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61 60 59 58	6 5
XMa/	56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41	4 3
SL	40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7	2 1

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

Click here to see a video of terminal removal.





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		

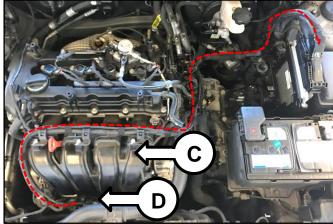
QF, TF, XMa, and SL				
Pin Extension Wire Color				
44	Blue			
45	Black			
62	Red			

UMa, JF, JFa, and QL				
Pin	Pin Extension Wire Color			
61 Blue				
62	Black			
63	Red			

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

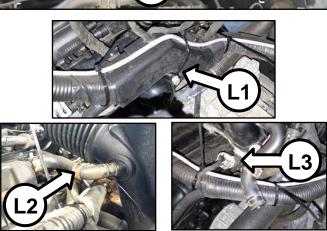


10. Route the extension harness (B) along the existing harness (A) leading by the intake manifold (C) to the knock sensor (D), as shown.

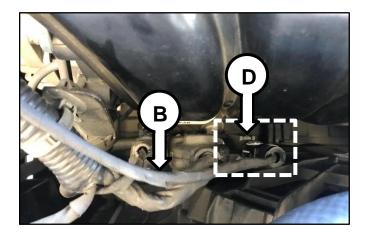


## \* IMPORTANT

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).

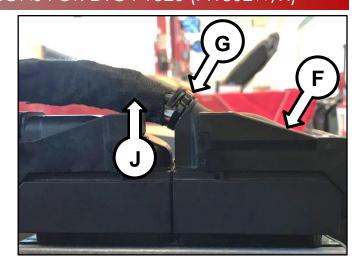


11. Connect the extension harness (B) to the knock sensor (D).

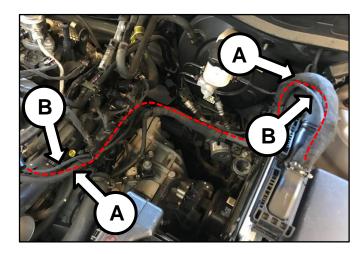


12. Cut off and discard the three (3) <u>old</u> knock sensor circuit terminals and the <u>old</u> knock sensor connector and secure the remaining wires to the <u>new</u> extension harness using the supplied electrical tape. **NOTE**: Complete removal of the <u>old</u> knock sensor wires is not necessary. Only remove the old terminals and connector.

13. 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.



14. 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 all parts from Service Kit I and II. Be advised of notes below.

#### Notes:

High Pressure Pump & Roller Tappet:

- Refer to TSB ENG083 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)

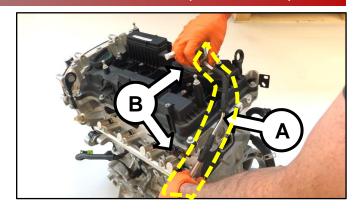


## \* NOTICE

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.

## \* NOTICE

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)

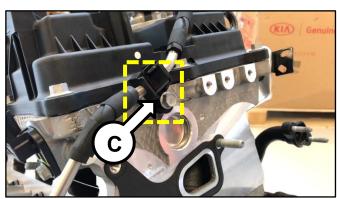
3. Using a click-type/electronic torque wrench and SST 09314-3Q100, torque both flare nuts (A) to specifications.

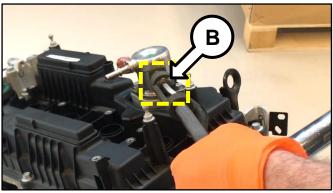
Tightening torque (flare nuts): 19.5 – 23.9 lb.ft (26.5 – 32.4 N.m, 2.7 – 3.3 kgf.m)

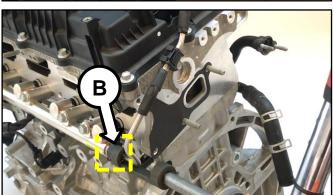
Click here to see a video tutorial of high pressure fuel pipe install (includes high pressure pump install).

## \* 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.



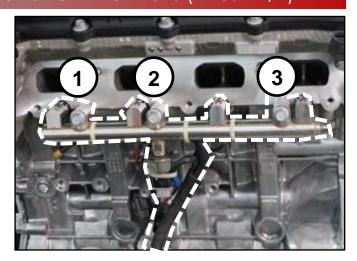




### **Delivery Pipe:**

- Refer to TSB ENG083 for special attention and handling procedures of GDI-specific components.
- Prior to installing the delivery pipe, be sure to replace all of the injector Orings 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 TSB ENG083).

### Dipstick Tube & Dipstick:

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

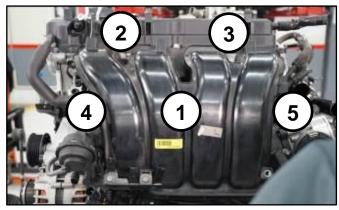
Tightening torque of bolt: 5.8 – 8.7 lb.ft (7.8 – 11.8 N.m, 0.8 - 1.2 kgf.m)

#### Intake Manifold:

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

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





#### **Exhaust Manifold:**

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

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

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

 On Turbo engines, 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

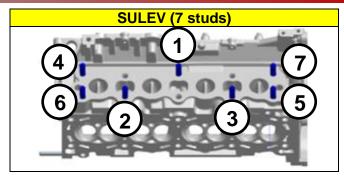
Tightening torque of oil drain line nuts and bolts:

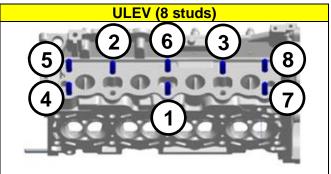
5.8 – 8.7 lb.ft (7.8 – 11.8 N.m,

0.8 - 1.2 kgf.m

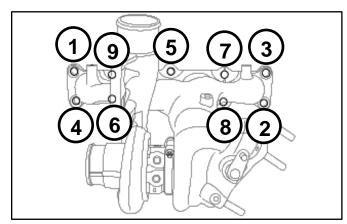
Torque exhaust manifold nuts in the sequence shown.

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





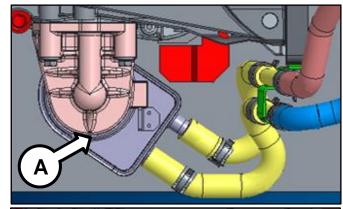


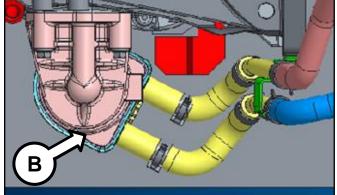


### Oil Cooler Tube Assembly:

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 17.
- If the new engine's (bigger) oil cooler
   (A) matches the old engine's (bigger) oil cooler (A), reuse the old engine's oil cooler tube assembly.
- If the new engine's (smaller) oil cooler
   (B) matches the old engine's (smaller) oil cooler (B), reuse the old engine's oil cooler tube assembly.





#### **Drive Plate Bolts:**

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

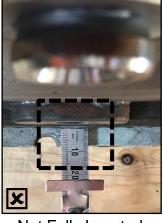
Tightening torque of nuts: 86.8 – 93.9 lb.ft (117.7 – 125.5 N.m, 12.0 – 13.0 kgf.m)



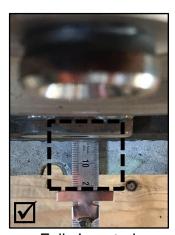
Drive Plate Bolt (A/T)

#### **Torque Converter**

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



Not Fully Inserted



Fully Inserted

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

Be sure to:

- 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 TSB ENG190 for information regarding engine replacement practices.

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

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

### AFFECTED VEHICLE RANGE:

Model	Production Date Range	
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:

Tool Name	Tool Part No.	Figure	Comments
Torque Wrench Socket	09314 3Q100		Refer to TSB ENG083 for
Injector Combustion Seal Ring Installer	09353 2B000		detailed usage instructions
Pin Tool	91400 00000QQK		Auto-shipped to Dealers in 10/2018. Replacements can be ordered through Mobis Parts America.
Click-Type or Electronic Torque Wrench	N/A		Locally Sourced

### **REQUIRED PARTS:**

Part MY Model		Part Number		Figure	
Name	lame   IVI T		2.4L GDI	2.0L T-GDI	rigure
	14-15	TF	21101 2GK06QQKR	-	
	14-16	SL	21101 2GK36QQKR	21101 2GK37QQKR	
		QF	21101 2GK06QQKR	21101 2GK08QQKR	
Engine Long	Engine Long Block 17-18 QI 16-17	XMa <u>ULEV &amp;</u> <u>SULEV</u>	21101 2GK11QQKR	-	
BIOCK		QL	*21101 2GK35QQKR	*21101 2GK39QQKR	A PARTY OF THE PAR
		UMa	*21101 2GK31QQKR	*21101 2GK32QQKR	
	18	Uivia	*21101 2GK33QQKR	ZIIUIZGK3ZQQKK	1,44
	16-18	JF, JFa	*21101 2GK34QQKR	*21101 2GK32QQKR	

<sup>\*</sup>Engines not yet available.

Models	Part Name	Engine	Part Number	Figure
TF, SL, QF,		2.4L GDI	21111 2GK50QQK	
XMa	Service Kit I	2.0L T-GDI	21111 2GK60QQK	
UMa, QL, JF,	Service Kit I	2.4L GDI	21111 2GK51QQK	-
JFa		2.0L T-GDI	21111 2GK52QQK	-

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Models	Part Name	Engine	Part Number	Figure
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 Harness	2.4L GDI and	*91400 2T100QQK	
UMa, QL, JF, JFa		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 14)	2.0L T-GDI	25470 2G650QQK	

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

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

N Code.	Claim	Code: C99 Causal		Repair	Labor Op	Ор	Replacement	
Model	Type	P/N	Qty.	Description	Code	Time	P/N	Qty.
	- 7						21111 2GK50QQKR	1
				(PI1802 <b>W1</b> )			21111 2GK70QQKR	1
				2.4L GDI 2WD MIL ON with P1326, KSDS Wire	180A12R0	8.4	23311 25050	7
				Harness Inspection Pass, & Engine Replacement	100/112110	M/H	(ULEV or SULEV) 21101 2GK11QQKRR	1
Sor. (XMa)	R	21020	0	(PI1802 <b>W1</b> ) 2.4L GDI 2WD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180A12R2	R2 0.8 *91400 2T100		1
`2.4L <sup>′</sup>		2G010		(PI1802 <b>W1</b> )			21111 2GK50QQK	1
				2.4L GDI AWD		8.6	21111 2GK70QQK	1
				MIL ON with P1326, KSDS Wire	180A12R1	M/H	23311 25050	7
				Harness Inspection Pass, & Engine Replacement			(ULEV or SULEV) 21101 2GK11QQKR	1
				(PI1802 <b>W1</b> ) 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
				(PI1802 <b>W1</b> )			21111 2GK50QQK	1
				2.4L GDI	40044604	8.4	21111 2GK70QQK	1
0.1				MIL ON with P1326, KSDS Wire Harness Inspection Pass, &	180A16R1	M/H	M/H 23311 25050	7
Opt. (QF)	R	23060	0	Engine Replacement			21101 2GK06QQKR	1
2.4L		2G400	J	(PI1802 <b>W1</b> ) 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 <b>W1</b> )			21111 2GK60QQK	1
				2.0L T-GDI	40044600	8.6	21111 2GK70QQK	1
0.1				MIL ON with P1326, KSDS Wire Harness Inspection Pass, &	180A16R0	M/H	23311 25050	7
Opt. (QF)	R	23060	0	Engine Replacement			21101 2GK08QQKR	1
2.0L T	, ,	2G400	-	(PI1802 <b>W1</b> ) 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 <b>W1</b> )			21111 2GK50QQK	1
				2.4L GDI MIL ON with P1326, KSDS Wire	180111R0	8.4	21111 2GK70QQK	1
Ont				Harness Inspection Pass, &	10011110	M/H	23311 25050	7
Opt. (TF)	R	23060	0	Engine Replacement			21101 2GK06QQKR	1
2.4L		2G400	-	(PI1802 <b>W1</b> ) 2.4L GDI MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180111R5	0.8 M/H	*91400 2T100QQK	1

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

	Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
					(Pl1802 <b>W1</b> )			21111 2GK50QQK	1
					2.4L GDI 2WD	180112R0	7.7	21111 2GK70QQK	1
					MIL ON with P1326, KSDS Wire Harness Inspection	100112KU	M/H	23311 25050	7
					Pass, & Engine Replacement			21101 2GK36QQKR	1
	Spo. (SL)	R	23060	0	(PI1802 <b>W1</b> ) 2.4L GDI 2WD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180112R5	0.9 M/H *91400 2T100Q0		1
	2.4L	IX	2G400		(PI1802 <b>W1</b> )			21111 2GK50QQK	1
					2.4L GDI AWD MIL ON with P1326, KSDS	180112R2	8.1	21111 2GK70QQK	1
					Wire Harness Inspection	100112112	M/H	23311 25050	7
					Pass, & Engine Replacement			21101 2GK36QQKR	1
					(PI1802 <b>W1</b> ) 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
					(Pl1802 <b>W1</b> )			21111 2GK60QQK	1
					2.0L T-GDI 2WD MIL ON with P1326, KSDS	180112R3	7.7	21111 2GK70QQK	1
					Wire Harness Inspection	10011213	M/H	23311 25050	7
					Pass, & Engine Replacement			21101 2GK37QQKR	1
	Spo. (SL)	R	23060	0	(PI1802 <b>W1</b> ) 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
	2.0L T	IX	2G400		(PI1802 <b>W1</b> )			21111 2GK60QQK	1
					2.0L T-GDI AWD MIL ON with P1326, KSDS	180112R4	8.1	21111 2GK70QQK	1
					Wire Harness Inspection	100112114	M/H	23311 25050	7
					Pass, & Engine Replacement			21101 2GK37QQKR	1
					(PI1802 <b>W1</b> ) 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

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

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.	
	,,				•		21111 2GK51QQK	1	
				(Pl1802 <b>W1</b> )			21111 2GK71QQK	1	
				2.4L GDI 2WD	10012200	8.4	23311 25050	7	
				MIL ON with P1326, KSDS Wire Harness Inspection	180A32R0	M/H	(16-17MY)		
				Pass, & Engine Replacement			*21101 2GK31QQKR (18MY)	1	
							*21101 2GK33QQKR		
Sor. (UMa)	R	23060	0	(PI1802 <b>W1</b> ) 2.4L GDI 2WD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180A32R4 0.8 M/H 91400 2T01	91400 2T010QQK	1		
2.4L	IX	2G401					21111 2GK51QQK	1	
				(PI1802 <b>W1</b> )			21111 2GK71QQK	1	
		2.4L GDI AWD MIL ON with P1326, KSDS Wire Harness Inspection Pass, & Engine Replacement	8.7	23311 25050	7				
			TOUASZKT	M/H	(16-17MY)				
							*21101 2GK33QQKR		
				(PI1802 <b>W1</b> ) 2.4L GDI AWD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180A32R5	0.8 M/H	91400 2T010QQK	1	
				(Pl1802 <b>W1</b> )			21111 2GK52QQK	1	
				2.0L T-GDI 2WD	180A32R2	8.4	21111 2GK72QQK	1	
				MIL ON with P1326, KSDS Wire Harness Inspection	100A32K2	M/H	23311 25050	7	
				Pass, & Engine Replacement			*21101 2GK32QQKR	1	
Sor. (UMa)	R	23060	0	(PI1802 <b>W1</b> ) 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	
2.0L T	K	2G401		(Pl1802 <b>W1</b> )			21111 2GK52QQK	1	
				2.0L T-GDI AWD MIL ON with P1326, KSDS	180A32R3	8.7	21111 2GK72QQK	1	
				Wire Harness Inspection	TOURSEINS	M/H	23311 25050	7	
				Pass, & Engine Replacement			*21101 2GK32QQKR	1	
				(PI1802 <b>W1</b> ) 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	

<sup>\*</sup>Engines not yet available.

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
	7,			(PI1802 <b>W1</b> )	•		21111 2GK51QQK	1
				2.4L GDI 2WD	400444D0	8.4	21111 2GK71QQK	1
				MIL ON with P1326, KSDS Wire Harness Inspection	180114R0	M/H	23311 25050	7
				Pass, & Engine Replacement		de         Time         P/N         Qty.           R0         8.4 M/H         21111 2GK51QQK         1           23311 25050         7           *21101 2GK35QQKR         1           R5         0.8 M/H         91400 2T010QQK         1           R1         21111 2GK51QQK         1           21111 2GK71QQK         1         1           23311 25050         7         *21101 2GK35QQKR         1           R7         0.8 M/H         91400 2T010QQK         1           R3         8.4 M/H         21111 2GK52QQK         1           23311 25050         7         *21101 2GK39QQKR         1           R8         0.8 M/H         91400 2T010QQK         1           R8         0.8 M/H         91400 2T010QQK         1           R8         0.8 M/H         91400 2T010QQK         1           R4         8.7 M/H         21111 2GK52QQK         1           23311 25050         7           *21101 2GK39QQKR         1           23311 25050         7           *21101 2GK39QQKR         1	1	
Spo. (QL)	R	23060	0	(PI1802 <b>W1</b> ) 2.4L GDI 2WD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180114R5		21111 2GK51QQK 21111 2GK71QQK	1
2.4L	1	2G401		(PI1802 <b>W1</b> )			21111 2GK51QQK	1
				2.4L GDI AWD MIL ON with P1326, KSDS	180114R2		21111 2GK71QQK	1
				Wire Harness Inspection	100114112	M/H	23311 25050	7
				Pass, & Engine Replacement			*21101 2GK35QQKR	1
				(PI1802 <b>W1</b> ) 2.4L GDI AWD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180114R7		91400 2T010QQK	1
				(Pl1802 <b>W1</b> )			21111 2GK52QQK	1
				2.0L T-GDI 2WD MIL ON with P1326, KSDS	180114R3	8.4	21111 2GK72QQK	
				Wire Harness Inspection	100114K3	M/H	3.4 21111 2GK72QQK M/H 23311 25050	7
				Pass, & Engine Replacement		21111 2GK52QQK 21111 2GK52QQK 21111 2GK72QQK M/H 23311 25050 *21101 2GK39QQKR	1	
Spo. (QL)	R	23060	0	(PI1802 <b>W1</b> ) 2.0L T-GDI 2WD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180114R8		91400 2T010QQK	1
2.0L T	IX.	2G401		(Pl1802 <b>W1</b> )			21111 2GK52QQK	1
				2.0L T-GDI AWD MIL ON with P1326, KSDS	180114R4			1
				Wire Harness Inspection	100117114	M/H	23311 25050	7
				Pass, & Engine Replacement			*21101 2GK39QQKR	1
				(PI1802 <b>W1</b> ) 2.0L T-GDI AWD MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180114R9		91400 2T010QQK	1

<sup>\*</sup>Engines not yet available.

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
				(PI1802 <b>W1</b> )			21111 2GK51QQK	1
				2.4L GDI MIL ON with P1326, KSDS	180113R0	8.4	21111 2GK71QQK	1
				Wire Harness Inspection	10011310	M/H	23311 25050	7
Opt.		23060		Pass, & Engine Replacement			*21101 2GK34QQKR	1
(JF) 2.4L	R	2G401	0	(PI1802 <b>W1</b> ) 2.4L GDI MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180113R5	0.8 M/H	91400 2T010QQK	1
				(Pl1802 <b>W1</b> )			21111 2GK51QQK	1
				2.4L GDI MIL ON with P1326, KSDS	180A33R0	8.4	21111 2GK71QQK	1
				Wire Harness Inspection	TOUASSKU	M/H 23311 25050	23311 25050	7
Opt.		23060		Pass, & Engine Replacement			*21101 2GK34QQKR	1
(JFa) 2.4L	R	2G401	0	(PI1802 <b>W1</b> ) 2.4L GDI MIL ON with P1326, KSDS Wire Harness Inspection Fail, KSDS Extension Harness Install	180A33R2	0.8 M/H	91400 2T010QQK	1
				(Pl1802 <b>W1</b> )			21111 2GK52QQK	1
				2.0L T-GDI MIL ON with P1326, KSDS	180A33R1	8.4	21111 2GK72QQK	1
				Wire Harness Inspection	TOUASSKT	M/H	23311 25050	7
Opt.		23060		Pass, & Engine Replacement			*21101 2GK32QQKR	1
(JFa) 2.0L T	R	2G401	0	(PI1802 <b>W1</b> ) 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

<sup>\*</sup>Engines not yet available.

WARRANTY INFORMATION (PI1802X1, ENGINE SEIZED/SEVERE KNOCKING):

N Code: N99 C Code: C99

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
	-			(PI1802 <b>X1</b> ) 2.4L GDI 2WD	-		21111 2GK50QQK	1
				Engine Seized / Severe		8.4	21111 2GK70QQK	1
				Knocking, Techline Authorized Engine	180A12R8	M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Pass			(ULEV or SULEV) 21101 2GK11QQKR	1
				(PI1802 <b>X1</b> )			21111 2GK50QQK	1
				2.4L GDI 2WD Engine Seized / Severe			21111 2GK70QQK	1
				Knocking, Techline	180A12RA	8.9	23311 25050	7
				Authorized Engine Replacement, KSDS Wire Harness Inspection Fail,	nent, KSDS Wire Inspection Fail, re Harness Install	M/H	(ULEV or SULEV) 21101 2GK11QQKR	1
Sor.	R	21020	0	KSDS Wire Harness Install		*91400 2T100QQK	1	
(XMa) 2.4L	K	2G010	U	(PI1802 <b>X1</b> ) 2.4L GDI AWD		8.6	21111 2GK50QQK	1
				Engine Seized / Severe			21111 2GK70QQK	1
				Knocking, Techline Authorized Engine	180A12R9	M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Pass			(ULEV or SULEV) 21101 2GK11QQKR	1
				(PI1802 <b>X1</b> )			21111 2GK50QQK	1
				2.4L GDI AWD Engine Seized / Severe			21111 2GK70QQK	1
				Knocking, Techline	180A12RB	9.1	23311 25050	7
_			Replacement, KSDS Wire Harness Inspection Fail,		M/H	(ULEV or SULEV) 21101 2GK11QQKR	1	
				KSDS Wire Harness Install			*91400 2T100QQK	1

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

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty
	- 7   0	. ,		(Pl1802 <b>X1</b> )	ор осис		21111 2GK50QQK	1
				2.4L GDI Engine Seized / Severe		8.4	21111 2GK70QQK	1
				Knocking, Techline Authorized Engine	180A16R9	M/H	23311 25050	7
0.1				Replacement, KSDS Wire Harness Inspection Pass			21101 2GK06QQKR	1
Opt. (QF)	R	23060 2G400	0	(PI1802 <b>X1</b> )			21111 2GK50QQK	1
2.4L		20100		2.4L GDI Engine Seized / Severe			21111 2GK70QQK	1
				Knocking, Techline Authorized Engine	180A16RB	8.9 M/H	23311 25050	7
				Replacement, KSDS Wire		101/11	21101 2GK06QQKR	1
				Harness Inspection Fail, KSDS Wire Harness Install			*91400 2T100QQK	1
				(Pl1802 <b>X1</b> ) 2.0L T-GDI			21111 2GK60QQK	1
				Engine Seized / Severe	40044000	8.7	21111 2GK70QQK	1
Opt. (QF) 2.0L T				Knocking, Techline Authorized Engine	180A16R8 M/H	23311 25050	7	
				Replacement, KSDS Wire Harness Inspection Pass			21101 2GK08QQKR	1
	R	R 23060 0	0	(PI1802 <b>X1</b> )			21111 2GK60QQK	1
2.0L I				2.0L T-GDI Engine Seized / Severe		21111 2GK70QQK	1	
		Knocking, Techline 180A16RA 9.2 Authorized Engine 180A16RA M/H	23311 25050	7				
				Replacement, KSDS Wire Harness Inspection Fail,			21101 2GK08QQKR	1
				KSDS Wire Harness Install			*91400 2T100QQK	1
				(PI1802 <b>X1</b> ) 2.4L GDI			21111 2GK50QQK	1
				Engine Seized / Severe	10011101	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 <b>X1</b> )			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

Ī	Model	Claim	Causal P/N	Qty.	Repair	Labor	Op	Replacement	Qty.
		Туре	P/N		Description (PI1802X1)	Op Code	Time	<b>P/N</b> 21111 2GK50QQK	1
					2.4L GDI 2WD Engine Seized / Severe			21111 2GK70QQK	1
					Knocking, Techline	180112RA	7.7 M/H	23311 25050	7
					Authorized Engine Replacement, KSDS Wire			21101 2GK36QQKR	1
					Harness Inspection Pass (PI1802 <b>X1</b> )			21111 2GK50QQK	1
					2.4L GDI 2WD			21111 2GK70QQK	1
					Engine Seized / Severe Knocking, Techline	180112RF	8.3	23311 25050	7
					Authorized Engine Replacement, KSDS Wire	10011210	M/H	21101 2GK36QQKR	1
	Spo.				Harness Inspection Fail, KSDS Wire Harness Install			*91400 2T100QQK	1
	(SL)	R	23060 2G400	0	(PI1802 <b>X1</b> )			21111 2GK50QQK	1
	2.4L				2.4L GDI AWD Engine Seized / Severe			21111 2GK70QQK	1
					Knocking, Techline	180112RC	8.1 M/H	23311 25050	7
					Authorized Engine Replacement, KSDS Wire			21101 2GK36QQKR	1
					Harness Inspection Pass (PI1802 <b>X1</b> )			21111 2GK50QQK	1
					2.4L GDI AWD			21111 2GK70QQK	1
			Knocking, Te	Engine Seized / Severe Knocking, Techline		8.7	23311 25050	7	
					Authorized Engine Replacement, KSDS Wire	1001121(11	M/H	21101 2GK36QQKR	1
					Harness Inspection Fail, KSDS Wire Harness Install			*91400 2T100QQK	1
					(PI1802 <b>X1</b> )			21111 2GK60QQK	1
					2.0L T-GDI 2WD Engine Seized / Severe			21111 2GK70QQK	1
					Knocking, Techline	180112RD 7.7 M/H	23311 25050	7	
					Authorized Engine Replacement, KSDS Wire			21101 2GK37QQKR	1
					Harness Inspection Pass (PI1802 <b>X1</b> )			21111 2GK60QQK	1
					2.0L T-GDI 2WD			21111 2GK70QQK	1
					Engine Seized / Severe Knocking, Techline	180112RI	8.3	23311 25050	7
					Authorized Engine Replacement, KSDS Wire	1001121(1	M/H	21101 2GK37QQKR	1
	Spo.		00000		Harness Inspection Fail, KSDS Wire Harness Install			*91400 2T100QQK	1
-	(SL) 2.0L T	R	23060 2G400	0	(PI1802 <b>X1</b> )			21111 2GK60QQK	1
	2.0L 1				2.0L T-GDI AWD Engine Seized / Severe			21111 2GK70QQK	1
					Knocking, Techline Authorized Engine	180112RE	8.1 M/H	23311 25050	7
					Replacement, KSDS Wire			21101 2GK37QQKR	1
					Harness Inspection Pass (PI1802 <b>X1</b> )			21111 2GK60QQK	1
					2.0L T-GDI AWD			21111 2GK00QQK	1
				Engine Seized / Severe Knocking, Techline	180112P I	8.7	23311 25050	7	
					Authorized Engine Replacement, KSDS Wire	180112RJ	M/H	21101 2GK37QQKR	1
					Harness Inspection Fail, KSDS Wire Harness Install			*91400 2T100QQK	1
					NODO WITE HATTIESS ITISTAL			31400 Z1 100QQK	'

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

Model	Claim	Causal	Otv	Repair	Labor	Ор	Replacement	Oty
wodei	Type	P/N	Qty.	Description	Op Code	Time	P/N	Qty.
				(PI1802 <b>X1</b> )			21111 2GK51QQK	1
				2.4L GDI 2WD			21111 2GK71QQK	1
				Engine Seized / Severe Knocking, Techline	180A32RA	8.4	23311 25050 (16-17MY)	7
				Authorized Engine	100/32/1/4	M/H	*21101 2GK31QQKR	
				Replacement, KSDS Wire			(18MY)	1
				Harness Inspection Pass			*21101 2GK33QQKR	
				(PI1802 <b>X1</b> )			21111 2GK51QQK	1
				2.4L GDI 2WD			21111 2GK71QQK	1 -
				Engine Seized / Severe		0.0	23311 25050 (16-17MY)	7
				Knocking, Techline Authorized Engine	180A32RB	8.9 M/H	*21101 2GK31QQKR	
				Replacement, KSDS Wire		101/11	(18MY)	1
				Harness Inspection Fail,			*21101 2GK33QQKR	
Sor.	Б	23060	_	KSDS Wire Harness Install			91400 2T010QQK	1
(UMa) 2.4L	R	2G401	0	(PI1802 <b>X1</b> )			21111 2GK51QQK	1
				2.4L GDI AWD			21111 2GK71QQK	1
				Engine Seized / Severe	180A32RE	8.7	23311 25050	7
				Knocking, Techline Authorized Engine	TOUASZKE	M/H	(16-17MY) *21101 2GK31QQKR	
				Replacement, KSDS Wire			(18MY)	1
				Harness Inspection Pass			*21101 2GK33QQKR	
				(PI1802 <b>X1</b> )			21111 2GK51QQK	1
				2.4L GDI AWD			21111 2GK71QQK	1
				Engine Seized / Severe Knocking, Techline Authorized Engine	ng Tachlina 0.5	9.2 M/H	23311 25050 (16-17MY)	7
					180A32RF		*21101 2GK31QQKR	
				Replacement, KSDS Wire			1	
				Harness Inspection Fail,			*21101 2GK33QQKR	
				KSDS Wire Harness Install			91400 2T010QQK	1
				(PI1802 <b>X1</b> ) 2.0L T-GDI 2WD			21111 2GK52QQK	1
				Engine Seized / Severe Knocking, Techline	180A32RC	8.4	21111 2GK72QQK	1
				Authorized Engine Replacement, KSDS Wire	100A32RC	M/H	23311 25050	7
				Harness Inspection Pass			*21101 2GK32QQKR	1
				(PI1802 <b>X1</b> ) 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		2G401		(PI1802 <b>X1</b> ) 2.0L T-GDI AWD			21111 2GK52QQK	1
				Engine Seized / Severe Knocking, Techline	180A32RG	8.7	21111 2GK72QQK	1
				Authorized Engine	100/102110	M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Pass			*21101 2GK32QQKR	1
				(PI1802 <b>X1</b> ) 2.0L T-GDI AWD			21111 2GK52QQK	1
				Engine Seized / Severe		0.0	21111 2GK72QQK	1
				Knocking, Techline Authorized Engine	180A32H 9.2 M/H		23311 25050	7
				Replacement, KSDS Wire Harness Inspection Fail,			*21101 2GK32QQKR	1
*Engines				KSDS Wire Harness Install			91400 2T010QQK	1

\*Engines not yet available.

	Claim	Causal		Repair	Labor	Ор	Replacement	
Model	Type	P/N	Qty.	Description	Op Code	Time	P/N	Qty.
				(PI1802 <b>X1</b> ) 2.4L GDI 2WD			21111 2GK51QQK	1
				Engine Seized / Severe Knocking, Techline	180114RA	8.4	21111 2GK71QQK	1
				Authorized Engine	100114NA	M/H	23311 25050	7
				Replacement, KSDS Wire Harness Inspection Pass			*21101 2GK35QQKR	1
				(PI1802 <b>X1</b> )			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. (QL)	R	23060	0	KSDS Wire Harness Install			91400 2T010QQK	1
2.4L	K	2G401		(PI1802 <b>X1</b> ) 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 <b>X1</b> )			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 <b>X1</b> ) 2.0L T-GDI 2WD			21111 2GK52QQK	1
				Engine Seized / Severe	400444DD	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 <b>X1</b> )			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 <b>X1</b> ) 2.0L T-GDI AWD			21111 2GK52QQK	1
				Engine Seized / Severe	400444DE	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 <b>X1</b> )			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	ta Engine t, KSDS Wire	M/H	*21101 2GK39QQKR	1
				Harness Inspection Fail, KSDS Wire Harness Install			91400 2T010QQK	1

<sup>\*</sup>Engines not yet available.

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
Opt. (JF) 2.4L	R	23060 2G401	0	(PI1802 <b>X1</b> ) 2.4L GDI Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Pass	180113RA	8.4 M/H	21111 2GK51QQK	1
							21111 2GK71QQK	1
							23311 25050	7
							*21101 2GK34QQKR	1
				(PI1802 <b>X1</b> ) 2.4L GDI Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Install	180113RF	8.9 M/H	21111 2GK51QQK	1
							21111 2GK71QQK	1
							23311 25050	7
							*21101 2GK34QQKR	1
							91400 2T010QQK	1
	R	23060 2G401	0	(PI1802 <b>X1</b> ) 2.4L GDI Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Pass	180A33RA	8.4 M/H	21111 2GK51QQK	1
Opt. (JFa) 2.4L							21111 2GK71QQK	1
							23311 25050	7
							*21101 2GK34QQKR	1
				(PI1802 <b>X1</b> ) 2.4L GDI Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Install	180A33RB	8.9 M/H	21111 2GK51QQK	1
							21111 2GK71QQK	1
							23311 25050	7
							*21101 2GK34QQKR	1
							91400 2T010QQK	1
	R	23060 2G401	0	(PI1802 <b>X1</b> ) 2.0L T-GDI Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Pass	180A33RC	8.7 M/H	21111 2GK52QQK	1
							21111 2GK72QQK	1
							23311 25050	7
Opt.							*21101 2GK32QQKR	1
(JFa)				(PI1802X1) 2.0L T-GDI Engine Seized / Severe Knocking, Techline Authorized Engine Replacement, KSDS Wire Harness Inspection Fail, KSDS Wire Harness Install	180A33RD	9.2 M/H	21111 2GK52QQK	1
2.0L T							21111 2GK72QQK	1
							23311 25050	7
							*21101 2GK32QQKR	1
							91400 2T010QQK	1

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

Old part number 91400 2T000QQK has been superseded by new part number 91400 2T100QQK. See Parts Bulletin 91-914 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.

## \* 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.

<sup>\*</sup>Engines not yet available.

## **Appendix 1 (Warranty Claim Authorization)**

Scenario		Description	Action Required
1	Campaign - TSB # PI1802W/X Case for Warranty Authorization <b>NO INSPECTION</b>	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)**

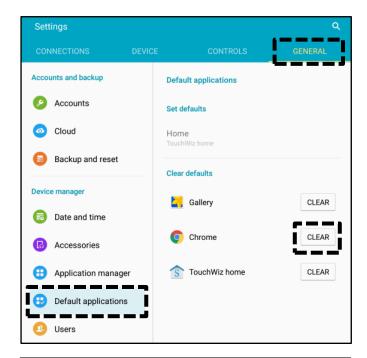
Capturing a video is often helpful in assisting the Kia Techline Agent in determining a proper diagnosis strategy. Once a TechLine case is open, the following procedure will guide you through the video capture and upload.

The Chrome<sup>™</sup> prowser should be used to access the Techline portal. Follow the steps below to clear the default browser if it is other than Chrome<sup>™</sup>.

#### For KDS Tab 10.1 Tablets:

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

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



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



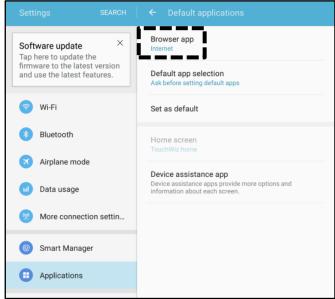
#### For KDS Tab S2 Tablets:

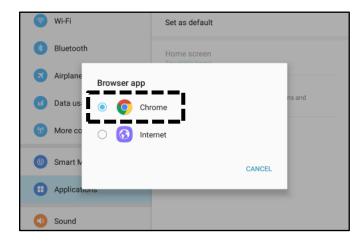
- 1. Select "Settings" from the App Screen.
- 2. Select "Applications".
- 3. Select "Default Applications".

Select "Browser app".

5. Ensure "Chrome" is selected.







### 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.



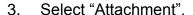
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### **Attaching Video to a Techline Case**

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

https://ksupport.kiausa.com

Open your existing Techline case for the vehicle requiring a video capture by selecting the case number.

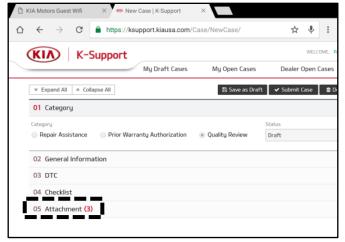


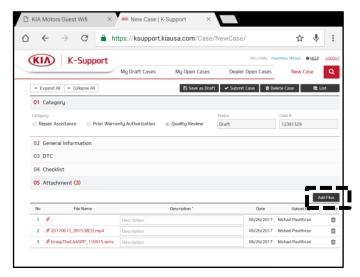
4. Select "Add Files".

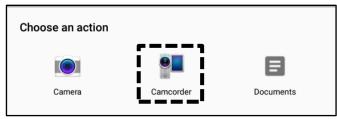
5. Select "Camcorder" and the video camera will open.











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.;

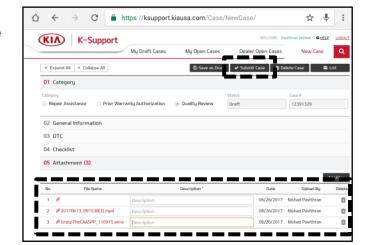
- Engine Noise record the engine.
- Hole In Block record the side of the engine with the damage.
- Seized Engine record a technician trying to turn the engine over with a breaker bar.



### \* NOTICE

NOTE: Ensure the video size is set to "Limit to email" (see page 31). Only record the VIN and the engine exhibiting the concern. 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.



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