	GROUP	MODEL
	ENG	**See Model List on Page 1**
	NUMBER	DATE
	205 (Rev 1, 04/10/2019)	**April 2019**

TECHNICAL SERVICE BULLETIN

SUBJECT: SERVICE ACTION: WIRING SIGNAL INTERFERENCE CHECK & ENGINE NOISE INSPECTION (SA379)

✶ 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 an expanded diagnostic test that is now required on a number of vehicles previously diagnosed with Diagnostic Trouble Code ("DTC") P1326. Using the procedures published in TSB PI1802W/X and PI1803W/X, the subject vehicles were diagnosed and determined to require an engine replacement and are currently being held at dealers pending repair.

As a result of additional field data collection and analysis, the initial diagnosis method has been updated to improve test result accuracy. Prior to performing an engine replacement on any of the VINs affected by this Service Action, the engine condition needs to be re-assessed utilizing an updated/expanded diagnostic process. Follow the procedure outlined in this bulletin to determine the engine's condition and then complete the repair by reverting back to TSB PI1802W/X and PI1803W/X (depending on model/model year) for instructions to either install the wiring harness or to replace the engine.

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

Campaign	Year	Model	Engine	Production Date
PI1802W/X	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
PI1803W/X	2011-2013	Optima (QF/TF)	2.4L & 2.0L T-GDI	8/12/10 – 9/27/13
	2014	Optima (QF)	2.4L & 2.0L T-GDI	8/28/13 – 5/15/14
	2011-2013	Sportage (SL)	2.0L T-GDI	12/30/10 – 8/30/13
	2012-2014	Sorento (XMa)	2.4L GDI	4/19/11 – 2/10/14

✶ NOTICE

A Service Action is a repair program without customer notification that is performed during the warranty period. Any dealer requesting to perform this repair outside the warranty period will require DPSM approval.

Repair status for a VIN is provided on WebDCS (Service → Warranty Coverage → Warranty Coverage Inquiry → Campaign Information). Not completed Recall / Service Action reports are available on WebDCS (Consumer Affairs → Not Completed Recall → Recall VIN → Select Report), which includes a list of affected vehicles.

This issue number is SA379.

File Under: <Engine>

Circulate To: ☒ **General Manager** ☒ **Service Manager** ☒ **Parts Manager** ☒ **Service Advisors** ☒ **Technicians** ☒ **Body Shop Manager** ☒ **Fleet Repair**

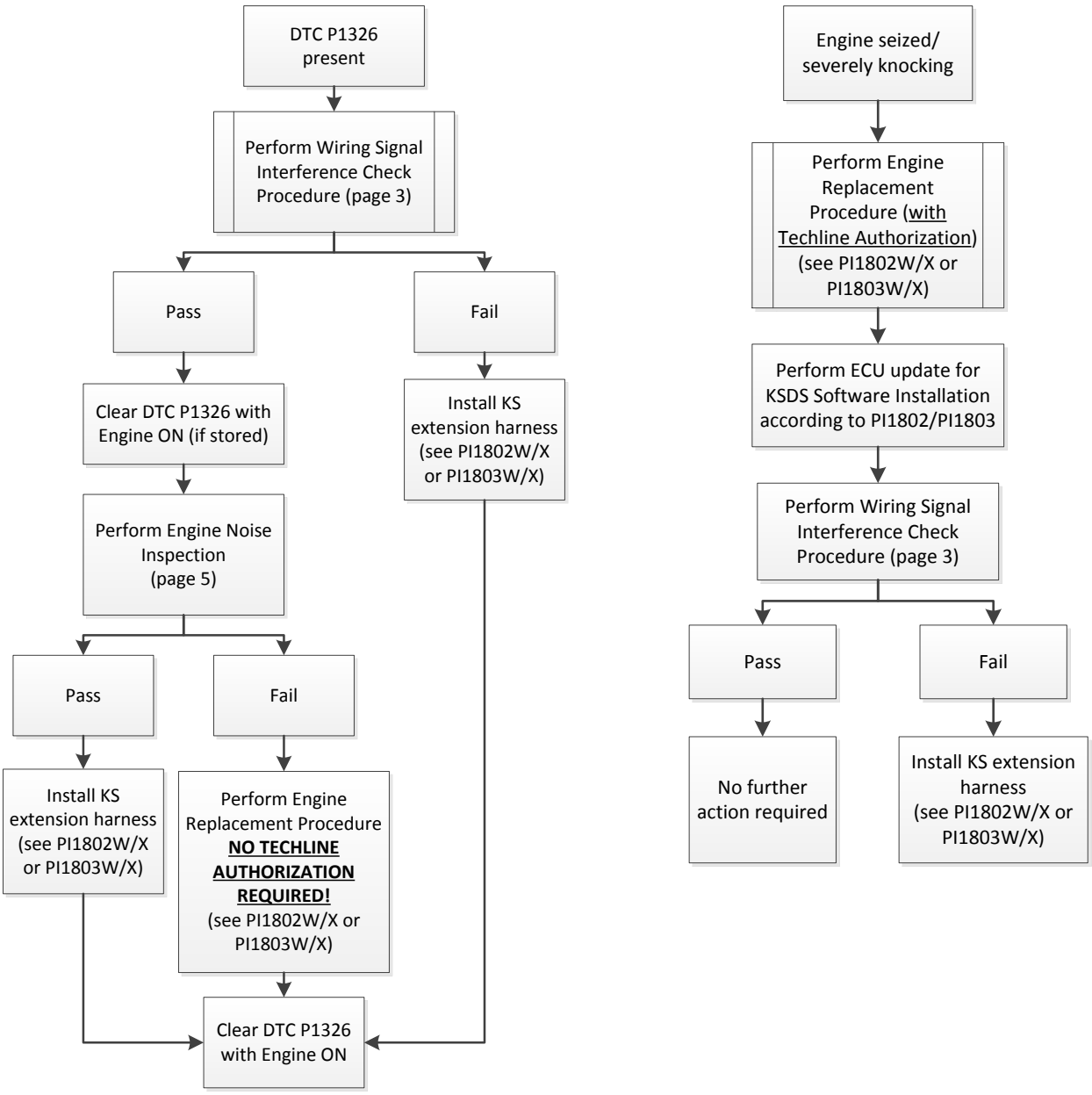
SUBJECT: SERVICE ACTION: WIRING SIGNAL INTERFERENCE CHECK & ENGINE NOISE INSPECTION (SA379)

* IMPORTANT

All parts orders will be validated by the KDS test results (Wiring Signal Interference Test AND Engine Noise Test) per this bulletin. Only parts orders with valid test results or Techline approval will be allocated. If test results are not confirmed via KDS within fourteen (14) business days of the launch of this bulletin or the Parts order (whichever is later), the parts order may be deleted.

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

Flow Chart:



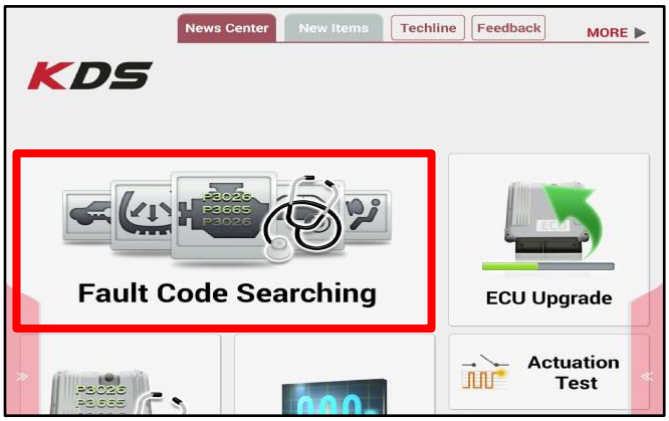
Note: **If any concerns arise after completing the flow chart, open a Techline case online.**

PI1802W/X: Wiring Harness Install – page 12; Engine Replacement – page 17
PI1803W/X: Wiring Harness Install – page 12; Engine Replacement – page 16

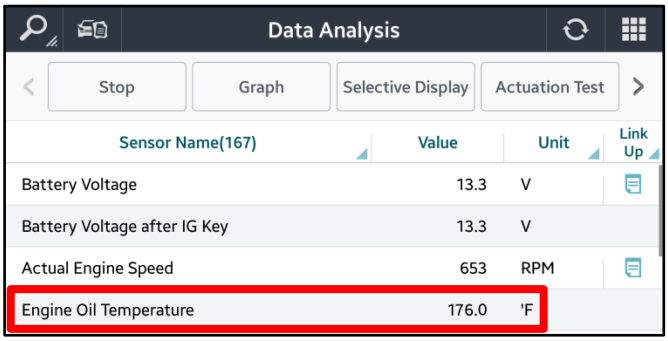
SUBJECT: SERVICE ACTION: WIRING SIGNAL INTERFERENCE CHECK & ENGINE NOISE INSPECTION (SA379)

Wiring Signal Interference Check Procedure:

1. Using the KDS **(connected to the internet)**, perform a Fault Code Search and confirm DTC P1326 is present.
   - If P1326 is or was 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 in PI1802W/X (page 17) or PI803W/X (page 16) (with Techline authorization per Flow Chart).

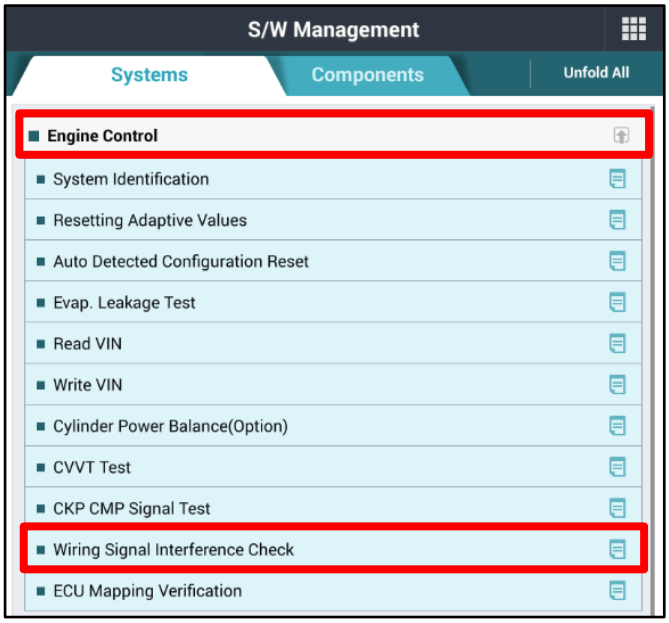


2. Start/warm up the engine and ensure **ENGINE OIL** is at operating temperature (176°F).

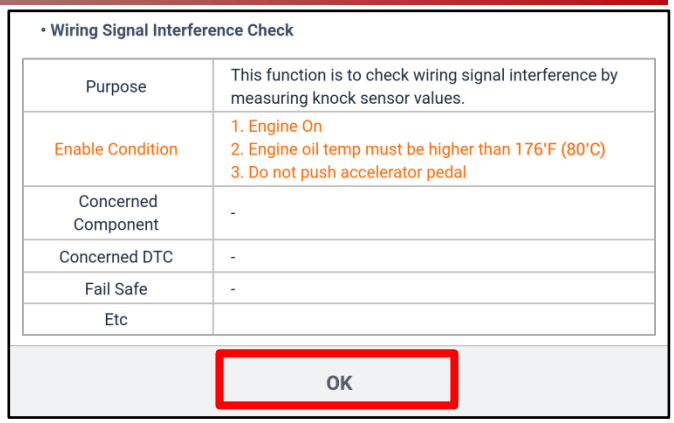


3. From the KDS Home Screen, select S/W Management.

4. Select Engine Control → Wiring Signal Interference Check.

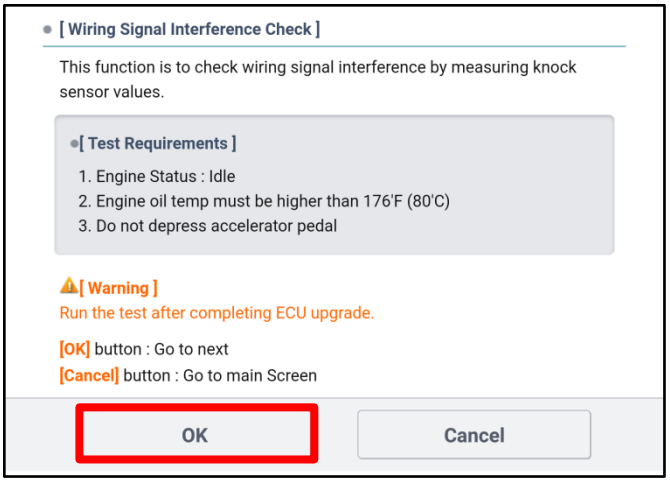


5. Ensure the engine is on and at idle and **ENGINE OIL** temperature is at 176°F degrees or higher. Select OK to proceed.

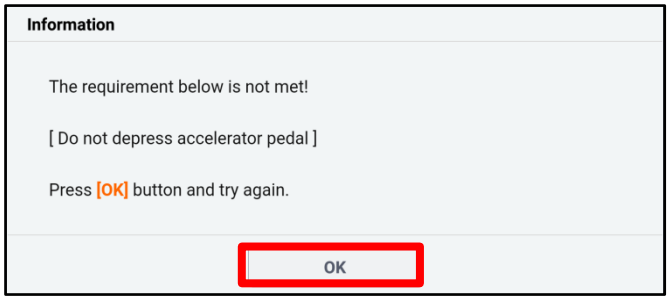


5b. Select OK to proceed.

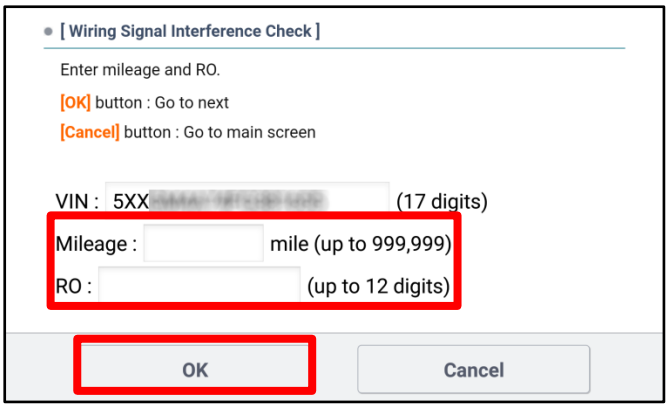
NOTE: This test should only be performed if Knock Sensor Detection System - ECU Logic Improvement (PI1803) has previously been completed.



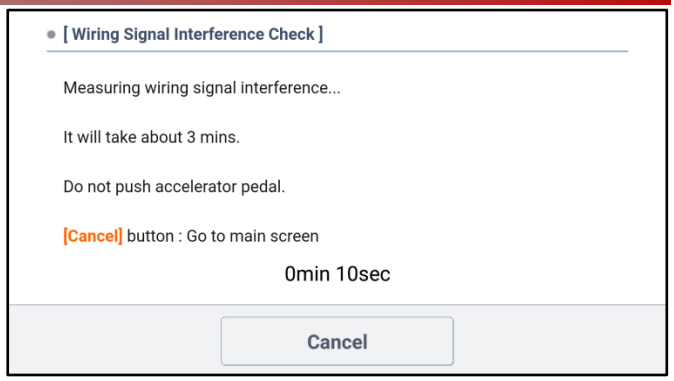
5c. If the conditions are not met, a pop-up as shown will be displayed.



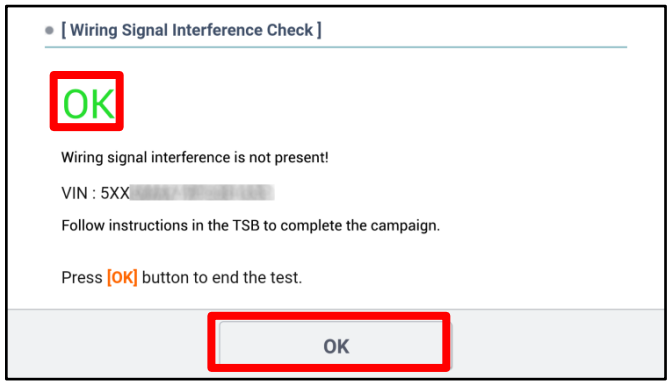
6. Enter vehicle mileage and RO number (VIN is automatically populated).



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



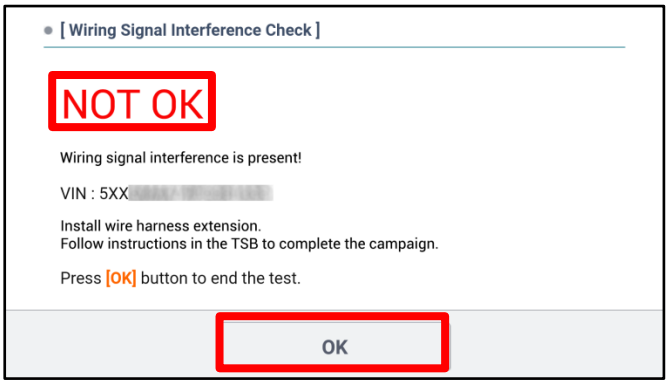
- If the result is "OK", **clear DTC P1326** and then proceed to the Engine Noise Inspection procedure below.



★ NOTICE

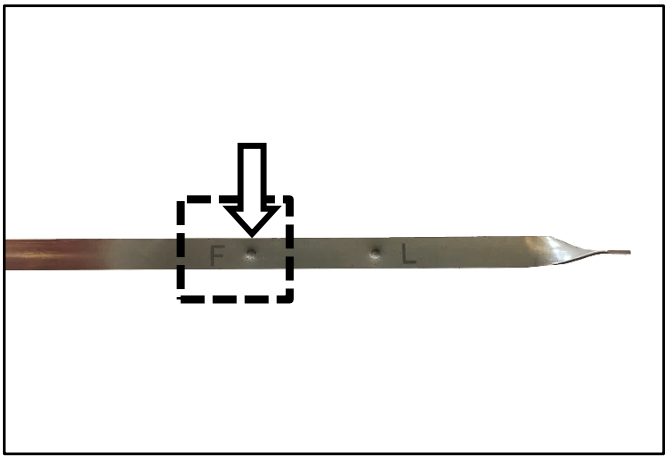
DTC P1326 must be cleared in order to perform the Engine Noise Inspection Procedure.

- If the result is "NOT OK", turn the engine off and proceed to **step 2** of the Knock Sensor (KS) Extension Harness Installation procedure on PI1802W/X (page 12) or PI803W/X (page 12).



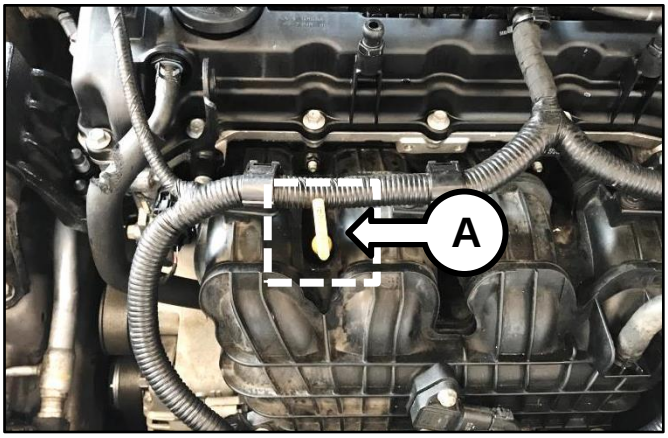
Engine Noise Inspection Procedure:

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 PI1802W/X (page 40) or PI1803W/X (page 30).**

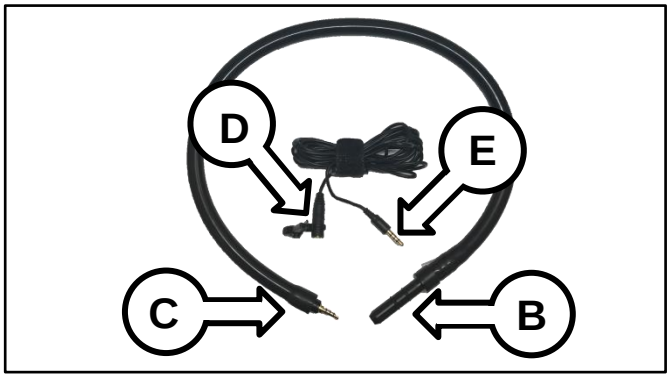
2. With the engine off, remove the dipstick (A).



✶ 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.



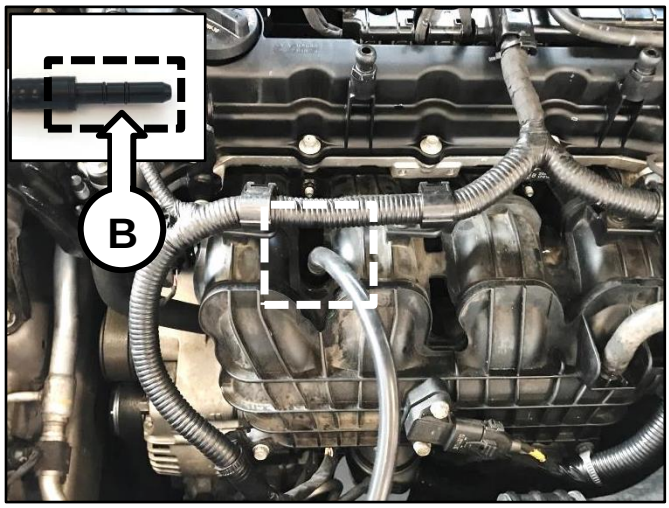
✶ NOTICE

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.

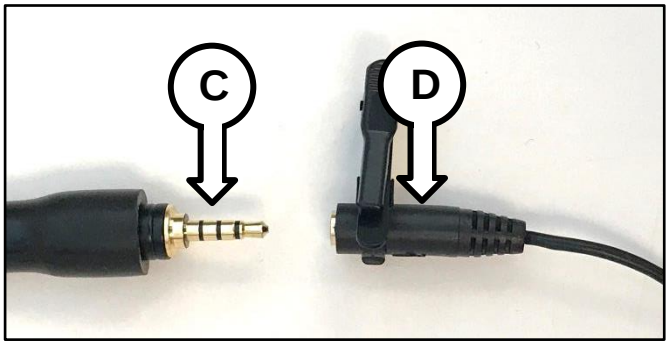

Not Centered


Centered

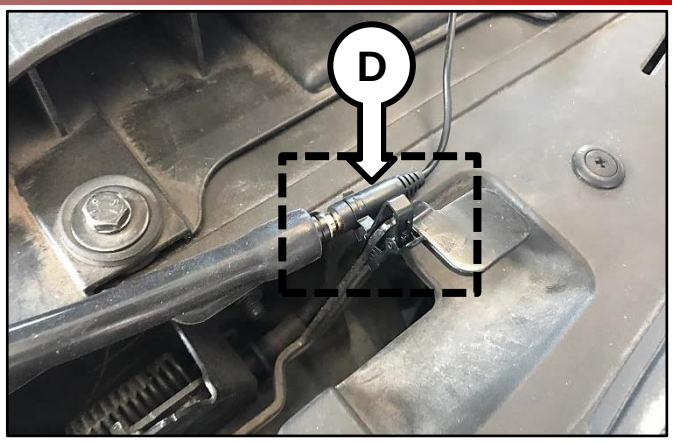


[Click here for a video tutorial of the Inspection Procedure.]

4. 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).



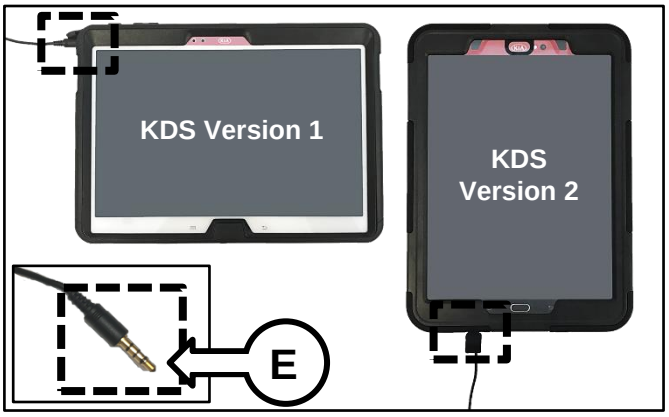
5. Attach the SST clip of the extension cable (D) to the hood latch.



✶ NOTICE

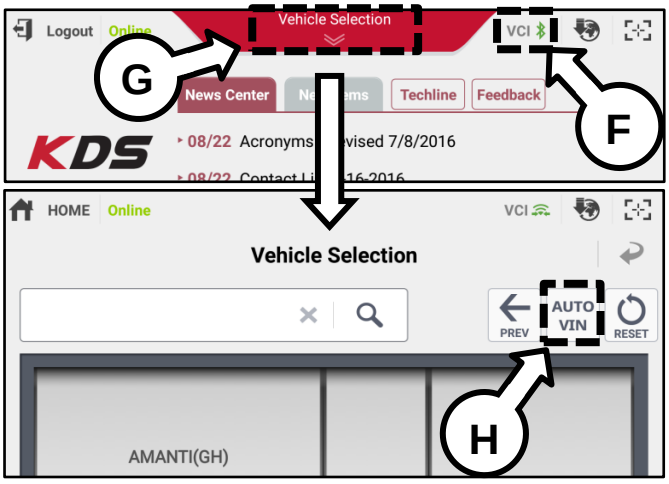
Make sure to route the extension cable away from moving parts (pulleys, fan, and belts and be careful not to get it pinched between door and body or window, etc.).

6. 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).

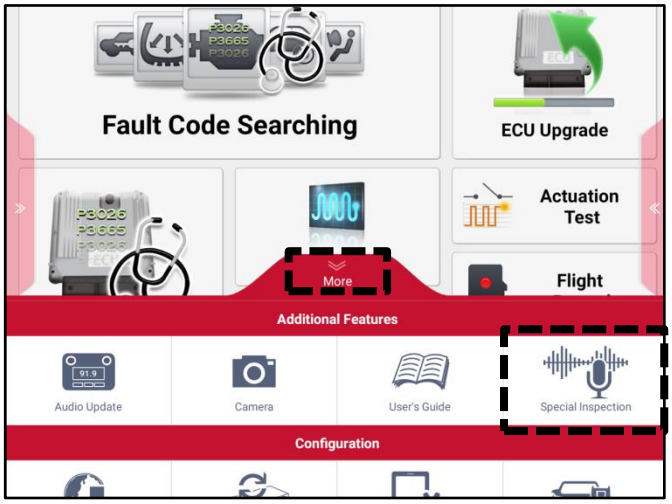


7. Connect the VCI-II to the OBD-II connector and launch the KDS application from the KDS tablet home page.

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



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



★ NOTICE

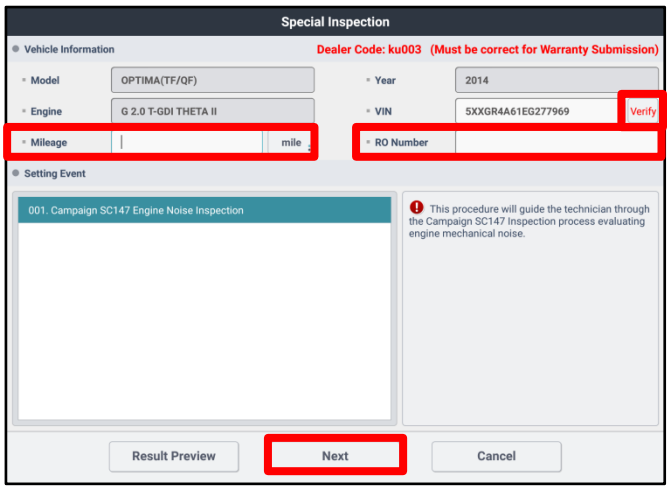
If the vehicle model/model year does not qualify for this campaign, a message will pop up; if so, verify that the vehicle is included in the list of affected VINs.

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.

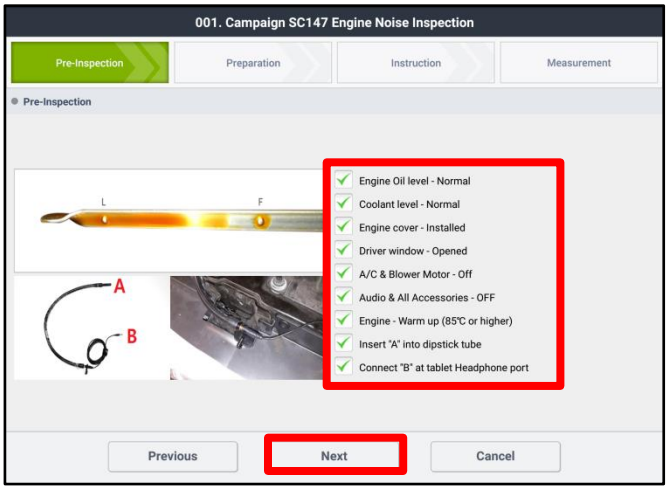
Select “Next” to continue.



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

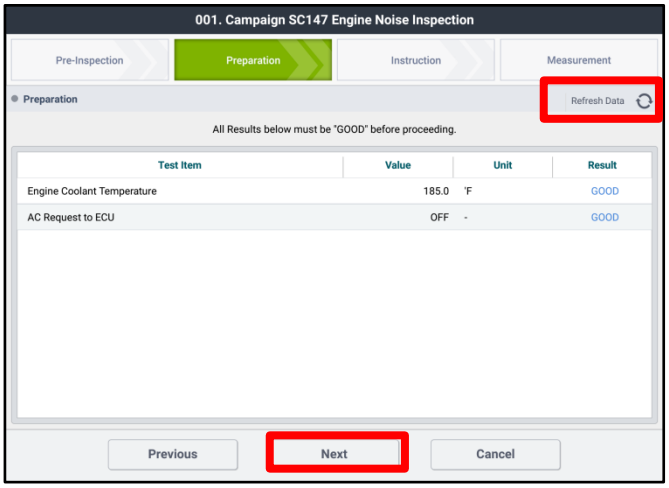
Select “Next” after checking items mentioned above.



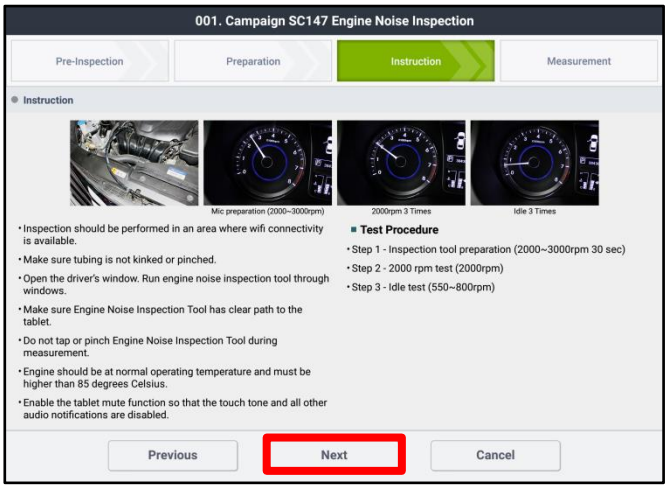
12. The program will automatically check the engine sensors' data. Select the "Next" button if all the conditions are satisfied.

    - 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".

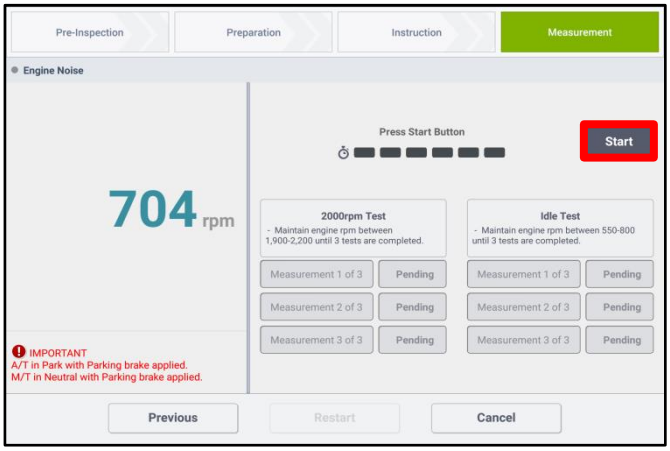


13. Follow the instructions on the screen then select "Next".



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".

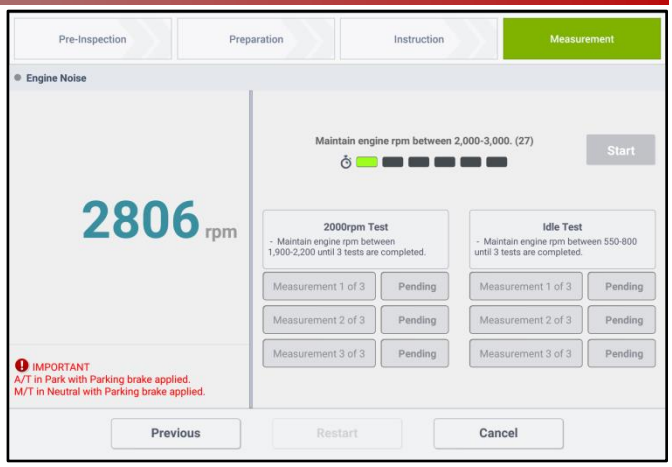


★ NOTICE

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.

15. 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.

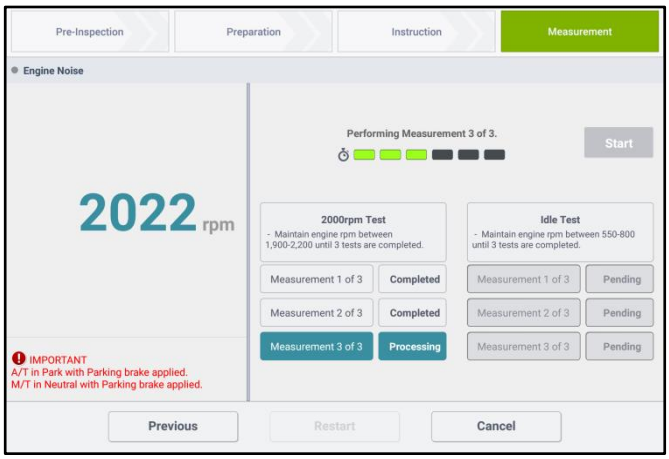
    The program will automatically proceed to the next step when the engine noise tester is ready.



✶ NOTICE

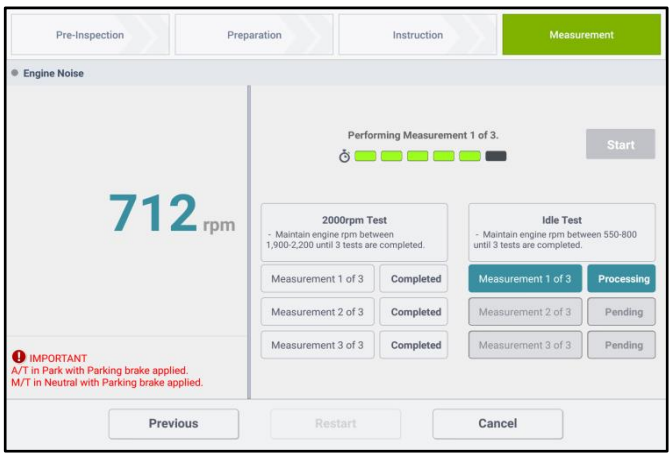
Once the RPM is in the specified range, the time count (green bars) will be initialized.

16. 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.



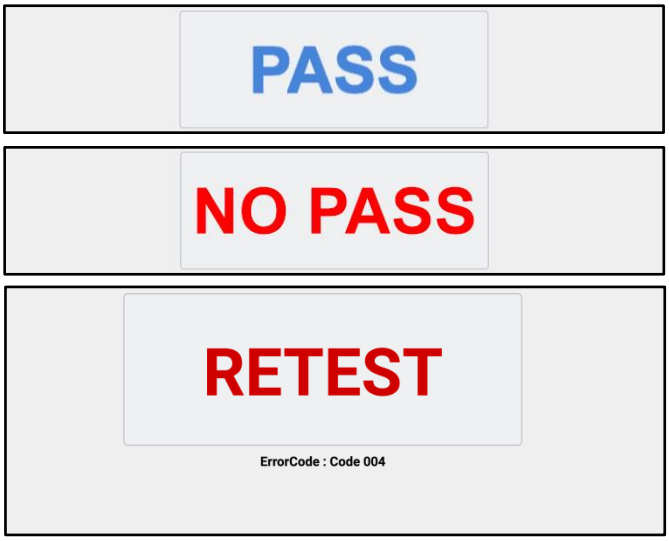
17. When the “2000rpm Test” is complete, release the accelerator pedal so that engine maintains idle state for the “Idle Test”.

18. The “Idle Test” will automatically begin. Keep the engine at idle and wait until all three (3) measurements are complete.



19. After the completion of the engine noise inspection, the KDS will automatically generate/display a “PASS” or “NO PASS” result.

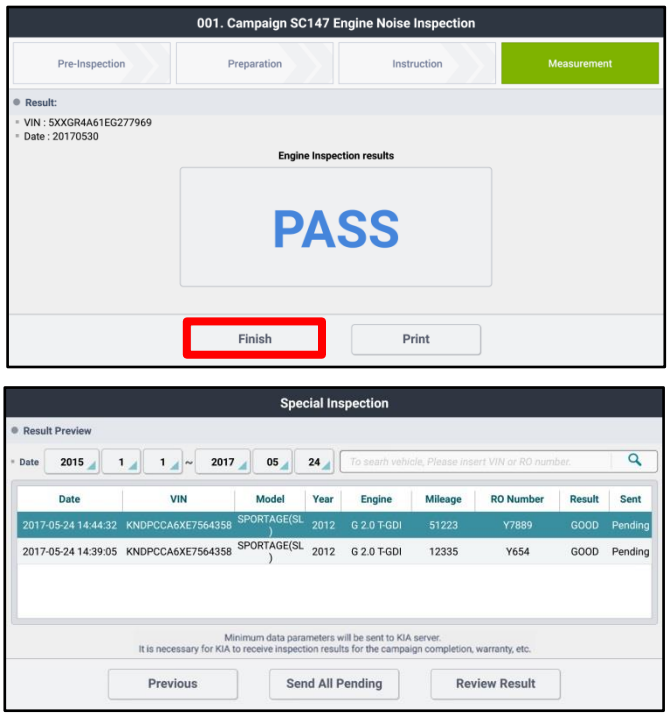
    - If the inspection result is “PASS”, proceed to the KS Extension Harness Installation procedure in PI1802W/X (page 12) or PI1803 (page 12).
    - If the inspection result is “NO PASS,” proceed to the Engine Replacement Procedure in PI1802W/X (page 17) or PI1803W/X (page 16)
    - If the inspection result is “RETEST” with an error code, see Adapter Error Code chart in Appendix 1 on page 13 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.



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. Refer to PI1802W/X or PI1803W/X to continue repair with Engine Replacement or Wiring Harness install.

    PI1802W/X: Wiring Harness Install – page 12; Engine Replacement – page 17
    PI1803W/X: Wiring Harness Install – page 12; Engine Replacement – page 16

SUBJECT: SERVICE ACTION: WIRING SIGNAL INTERFERENCE CHECK & ENGINE NOISE INSPECTION (SA379)

PI1802W/X 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

PI1803W/X AFFECTED VEHICLE RANGE:

Model	Production Date Range
11-13MY Optima (QF/TF)	August 12, 2010 through September 27, 2013
14MY Optima (QF)	August 28, 2013 through May 15, 2014
12-14MY Sorento (XMa)	April 19, 2011 through February 10, 2014
11-13MY Sportage (SL)	December 30, 2010 through August 30, 2013

REQUIRED TOOL:

Tool Name	Tool Part No.	Figure	Comments
Engine Noise Tester SST	GIT1XTDCP005		Auto-shipped to Dealers in June 2017 for SC147 For replacements, contact Snap-On Business Solutions at (888) 542-1011.

WARRANTY INFORMATION:

N Code: N99 C Code: C99

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
Opt. (TF, JF), Spo. (SL, QL	V	23060 2G400	0	(SA379) Wiring Harness & Engine Noise Inspection (KMC VIN)	190027R0	0.5 M/H	N/A	N/A
Opt. (QF, JFa), Sor. (XMa, UMa)	V	23060 2G400	0	(SA379) Wiring Harness & Engine Noise Inspection (KMMG VIN)	190A10R0	0.5 M/H	N/A	N/A

NOTE: 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 SA379 when accessing the WebDCS system.

Appendix 1 (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 or 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 and 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.