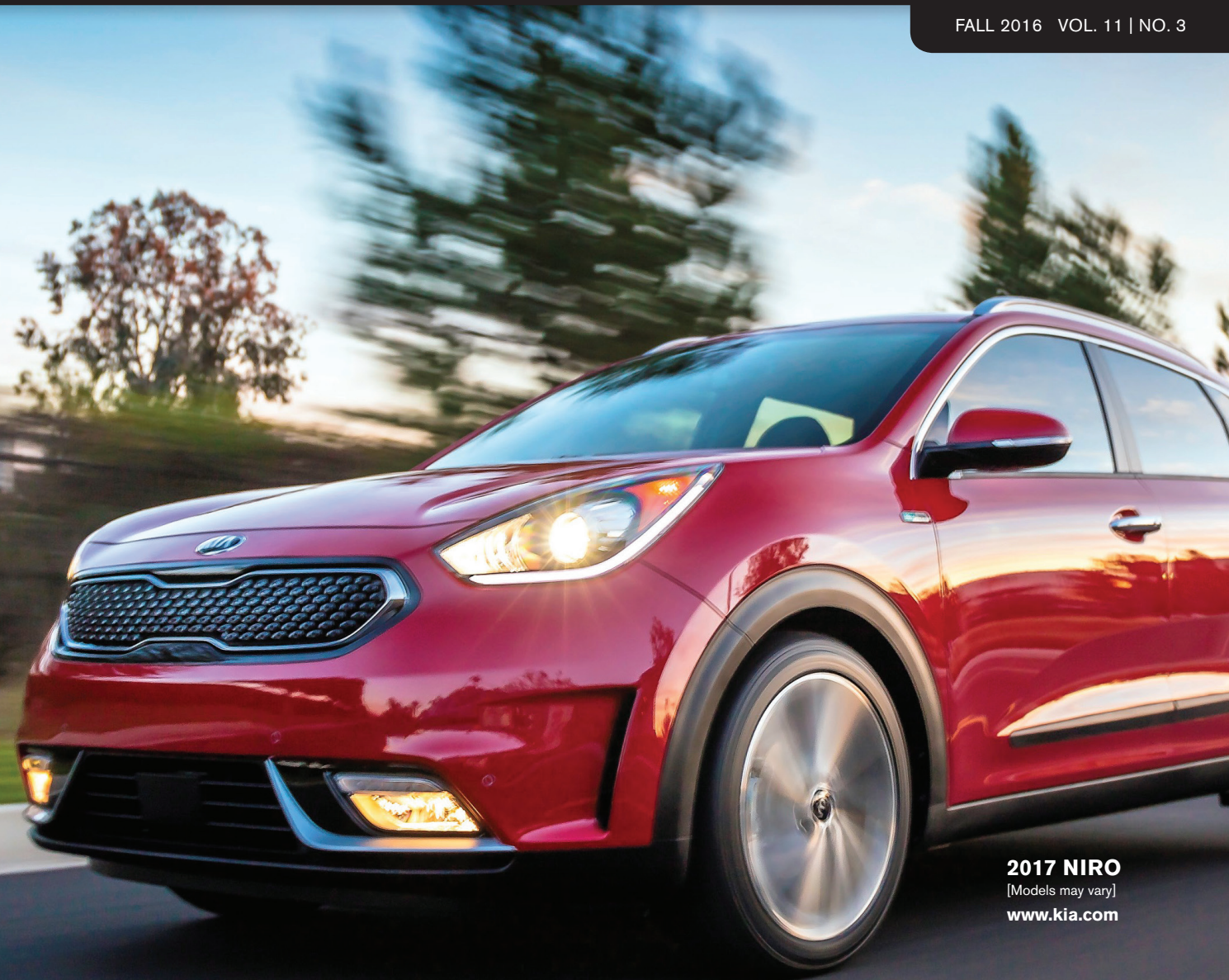


Quality Connection

Dedicated to Quality Kia Vehicle Repairs

FALL 2016 VOL. 11 | NO. 3



2017 NIRO
[Models may vary]
www.kia.com

FOR SAFETY'S SAKE

Motorists' safety trumps everything else

BRIDLE THE IDLE

ECM upgrade, pulley replacement rein in instability

OPEN AND SHUT CASE

Fuel door alignment provides smooth operation



Genuine Parts

For Safety's Sake

Motorists' safety trumps everything else

Both auto industry analysts and automotive consumers recognize that Kia vehicles are among the best in the world. Besides being the vanguard of design and quality, Kia has taken its place among the leaders in technological advancements. But as great as Kia's technological advancements have been, as well as those yet to come, there is a distinction that Kia likes to make: Although technology drives vehicle improvement, Kia is not driven by technology for the sake of technology; rather, it is driven for the sake of safety.

Case in point is the Kia's best-selling CUV, the 2017 Sorento. This carefully crafted and engineered vehicle has earned top honors – Top Safety Pick Plus (TSP+) — from the Insurance Institute for Highway Safety (IIHS) when equipped with optional front-crash prevention. With the Sorento earning “good” crashworthiness ratings and a superior rating for the optional front-crash prevention system, Kia continues to demonstrate its ongoing commitment to safety.

“These results are a clear indication that Kia places a high priority on safety by



The 2017 Sorento has earned top safety honors from the Insurance Institute for Highway Safety.

offering advanced crash avoidance technologies and enhancing vehicle structure through the use of advanced high-strength steel,” said Orth Hedrick, vice president, product planning, Kia Motors America. “We are proud that the Sorento received strong ratings across the board, and having earned the prestigious TSP+ award bolsters our strong safety record and the integrity of our products.”

Safety certainly was a major consideration when *Parents* magazine and

Edmunds.com choose the Optima and Soul among the 10 Best Family cars of 2016. In response to this recognition, Orth again emphasized safety as a priority, as well as Kia vehicles' innovative and easy-to-use features at an outstanding value. Summing up, Orth said...“the recognition from *Parents* magazine and Edmunds.com validates our efforts.”

What does this recognition mean to you as an independent shop owner? We think it means that you will have a closer bond with the Kia owners who choose your shop for maintenance and repair. Unquestionably, motorists feel strongly about safety for themselves and their families. To assure that their Kias remain Kias, thus keeping their original specs intact assuring the highest degree of safety possible, we recommend installing Genuine Kia parts exclusively. By doing so, you will give your customers peace of mind and keep their confidence for as long as you work on their Kias.

Kia Motors America, Inc.

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Let's Talk Tech...

Kia Global Information System site provides answers 24/7/365



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Bridle the Idle

ECM upgrade, pulley replacement rein in instability



» **NOTE:** For confirmation that the latest reflash has been performed to a vehicle you are working on, verify ROM ID using the tables in this article.

» **CAUTION:** Do not attempt to jack the engine up by the oil pan as this may damage the oil pan. In addition, the clearance between the oil pan and oil screen pick-up is minimal and a collapsed pan can restrict oil flow into the pump assembly.



» This and other technical information is available at www.Kiatechinfo.com.

» All images are for illustration purposes only.



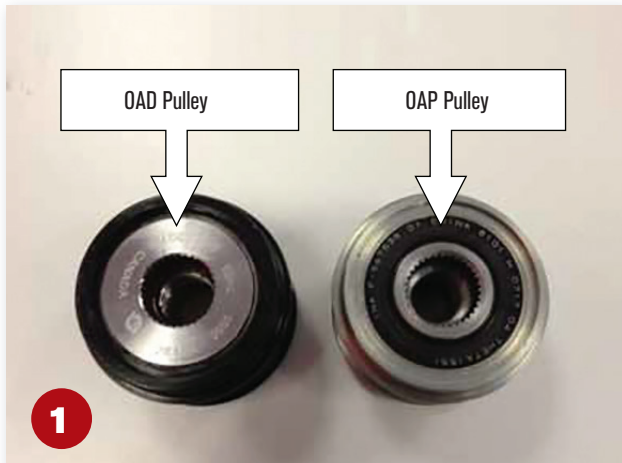
A certain level of harmonic vibration at idle rpm on 2013MY Sorentos' 2.4L GDI engines is a normal characteristic, however, some of these vehicles produced from February 15, 2012 to September 13, 2012 may need improvement of their idle rpm stability (750 to 680) at a stop. The remedy to stabilize the idle is an ECM upgrade and alternator pulley replacement.

REQUIRED PARTS

Part Name	Part Number	Figure
Pulley	37322 2G500	
Tensioner	25281 25000	

REQUIRED SST

Alternator Pulley Removal/Installation Kit (P/N 09373-2700)		
Pulley Removal Tool Tensioner		T-50 Torx® Socket
		



Pulley Identification Chart	
Pulley Type	Body Color
OAD	Black
OAP	Silver

Service Procedure

1. Disconnect and isolate the negative terminal from the battery. Inspect the alternator pulley to confirm the specific type of pulley installed on the vehicle. If the vehicle is equipped with the Original Alternator Dampening pulley (OAD; see identification chart above), perform the procedure outlined in this article.

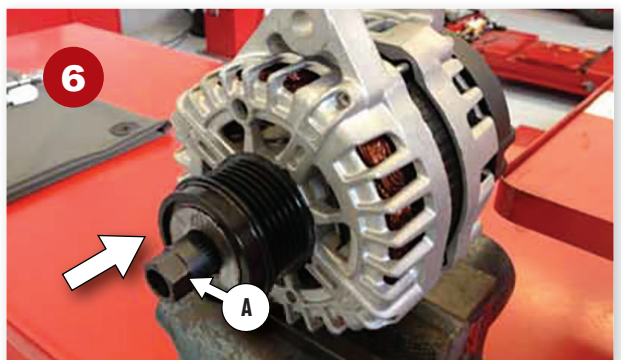
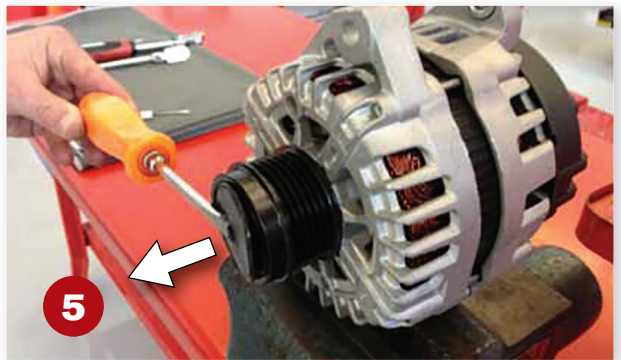
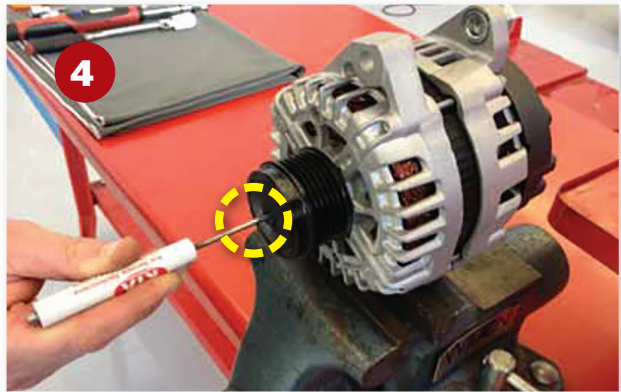
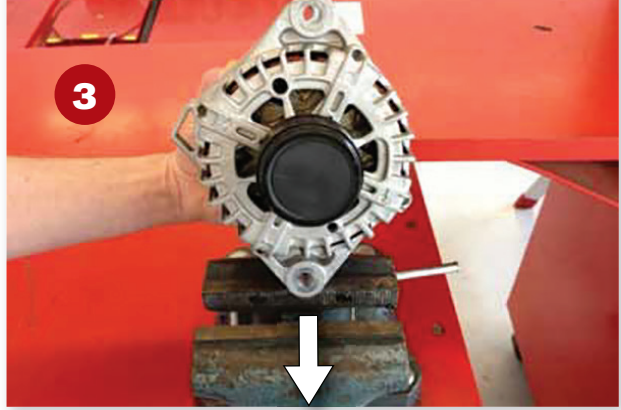
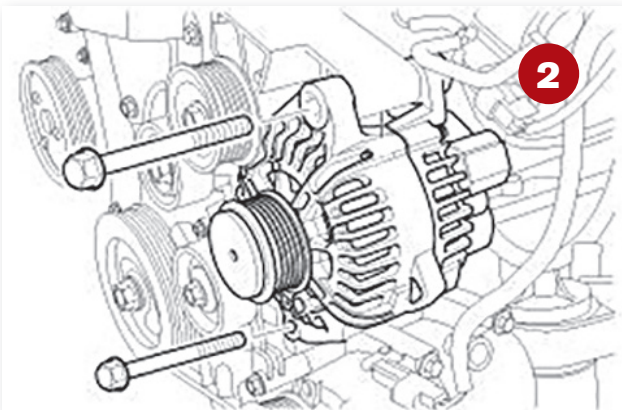
Notice: Record the customer's radio presets before starting procedure. If the vehicle is equipped with the Overrunning Alternator Pulley (OAP), proceed with reflash procedure only.

2. Remove the alternator (A) from the vehicle. Refer to the following section on Kia Global Information System for removal information:

SORENTO(XM) > 2013 > G 2.4 GDI > Engine Electrical System > Charging System > Alternator > Repair Procedures

3. Secure the alternator in a shop vise as shown.

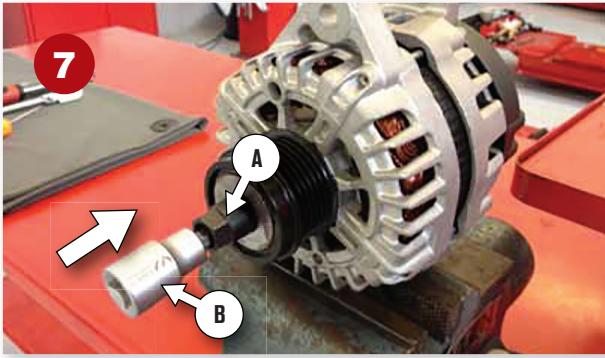
Caution: Avoid excessively tightening the vise around the alternator mounting flange or use vise jaw pads to protect the surface integrity of the alternator mounting flange.



4. Puncture the center of the alternator pulley dust cover with a pocket screwdriver or pick tool.

5. Using a flat-bladed screwdriver, remove the dust cover from the pulley.

6. Use the alternator pulley removal /Installer Kit (P/N 09373-27000) to remove the OAD alternator pulley by inserting the removal tool (A) into the pulley splines, as shown.



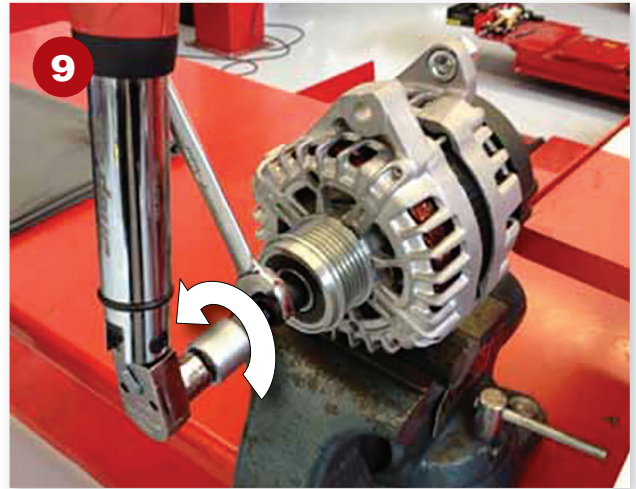
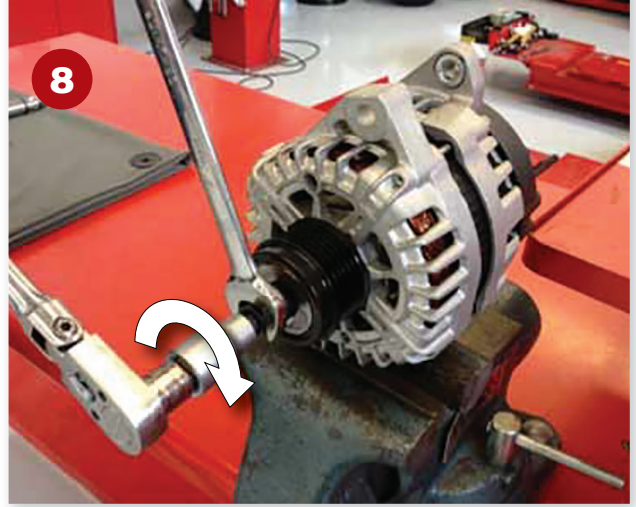
7. Insert the T-50 Torx® socket (B) through the pulley removal tool (A) and into the alternator shaft.

Caution: Confirm the socket is fully seated to avoid damage to the alternator shaft.

8. Use a wrench to hold the pulley removal/installation tool and rotate the Torx® socket clockwise to loosen the pulley. Remove the pulley from the alternator.

Note: Make sure the shaft is clean and free of debris before proceeding.

9. Install the new OAP pulley onto the alternator shaft by hand. Using a wrench, pulley removal/installation tool and Torx® socket, secure the OAP pulley to the shaft by turning the socket counter-clockwise.



➔ ECM Upgrade Procedure

To pursue the ECM upgrade, the ECM should be reprogrammed using the GDS download as described in this article.

NOTICE:

- » A fully charged battery is necessary before ECM upgrade can take place. It is recommended that the Midtronics GR8-1299 system be used in ECM mode during charging. Do not connect any other battery charger to the vehicle during ECM upgrade.
- » All ECM upgrades must be done with the ignition key in the "On" position.
- » Be careful not to disconnect any cables connected to the vehicle or GDS during the ECM upgrade procedure.
- » Do not start the engine during ECM upgrade.
- » Do not turn the ignition key "Off" or interrupt the power supply during ECM upgrade.
- » When the ECM upgrade is completed, turn the ignition "Off" and wait 20 seconds before starting the engine.
- » Only use approved ECM upgrade software designated for the correct model, year.

1. Connect the power supply cable to the GDS tool.

Notice: If attempting to perform the ECM upgrade with the power supply cable disconnected from the GDS tool, be sure to check that the GDS tool is fully charged before the ECM upgrade. If the GDS tool is not fully charged, failure to perform the ECM upgrade may occur. Therefore, it is strongly recommended that the power supply be connected to the GDS tool.

2. Connect the USB cable between the VCI and the GDS tool.

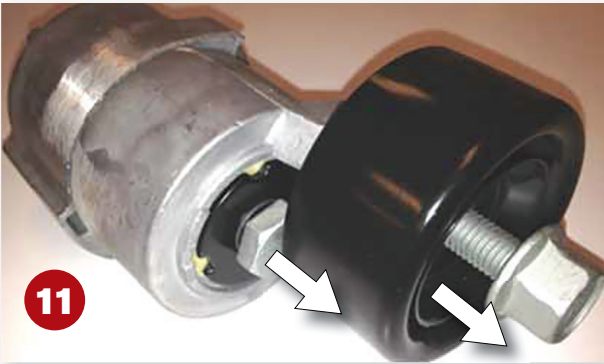
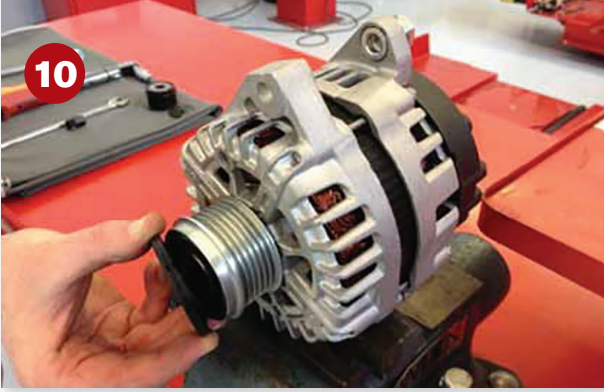
Notice: When performing the ECM upgrade using the GDS tool, wireless communication between the VCI and GDS tool is not available. Therefore, be sure to connect the USB cable between the VCI and the GDS tool.

3. Connect the main 16-pin DLC cable (GHDM – 241000) to the VCI.

4. Connect the main 16-pin DLC cable (GHDM – 241000) to the OBD-II connector, located under the driver's side of the instrument panel.

5. With the ignition key "On," turn on the VCI and GDS tool. Access the GDS vehicle identification number (VIN) screen and configure the vehicle using the VIN Auto Detect function.

6. Once back at the GDS main screen, select ECU upgrade from the bottom right-hand corner. Next select Auto mode, and then engine. Perform the ECM upgrade in accordance with normal GDS tool ECM upgrade procedures.



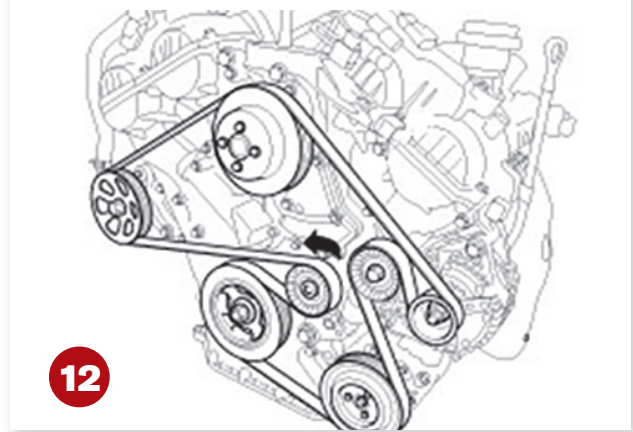
Torque pulley to the specification below:
Tightening torque: 50 lb-ft (67Nm)

- 10.** Make sure the alternator pulley spins freely before proceeding. Install new dust cover onto pulley.
- 11.** Remove the drive belt tensioner by removing the pulley bolt and mounting bolt.

Notice: Do not attempt to perform a Manual Mode upgrade unless Auto Mode fails. Always follow the instructions given on the GDS tool in either Auto or Manual mode. See table (below right) for Manual Mode passwords.

Caution: Before attempting an ECM upgrade on any Kia model, make sure to first determine whether the particular model is equipped with an immobilizer security system. Failure to follow proper procedures may cause the PCM to become inoperative after the upgrade.

- 7.** When the GDS tool reports that the ECM upgrade has been successfully completed, click "Ok," turn off the ignition key, and wait at least 10 seconds before attempting to start the engine.
- 8.** Check for diagnostic trouble codes using the GDS and erase any DTCs stored such as EPS, ESC, and TPMS. Due to CAN BUS, multiple DTCs may be set during reprogramming.
- 9.** Start the engine to confirm proper operation of the vehicle.



Note: The pulley bolt is a left-hand thread.

Install new parts by reversing the removal process.

Torque the components to the specification below:

- Tensioner Mounting Bolt (M12) 39.7~47 lb-ft (53.9~63.7 Nm)
 - Tensioner Pulley Bolt (M12) 39.7~47 lb-ft (53.9~63.7 Nm)
- Reinstall the alternator by reversing the removal procedure.

Tightening torque:

Alternator M8 mounting bolt 19.5~24.6 lb-ft (26.5~33.3 Nm)

- 12.** Reinstall the serpentine belt.

Notice: Reprogram the customer's radio presets as recorded earlier.

Caution: Before attempting an ECM upgrade on any Kia model, make sure to first determine whether the particular model is equipped with an immobilizer security system. Failure to follow proper procedures may cause the PCM to become inoperative after the upgrade.

ROM ID INFORMATION TABLE: Upgrade event #194:

MODEL	MY	IMMO	ECM P/N	ROM ID	
			A/T	PREVIOUS	NEW
XM 2.4 GDI	2013	No (-)	39113-2G761 (2WD) 39114-2G761 (4WD)	XDC4MEDA XDC4MEAA XDC4MEAB XDC4MEAC XDC4MEDA XDC4MEAA XDC4MEAB XDC4MEAC	XDC4MEAD
		Yes (+) 	39113-2G771 (2WD) 39114-2G771 (4WD)	XDC4REDA XDC4REAA XDC4REAB XDC4REAC XDC4REDA XDC4REAA XDC4REAB XDC4REAC	XDC4READ

MANUAL MODE ECM UPGRADE PASSWORDS: Upgrade event #194:

Menu	Password
XMA GDI 2.4 - IMMO : 39113/39114-2G761	2761
XMA GDI 2.4 + IMMO : 39113/39114-2G771	2771



Open and shut case


Fuel door alignment provides smooth operation



» NOTICE: Optima VINs that start with KNA are designated Optima (TF) and built in South Korea. Optima VINs that start with 5XX are designated Optima (QF) and built in the United States.

» This and other technical information is available at www.Kiatechinfo.com.

» All images are for illustration purposes only.

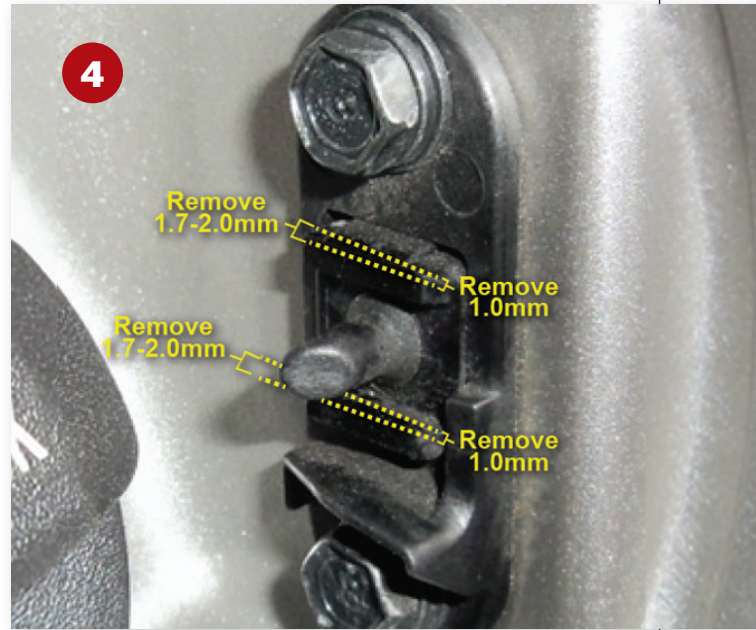
 The fuel filler door on some Optima (TF) vehicles, produced from September 2010 to December 2011, may be difficult to open or close because of decreased clearance between the fuel filler opener and the fuel filler door latch. Follow the procedures outlined in this article to inspect and repair this concern.

Inspection Procedure

1. Open the fuel filler door and verify any clearance issues preventing the door from opening or closing correctly.
 - If the door operation is normal, no further steps will be necessary.
 - If there is evidence of abnormal operation due to clearance concerns, proceed to the Service Procedure below.

AFFECTED VEHICLE PRODUCTION RANGE

Model	Model Year
Optima (TF)	From September 2010 - December 2011



Service Procedure

2. Open the fuel filler door and locate the latch assembly.

3. Note the location of the upper and lower alignment guides (A) protruding from the body of the fuel filler door latch.

These guides need to be filed down as noted below:

Upper alignment guide: remove 1mm (.039") from top surface of guide at the front edge and taper it to remove 1.7~2.0mm (.066"~.078") at the rear edge.

Lower alignment guide: remove 1mm (.039") from top surface of guide at the front edge and taper it to remove 1.7~2.0mm (.066"~.078") at the rear edge.

4. Use a triangular file to remove the required material from the top surface of each alignment guide, as shown. When filing is complete, use shop air to remove any debris from the fuel filler area.

Notice: Be careful not to file down the door latch pin. Be careful not to scratch paint.

5. Verify proper operation of the fuel filler door prior to releasing the vehicle. **(KIA)**

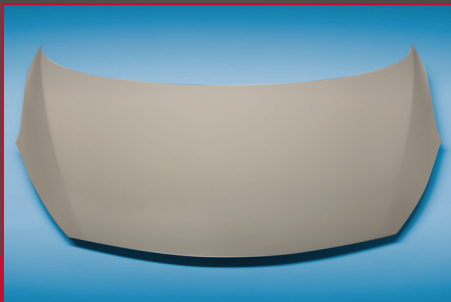
REQUIRED TOOL

Tool Name	Figure
Triangular File	



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— every bit as Genuine as
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