	GROUP Service Campaign	MODEL 2011-2015MY Sorento (XMa) with 2WD
	NUMBER SC148	DATE May 2017
VOLUNTARY SERVICE CAMPAIGN		
SUBJECT: REAR WHEEL SPEED SENSOR HOUSING COVER INSPECTION AND/OR REPLACEMENT (SC148)		

This bulletin provides the procedure on how to inspect, clean and seal or, if necessary, replace the rear wheel speed sensor (WSS) housing covers on certain 2011-2015MY 2WD Sorento (XMa) vehicles, produced from October 24, 2009 through April 30, 2014, originally retailed and/or currently registered in the coastal states of Alabama, Florida, Georgia, Hawaii, Louisiana, Mississippi, North Carolina, South Carolina and Texas. If the rear wheel hub comes into contact with a significant amount of seawater, the water can enter the rear wheel speed sensor housing covers and may interrupt the rear wheel speed sensor signal and illuminate the Anti-Lock Braking System ("ABS") and/or Electronic Stability Control ("ESC") warning lights in the instrument cluster.

Use KDS to retrieve any DTCs (history or active) in the HECU. If any of the following DTC codes (C1206, C1207, C1208, C1209, C1210, C1211, or C1212) are identified, proceed with the replacement of both rear wheel speed sensor housing covers. If no DTC (pending or current) is identified, proceed to the Silicone Coating Section. Before conducting the procedure, verify that the vehicle is included in the list of affected VINs.



Rear Wheel Speed Sensor Housing Cover

★ NOTICE

To assure complete customer satisfaction, always remember to refer to WebDCS Warranty Coverage (validation) Inquiry Screen (Service → Warranty Coverage → 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: <Service Campaign>

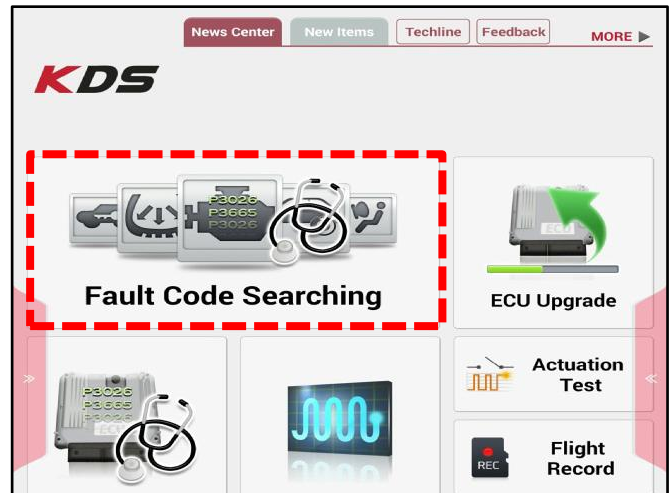
Circulate To: ☒ General Manager ☒ Service Manager ☒ Parts Manager
☒ Service Advisors ☒ Technicians ☒ Body Shop Manager ☐ Fleet Repair

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Inspection Procedure:

1. With the ignition on and VCI-II connected to the vehicle, perform a Fault Code Search using the KDS.
 - If no DTC(s) specified on page 1 is/are active/stored, proceed to Silicone Application Procedure below.
 - If any DTC(s) specified on page 1 is/are active/stored, proceed to the Service Procedure on page 3.

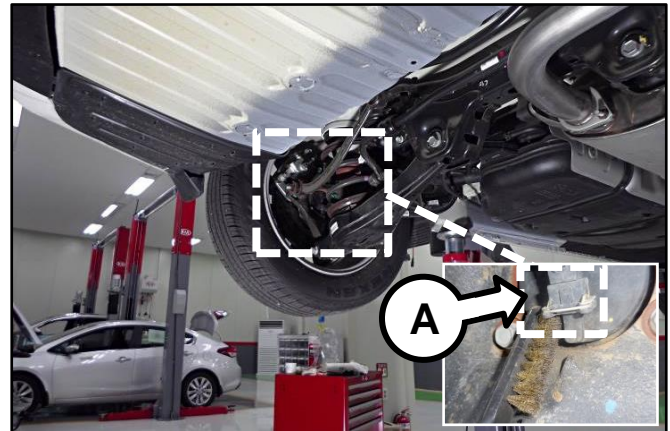


Silicone Application Procedure

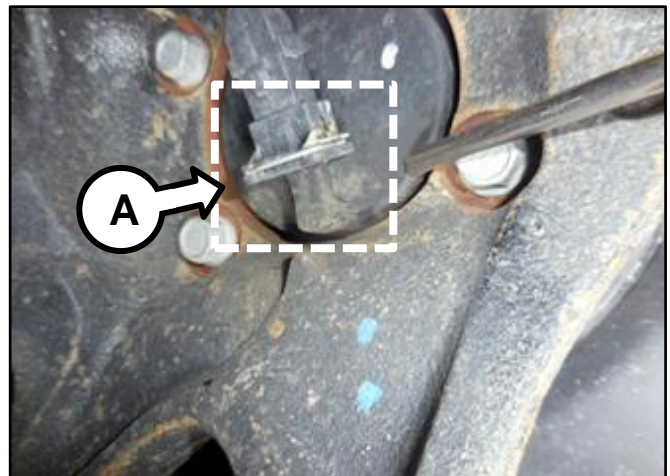
1. With the vehicle positioned on a lift, use a wire brush and clean off any dirt or foreign substances around both rear Wheel Speed Sensor (WSS) connectors (A).

CAUTION

Leave the rear WSS connectors connected for this procedure to prevent contamination of the rear WSS.



2. Using compressed air, blow away any remaining dirt or foreign substances around both rear WSS connectors (A).



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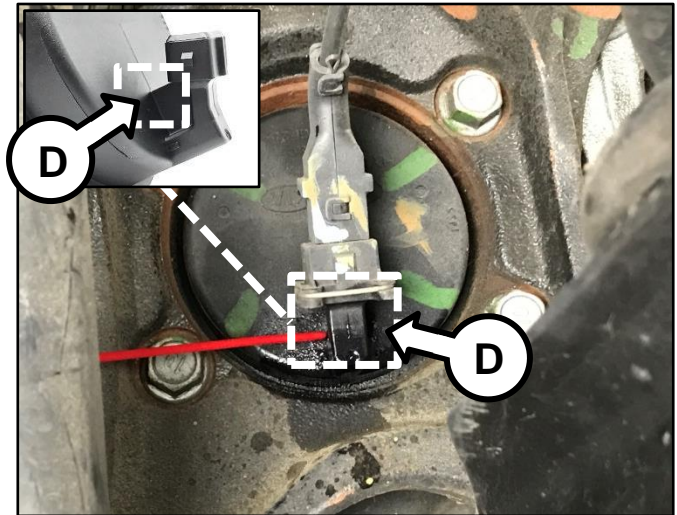
- Discard and replace the black spray nozzle (B) with the white spray nozzle (C) and add the red straw provided as shown.



- Beginning at the top of the rear WSS male connector (D), apply a medium coat of silicone (UM017 CH014) around both rear WSS male connectors, as shown. Wipe off any excess silicone. No further action is required after silicone application.

CAUTION

Use caution not to contaminate other areas when applying the silicone to the connectors.

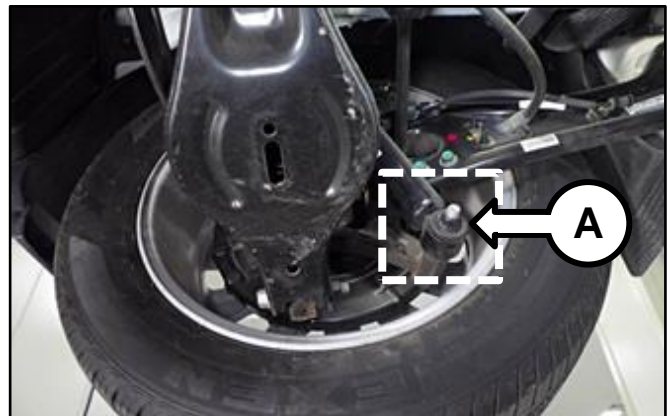


Rear WSS Service Procedure:

- Beginning with one side of the vehicle, remove the lower rear shock absorber retaining nut (A).

Tightening torque:

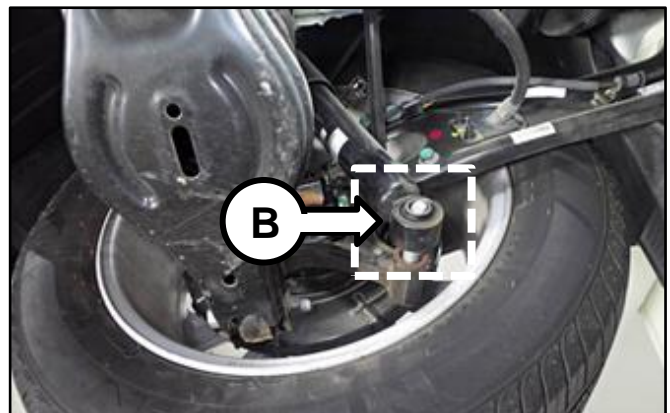
101.2 - 115.7 lb-ft (137.2 - 156.9 Nm,
14.0 - 16.0 kgf.m)



- Dismount the lower shock absorber mounting (B) by pushing the shock towards the center of the vehicle for better access to the WSS.

* NOTICE

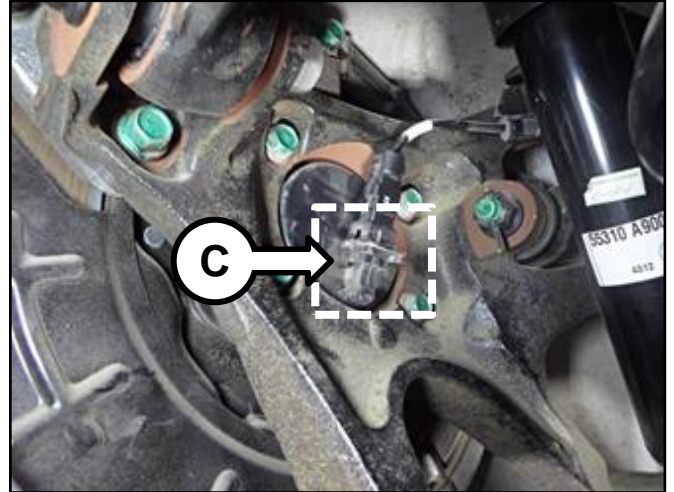
For ease of dismounting the shock absorber, use a screw-jack to slightly compress the suspension and remove any residual load of the shock.



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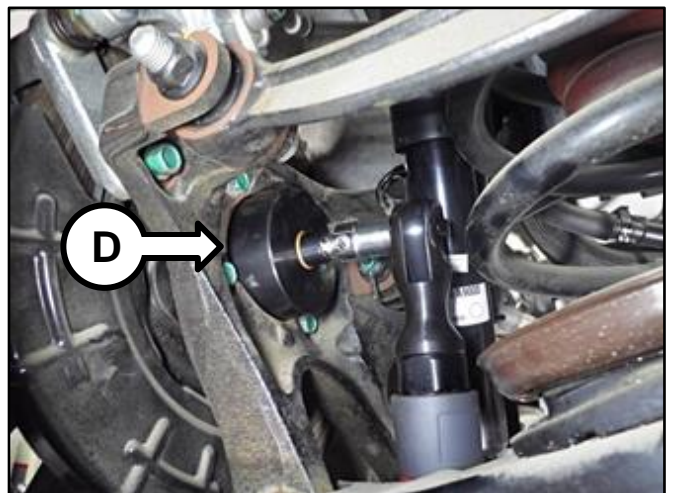
3. Disconnect the rear WSS connector (C) by pressing and holding in the spring clip and pulling the connector upwards.



4. Using compressed air, blow away any dust from the rear WSS circumference area.



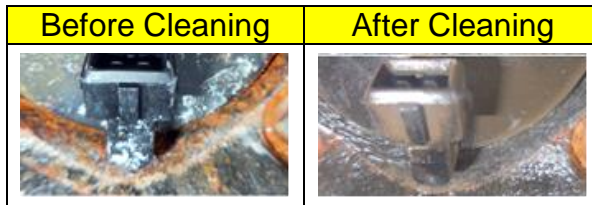
5. Connect the CLEANER SST (D) onto a 1/2" drive air ratchet then insert the CLEANER into the gap between the knuckle and WSS cover. With the air ratchet firmly held and CLEANER SST flush with the knuckle gap surface, carefully and lightly turn the CLEANER clockwise and counter-clockwise to remove any dirt or foreign substances as much as possible.



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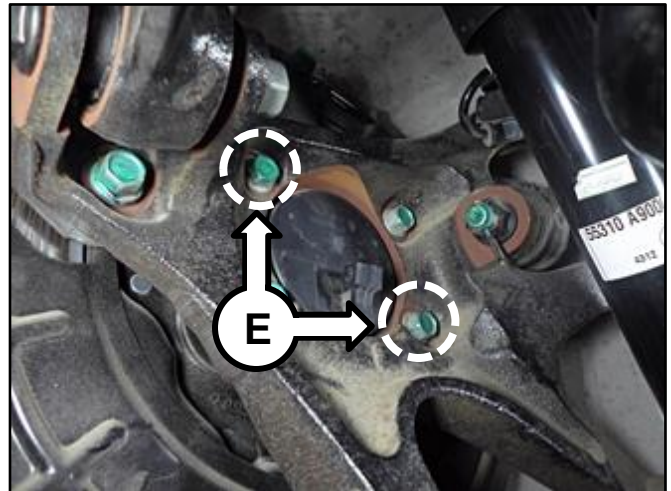
6. Use compressed air to blow out any remaining debris after using the CLEANER SST.



7. Remove the two diagonally opposite hub retaining bolts (E) as shown.

Tightening torque:

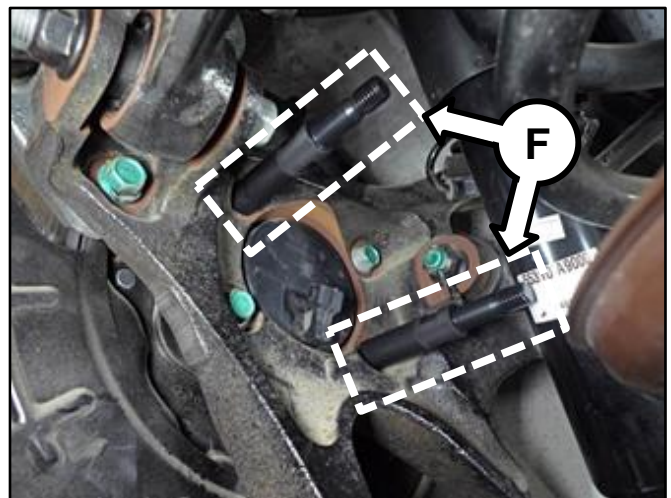
57.9 - 65.1 lb.ft (78.5 - 88.3 Nm, 8.0 - 9.0 kgf.m)



8. Insert the fine threaded end of the SST SUPPORT BOLTS (F) into the knuckle and hand-tighten.

CAUTION

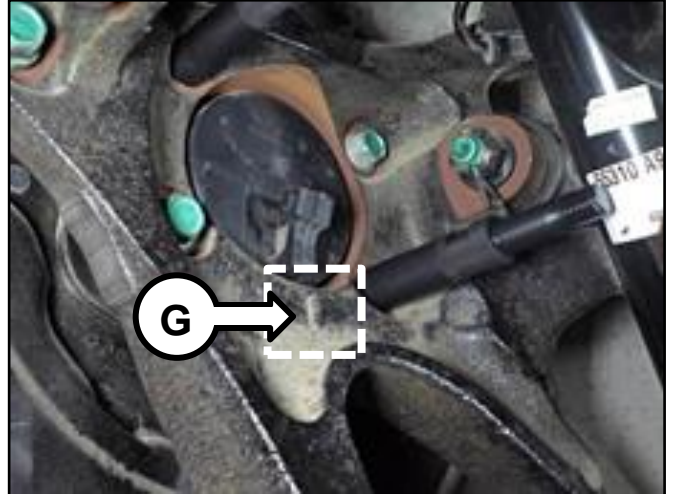
Ensure the correct ends of the SST SUPPORT BOLTS are inserted into the knuckle. Forcing the incorrect end may damage the knuckle and SST SUPPORT BOLTS.



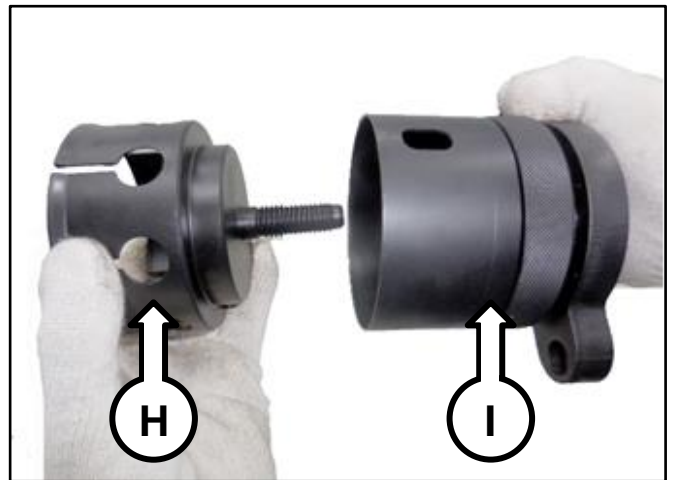
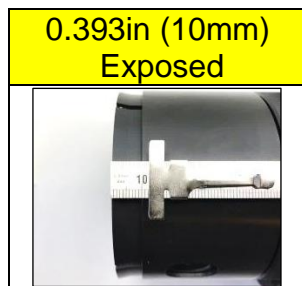
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9. Ensure the arrow (G) marking the rear WSS connector location is present. If not, create a mark at the location of the WSS with a permanent marker.



10. Assemble the SST for the rear WSS cover removal by inserting the COLLET (H) into the ASSY SST (I), with approximately 0.393in (10mm) of the COLLET (H) exposed, as shown below.



CAUTION

Use caution not to drop the COLLET on the floor.

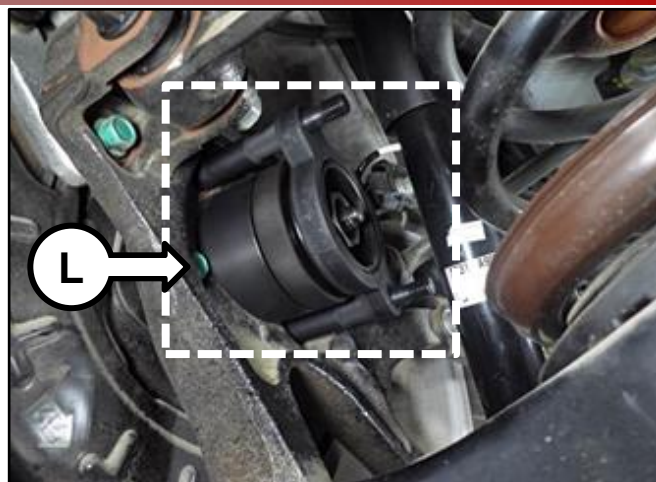
11. While holding the knurled section (J) of the ASSY SST, turn the flange (K) to adjust its position until it is flush with the beveled edge of the ASSY SST flange thread as shown.



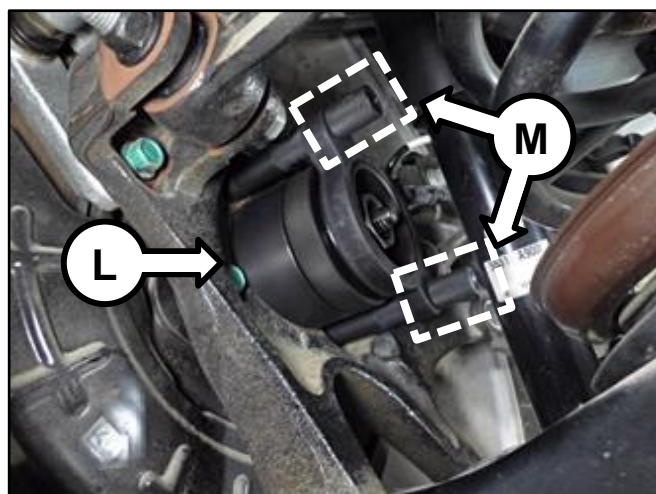
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12. Insert the assembled SST (L) onto the SUPPORT BOLTS and firmly press the SST inwards until a click sound is heard.



13. Install and hand-tighten the SUPPORT NUTS (M) onto the SUPPORT BOLTS while wiggling the assembled SST (L) up and down with the non-threaded end of the nuts (M) inserted first to ensure proper retainment of the flange during the next step.



Non-Threaded	Threaded
	
Correct Installation	Incorrect Installation
	

14. Tighten the 32mm ASSEMBLY NUT (N) with hand tools until the NUT (N) is seated and stops turning.

CAUTION

Use caution not to over-tighten the 32mm ASSEMBLY NUT. Use moderate force when tightening and stop when the nut is seated and stops turning. Do not use power tools.



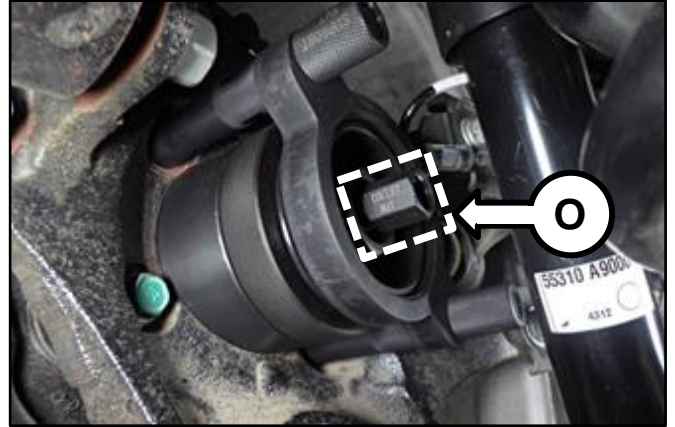
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15. Install and tighten the COLLET NUT (O) with hand tools until the NUT (O) is seated and stops turning. **NOTE: NUT (O) is left-hand threaded - turn the nut counter-clockwise to tighten.**

CAUTION

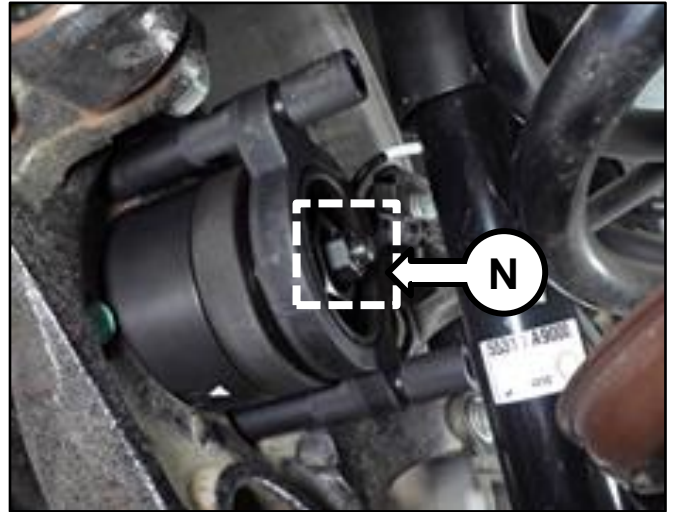
Use caution not to over-tighten the COLLET NUT. Use moderate force when tightening and stop when the nut is seated and stops turning. Do not use power tools.



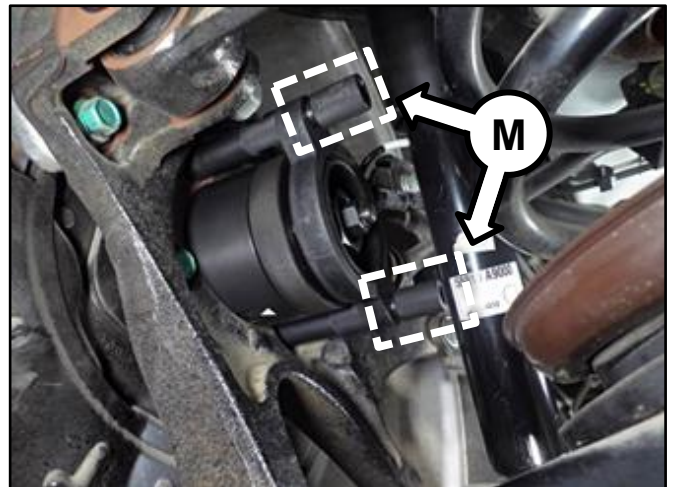
16. Loosen the 32mm ASSEMBLY NUT (N) to separate the rear WSS cover from the hub assembly just enough to relieve tension.

* NOTICE

Do not loosen the COLLET NUT.



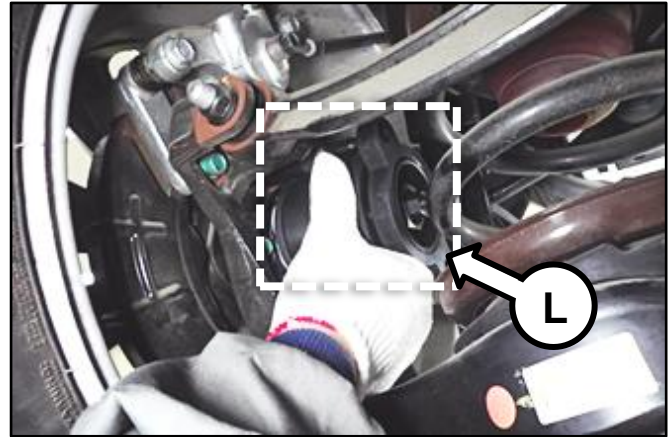
17. Remove the SUPPORT NUTS (M).



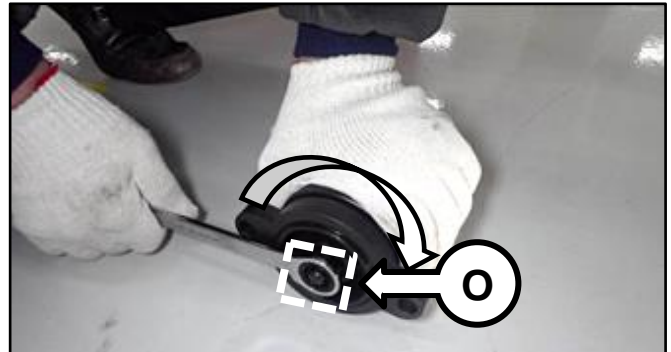
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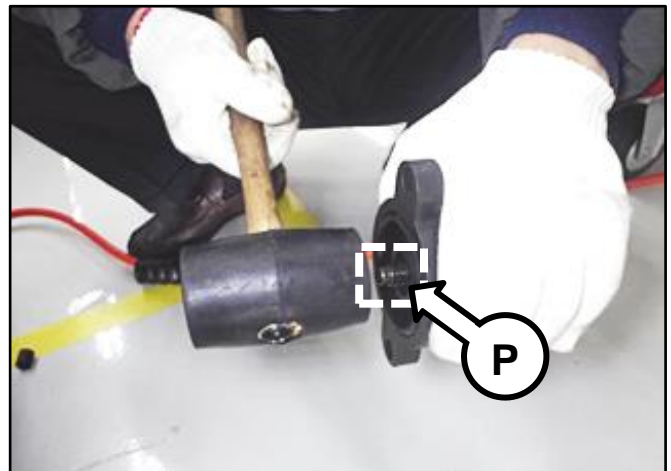
18. Remove the assembled SST (L) from the vehicle. Ensure the rear WSS cover is removed from the hub and is inside the COLLET of the assembled SST.



19. Loosen and remove the COLLET NUT (O) (turn the nut clockwise).



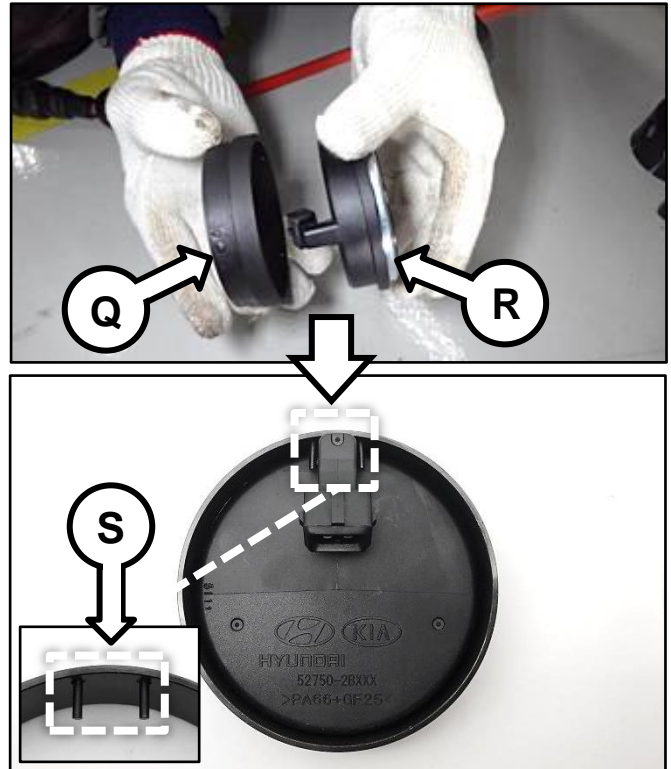
20. While holding the assembled SST, tap the COLLET STUD (P) with a rubber mallet to loosen the COLLET from the assembled SST. Remove the COLLET from the ASSY SST. Remove the rear WSS housing cover from the COLLET and discard.



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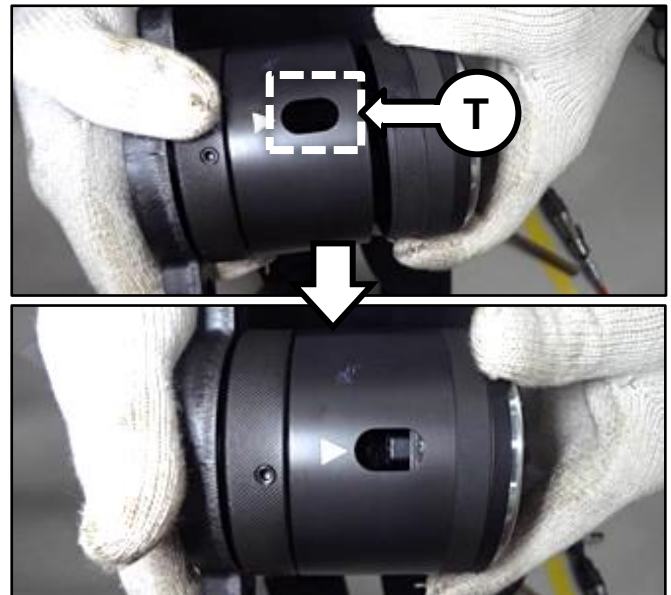
21. Use the INSTALLER SST (Q) from the tool kit and attach the new rear WSS housing cover (R) in the INSTALLER SST with the male connector aligned between the guide pins (S) of the INSTALLER SST.



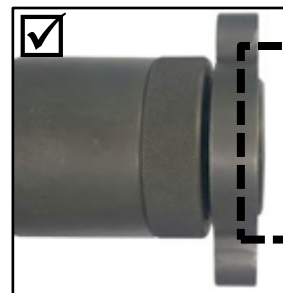
22. Insert the INSTALLER SST with the rear WSS housing cover attached into the ASSY SST and the WSS male connector aligned with the hole (T) in the ASSY SST.

★ NOTICE

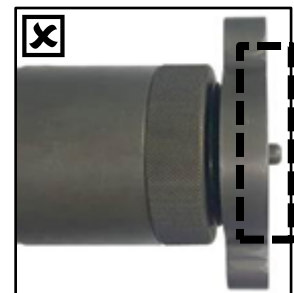
The hole in the ASSY SST is to provide a visual confirmation of the connector's orientation when installed into the hub assembly.



23. While holding the knurled section of the ASSY SST, turn the flange clockwise by hand until only one thread at the flange is exposed (☑).



One thread exposed



No thread exposed

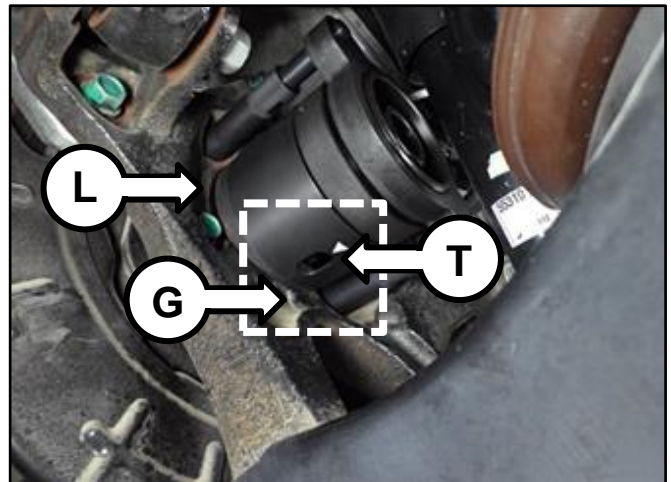
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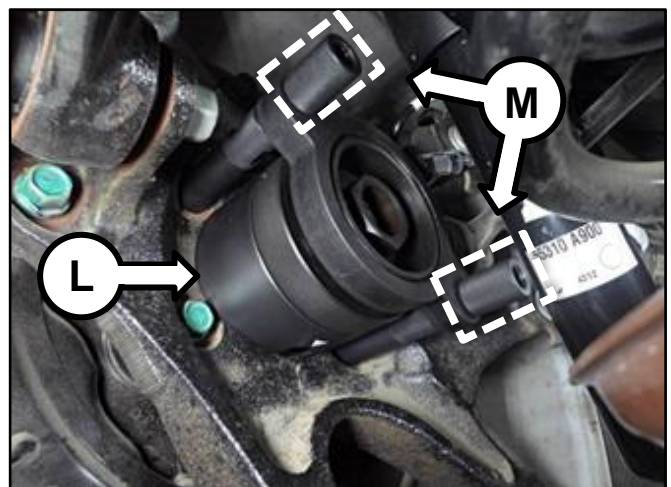
24. Insert the assembled SST (L) with the INSTALLER SST and new rear WSS housing cover attached onto the SUPPORT BOLTS and press the assembled SST onto the knuckle until a click sound is heard.



25. Rotate the assembled SST (L) until the inspection hole (T) is aligned with the mark (G) on the bottom of the knuckle.



26. Install and hand-tighten the SUPPORT NUTS (M) onto the SUPPORT BOLTS while wiggling the assembled SST (L) up/down with the non-threaded end of the NUTS (M) inserted first to ensure proper retainment of the flange during the next step.



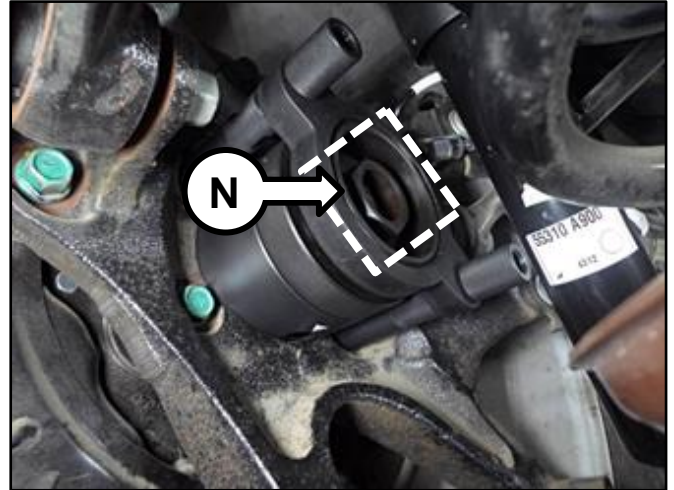
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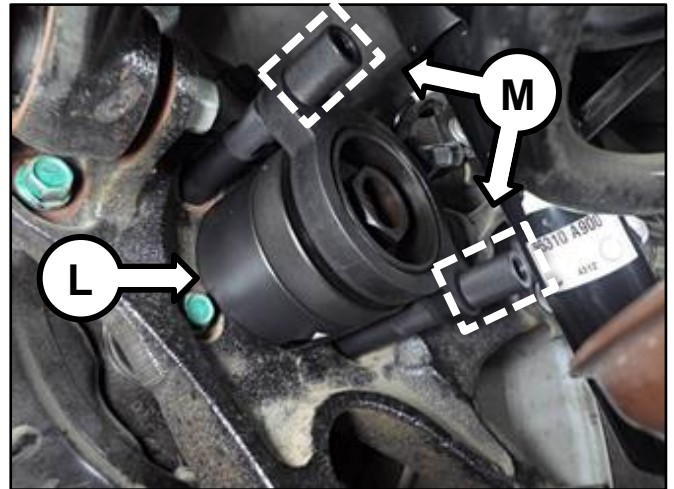
27. Tighten the 32mm ASSEMBLY NUT (N) with hand tools until the NUT (N) is seated and stops turning.

CAUTION

Use caution not to over-tighten the 32mm ASSEMBLY NUT. Use moderate force when tightening and stop when the nut is seated and stops turning. Do not use power tools.

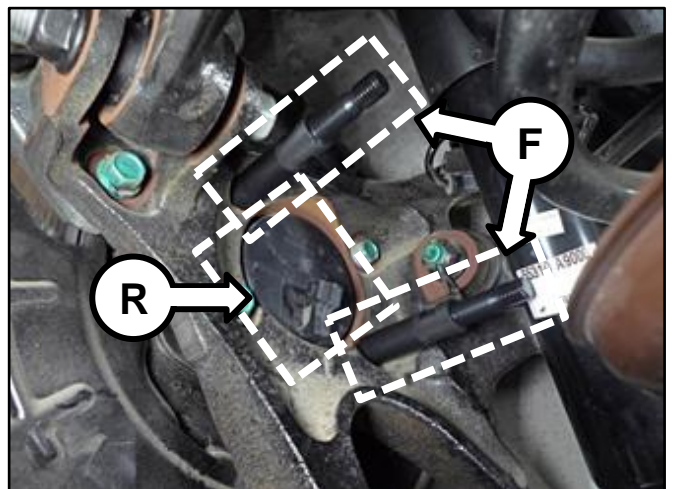


28. Remove the SUPPORT NUTS (M) and remove the assembled SST (L). If necessary, remove the INSTALLER SST using a pair of pliers.



29. Ensure the rear WSS cover (R) is properly installed by verifying that the cover is underflush (deeper) compared with the knuckle surface.

Remove the SUPPORT BOLTS (F).



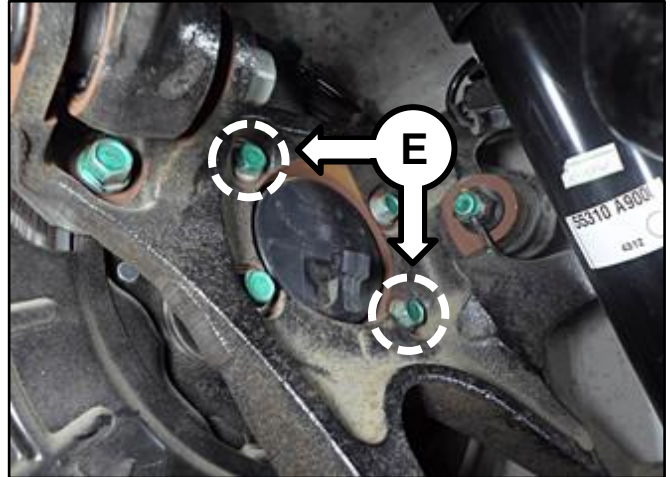
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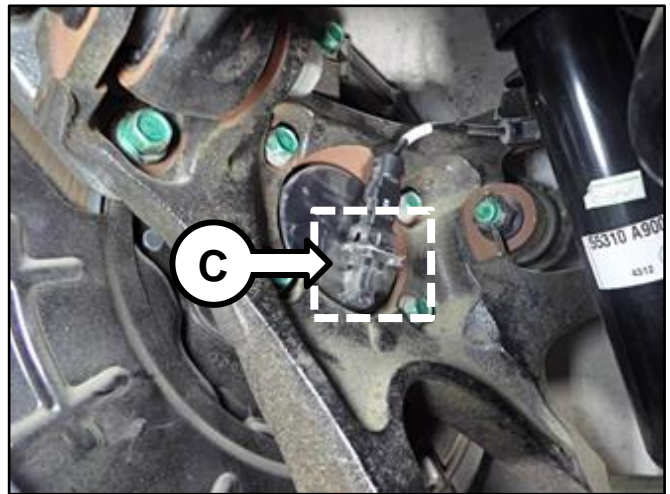
30. Reinstall and torque the hub bolts (E).

Tightening torque:

57.9 - 65.1 lb.ft (78.5 - 88.3 Nm, 8.0 - 9.0 kgf.m)



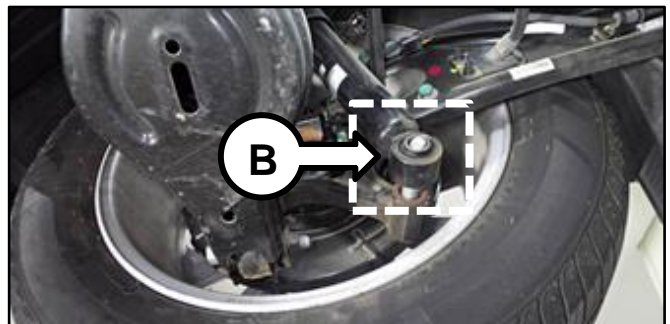
31. Reinstall and secure the rear WSS sensor connector (C).



32. Remount the bottom of the shock absorber (B). Reinstall and torque the shock absorber retaining nut (A).

Tightening torque:

101.2 - 115.7 lb-ft (137.2 - 156.9 Nm, 14.0 - 16.0 kgf.m)



33. Repeat steps 1-32 for the other side of the vehicle.
34. Check and clear any related DTCs. Ensure no warning lamps are illuminated on the instrument cluster.

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AFFECTED VEHICLE RANGE:

Model	Production Date Range
Sorento (XMa)	October 24, 2009 through April 30, 2014






REQUIRED TOOL:

Tool Name	Tool No.	Figure	Comments
Wheel Sensor Cap SST	0K527 1U100QQK		<p>WSS Tool Kit was auto-shipped to Dealers.</p> <p>For replacements of WSS Tool Kit parts, contact Snap-On Business Solutions at (888) 542-1011</p>



Callout Letter	SST Name	Figure
D	Cleaner	
F	Support Bolts	
H	Collet	
I	Assy	

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Callout Letter	SST Name	Figure
L	Assembled SST	
M	Support Nuts	
N	32mm Nut	
O	Collet Nut	
Q	Installer	

REQUIRED PART:

Part Name	Part Number	Figure	Comments
Wheel Speed Sensor Cover	52751 2B100QQK		2 covers required; 1 for each side of vehicle.
Silicone	UM017 CH014		<p>Initial supply will be auto-shipped to Dealers.</p> <p>Additional supply can be ordered through Kia Chemicals.</p> <p>1 kit will cover at least 20 vehicles.</p> <p>1 kit includes 5 straws, 2 white straw-nozzles, 2 black spray-nozzles and 2 bottles.</p> <p>Before use, ensure the white straw-nozzle and straw is installed on the Silicone container. Remove and discard the black spray-nozzle.</p>

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WARRANTY INFORMATION:

N Code: N99 C Code: C99

Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
R	52750 2B100	0	(SC148) Rear Wheel Speed Sensor Housing Cover Inspection & Silicone Application	160064R0*	0.3 M/H	N/A	0
			(SC148) Rear Wheel Speed Sensor Housing Cover Inspection & Replacement (LH & RH)	160064R1*	0.7 M/H	52751 2B100QQK	2

*Only one labor op code can be claimed.

Note: For Op Code 160064R0, use sublet code X1 for reimbursement of silicone (\$2.60 maximum).

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