



Technical Service Bulletin

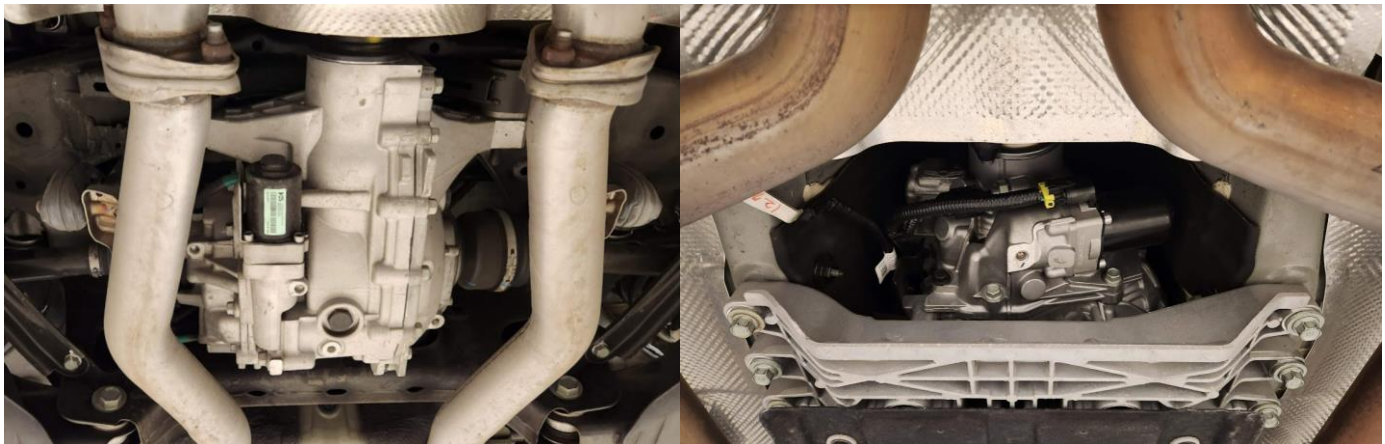
GROUP	NUMBER
DRIVESHAFT AND AXLE	23-DS-001G-1
DATE	MODEL(S)
APRIL, 2023	GV70 (JK1) GV80 (JX1)

SUBJECT: E-LSD AND TRANSFER CASE ACTUATOR DIAGNOSIS

This TSB supersedes 23-DS-001G by specifying the 7-digit DTC codes in place of the 5-digit codes.

Description: When servicing any of the specified vehicles below with the corresponding DTCs, follow the step-by-step procedures in this bulletin.

- Electronic-Limited Slip Differential (E-LSD) actuator on certain 2022 to 2023MY GV70 (JK1) and 2021 to 2023MY GV80 (JX1) for DTC codes P188213, P188900, or P189600.
- Transfer case actuator on certain 2022 to 2023MY GV70 (JK1) for DTC codes P196000, P195800, or P195513.



Applicable Vehicles:

- Certain 2022 to 2023MY GV70 (JK1) produced from March 10, 2021 to September 28, 2022
- Certain 2021 to 2023MY GV80 (JX1) produced from July 27, 2020 to July 22, 2022

STUI



This TSB includes STUI pictures as a requirement. Where indicated, please include the last 6 digits of the VIN and date of repair on a piece of paper. Ensure the VIN and date of repair are clearly visible. Finally, please ensure all captured pictures are completed according to the steps in this TSB and uploaded to STUI. All claims submitted that have illegible, incomplete, missing, or incorrect picture(s) are subject to debit.

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Warranty Information:





Model	Op. Code	Operation	Op. Time	Causal Part	Nature Code	Cause Code
GV70 (JK1) GV80 (JX1)	47892F02	E-LSD ACTUATOR REPLACEMENT	1.5 M/H	47892-4J000	I3A	ZZ3
GV70 (JK1)	47892F03	TRANSFER CASE ACTUATOR REPLACEMENT		47899-4G300		

NOTE 1: Normal Warranty Applies

NOTE 2: All claims must have a STUI picture uploaded as directed on page 8 or 11 of the TSB depending on the repair. Claims with illegible, incomplete, missing, or incorrect STUI pictures are subject to debit.

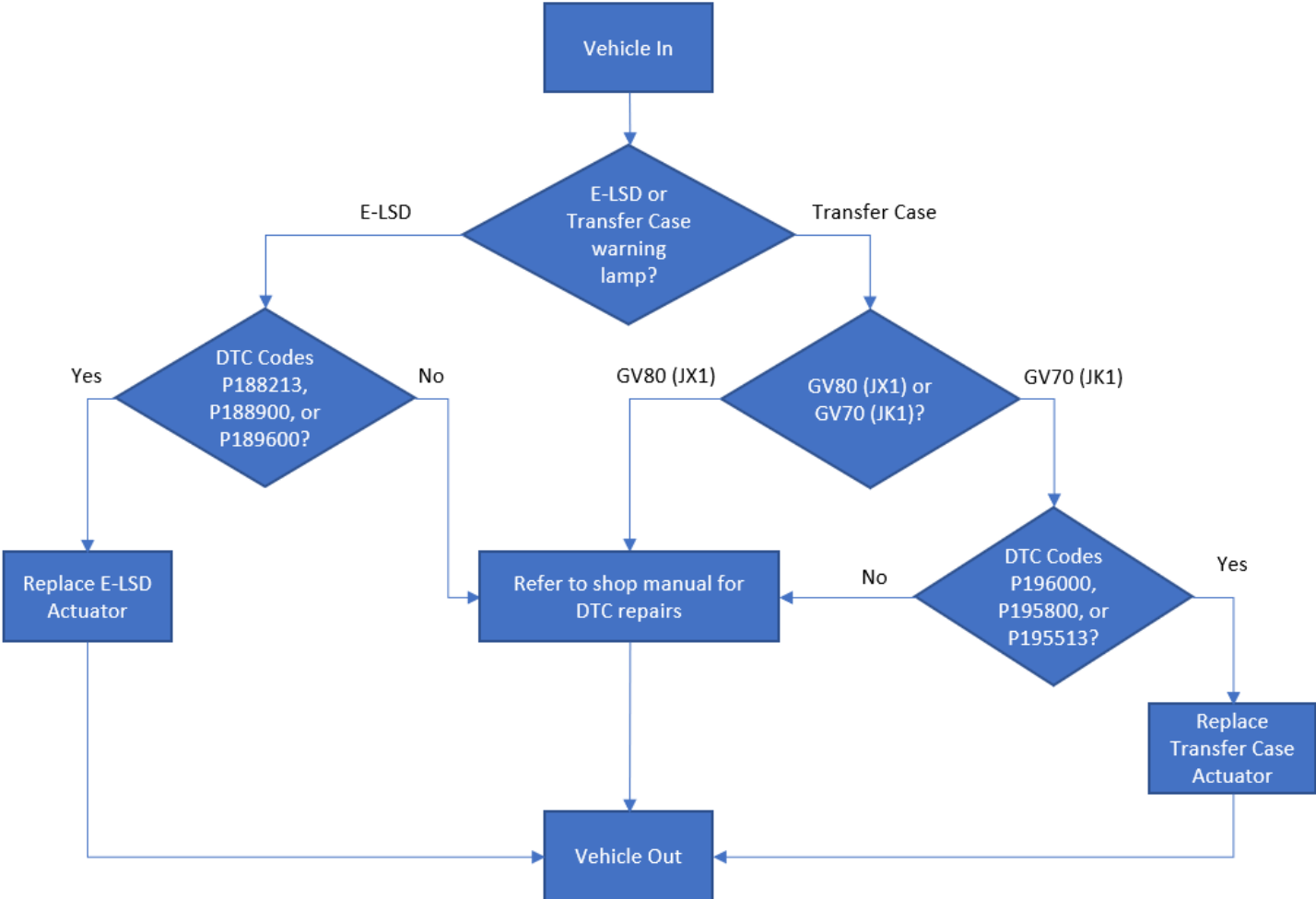
NOTE 3: The incident parts are subject to callback through the normal Warranty Technical Center (WTC) parts return process. Claim is subject to debit if the part is not returned.

Parts Information:

Part Number	Part Description	Photo	Model	Remarks
47892-4J000	E-LSD Actuator		JK1 and JX1	 Confirm date on actuator label is 07/14/2022 or after.
47899-4G300	Transfer Case Actuator		JK1	 Confirm date on actuator label is 07/11/2022 or after.

49551-4T000	Castle Lock Nut		JK1 and JX1	1 each Required if E-LSD is removed
49557-T6000	Axle Clip		JK1 and JX1	1 each Required if E-LSD is removed
28751-2S000	Rear Exhaust Gasket (to exhaust muffler)		JK1 and JX1	2 each Required if E-LSD is removed
28751-3J000	Front Exhaust Gasket (to catalyst)		JK1	2 each Required if transfer case is removed
49129-B1100	Front Propeller Shaft Bolts (to front differential)		JK1	4 each Required if transfer case is removed
49319-T6100	Rear Propeller Shaft Bolts (to transfer case)		JK1	3 each Required if transfer case is removed
00232-19066	Transfer Case Oil TF 0870B (32 FL OZ, 946 mL)		JK1	Only required if necessary to add fluid into transfer case.
00232-19096	TF 0870C E-LSD Synthetic Transfer Case Fluid E-LSD (16 FL OZ, 473 mL)		JK1 and JX1	Only required if necessary to add fluid into the E-LSD.

Repair Flow Chart:



Service Procedure:**E-LSD Actuator Replacement for GV70 (JK1) and GV80 (JX1)**

1. Confirm E-LSD warning message, "Check Limited Slip Differential" is displayed in the cluster.

If any of the following DTCs are present, P188213, P188900, or P189600, continue with E-LSD actuator replacement.

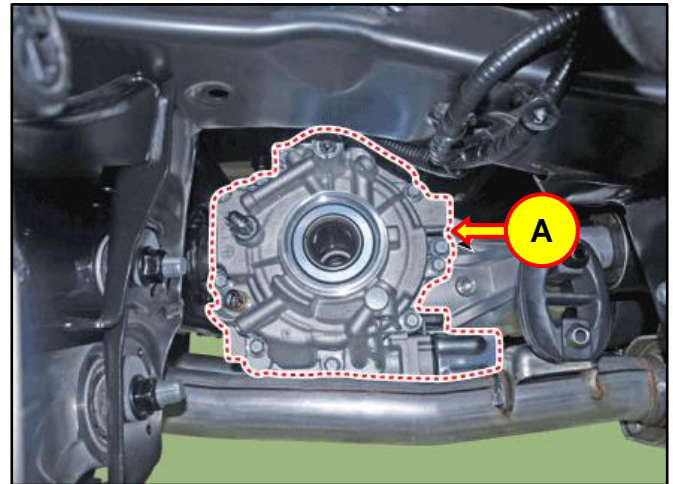
If other DTCs are present, follow the shop manual for repairs.



2. Lift the vehicle to remove the Electronic Limited Slip Differential (E-LSD) (A).

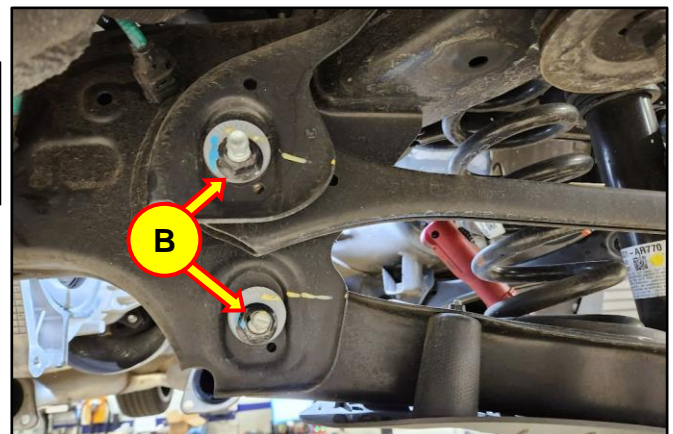
Refer to the applicable shop manual.

Electronic Limited Slip Differential System →
 Electronic Limited Slip Differential Assembly →
 Electronic Limited Slip Differential (E-LSD) →
 Removal and Installation



i Information

Do not touch the alignment settings (B) for the rear suspension during E-LSD removal.

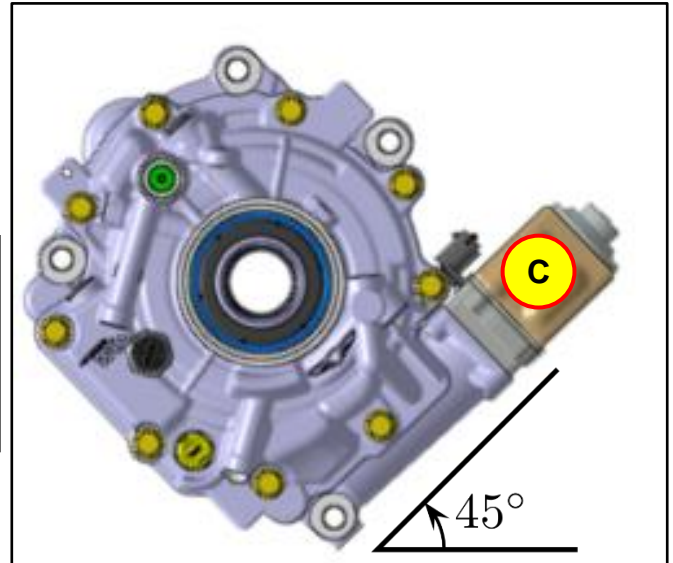


3. Place the E-LSD onto a work bench.

Rotate the E-LSD to point the actuator (C) at a 45-degree angle.

NOTICE

During removal and installation of the actuator, maintain the E-LSD at a 45-degree angle to not spill fluid. Low fluid levels may damage the E-LSD.



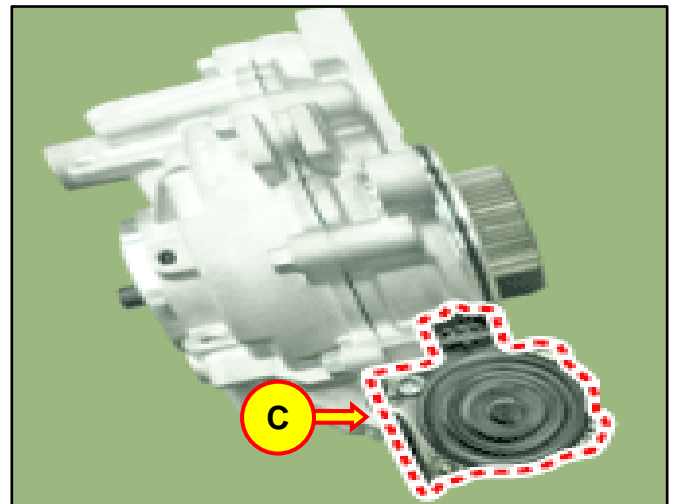
4. Leave the E-LSD in this position for at least 10 seconds to allow the fluid to drain from the actuator into the E-LSD.
5. Loosen the bolts and remove the actuator (C).

E-LSD Actuator Tightening Torque

lb-ft	• 8.24-8.39
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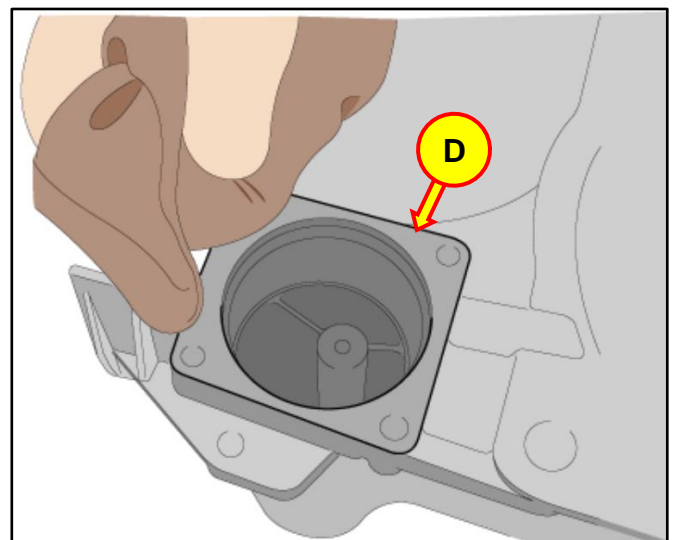
kgf.m	• 1.14-1.16
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N.m	• 11.17-11.37
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6. Wipe the actuator seating surface (D) with a clean cloth.

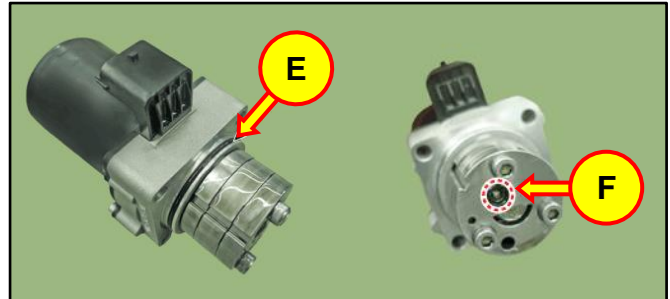
Do not allow foreign substances to enter the E-LSD.



- Confirm date on new actuator label is 07/14/2022 or after.



- Ensure the both O-rings (E) and (F) are properly seated on the new actuator.



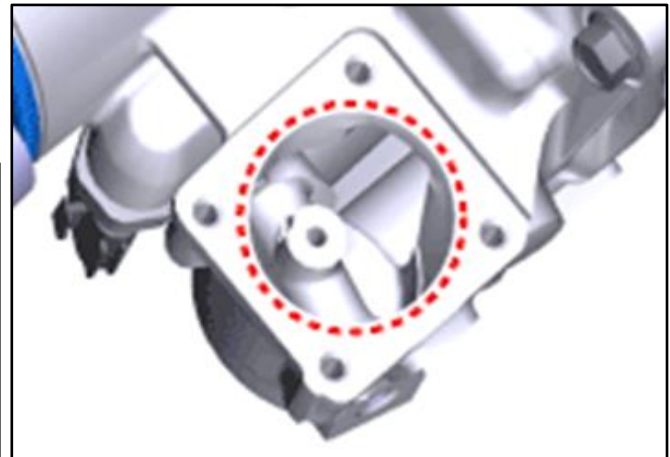
- If fluid is lost, add fluid for the amount lost into the actuator opening.

NOTICE

Using the wrong fluid specification or low fluid levels may damage the E-LSD.

Fluid Specification: TF 0870C, E-LSD
 Synthetic Transfer Case Fluid, Part Number:
 00232-19096

E-LSD Fluid Capacity: 395mL - 425mL



- Install the new actuator.

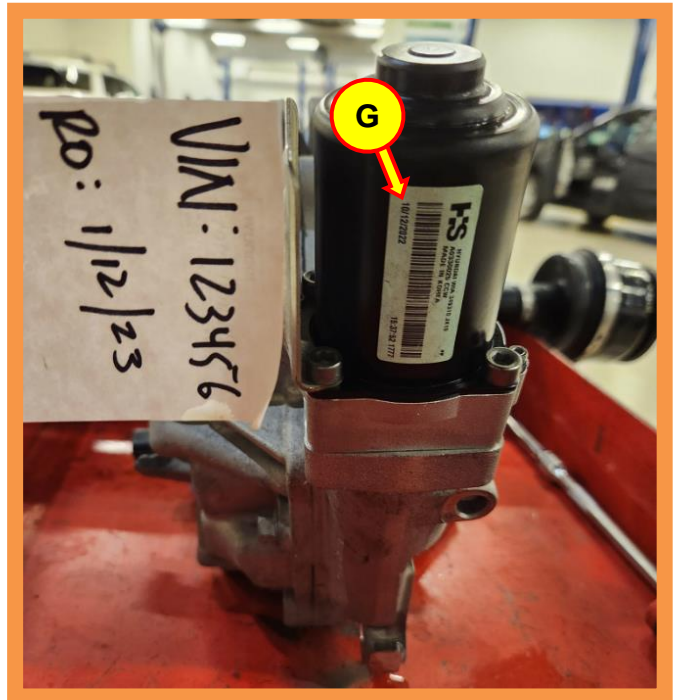
11. Before reinstalling the differential assembly take a STUI photo.

STUI



Using STUI, take a clear photo of the installed actuator with the last 6 digits of the VIN and the date of repair on a piece of paper. The manufacture date of the actuator (G) must be clearly visible. See example shown to the right.

Upload the photo to STUI.



12. Install parts in the reverse order of removal.

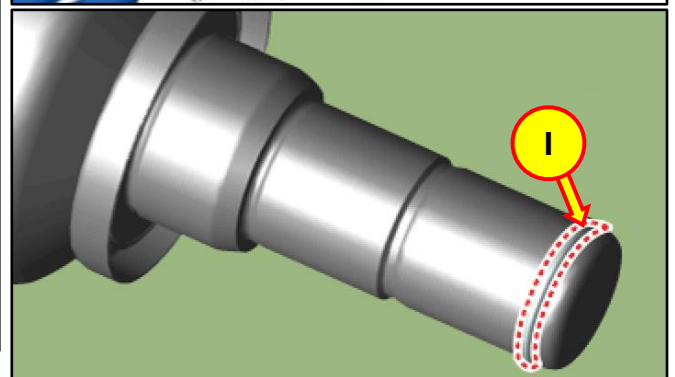
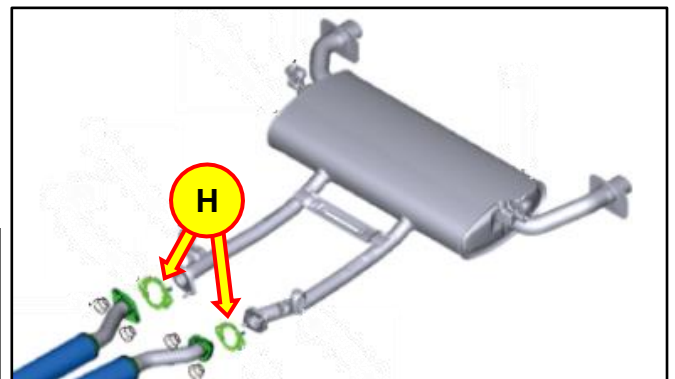
Refer to the applicable shop manual for tightening torque specifications.

NOTICE

The following new parts must be used during reassembly:

Part Name	Part Number	Qty
Rear exhaust gasket (H) (to muffler)	28751-2S000	2
Axle Clip (I)	49557-T6000	1
Axle Castle Nut	49551-4T000	1

Reusing parts will cause the exhaust to leak and the axle to become unseated.



Axle Castle Nut

13. The service procedure is now complete.

Transfer Case Actuator Replacement for GV70 (JK1) ONLY

1. Confirm transfer case warning lamp is displayed in the cluster.

If any of the following DTCs are present, P196000, P195800, or P195513, continue with transfer case actuator replacement.

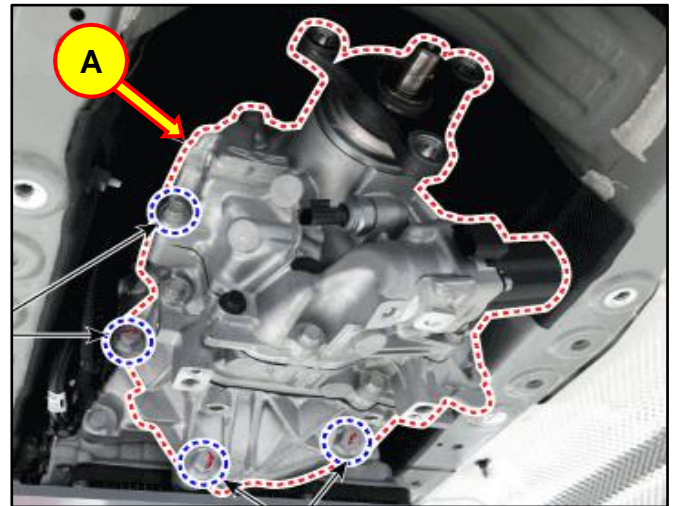
If other DTCs are present, follow the shop manual for repairs.



2. Lift the vehicle to remove the transfer case (A).

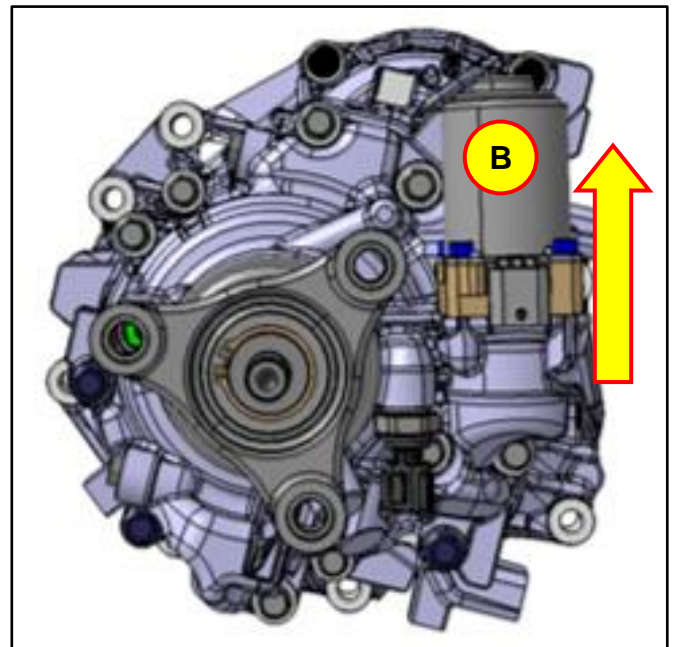
Refer to the applicable shop manual.

4 Wheel Drive (AWD) System → Transfer Assembly → Transfer Case Assembly → Removal



3. Place the transfer case onto a work bench.

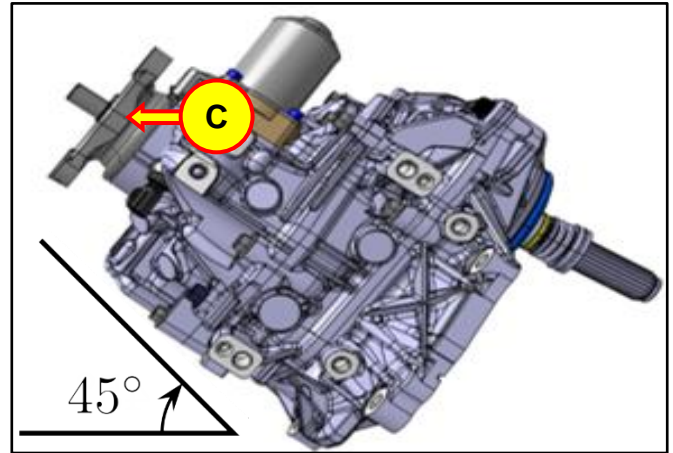
Rotate the transfer case to point the actuator (B) up in a vertical position.



Lift the flange (C) end of the case at a 45-degree angle.

NOTICE

During removal and installation of the actuator, maintain the transfer case at a 45-degree angle to not spill fluid. Low fluid levels may damage the transfer case assembly.



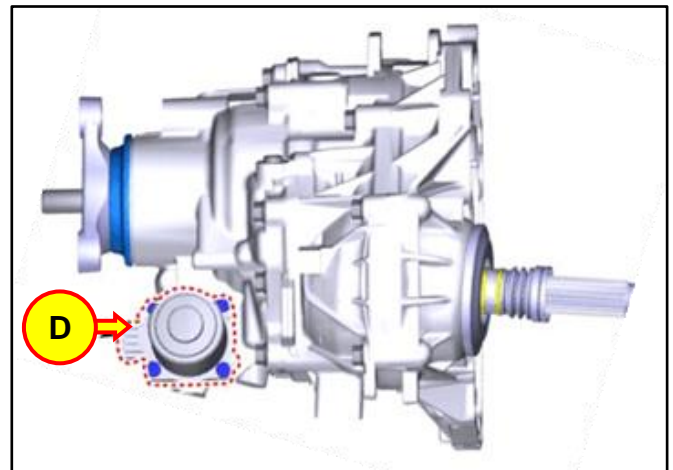
4. Leave the case in this position for at least 10 seconds to allow the fluid to drain from the actuator into the case.
5. Loosen the bolts and remove the actuator (D).

Transfer Case Actuator Tightening Torque

lb-ft	• 8.24-8.39
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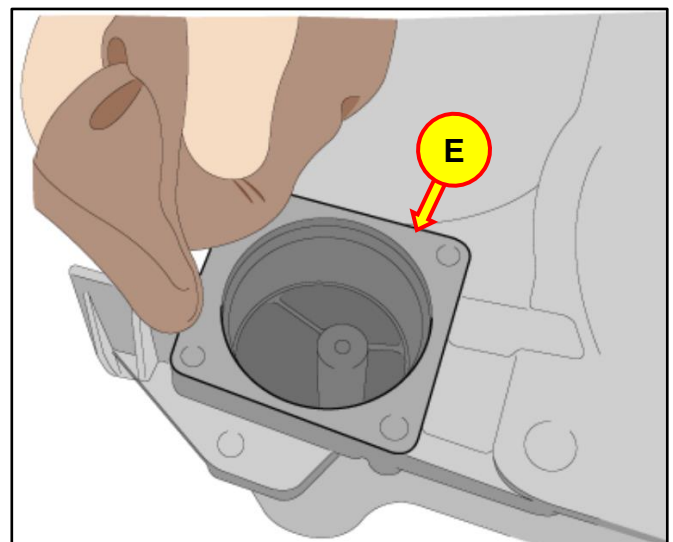
kgf.m	• 1.14-1.16
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N.m	• 11.17-11.37
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6. Wipe the actuator seating surface (E) with a clean cloth.

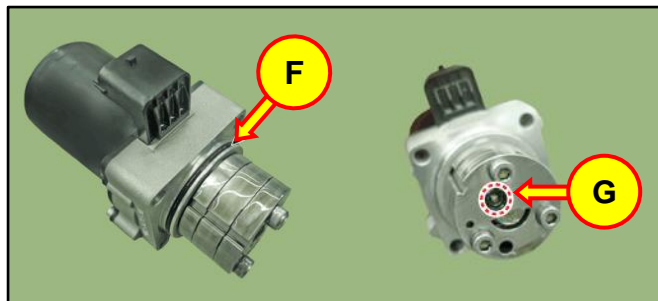
Do not allow foreign substances to enter the case.



- Confirm date on new actuator label is 07/11/2022 or after.



- Ensure the both O-rings (F) and (G) are properly seated on the new actuator.



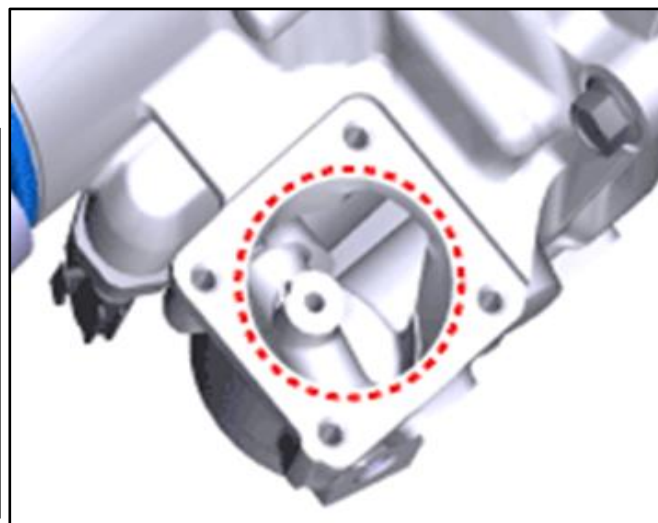
- If fluid is lost, add fluid for the amount lost into the actuator opening.

NOTICE

Using the wrong fluid specification or low fluid levels may damage the E-LSD.

Fluid Specification: TF 0870C, E-LSD Synthetic Transfer Case Fluid, Part Number: 00232-19096

E-LSD Fluid Capacity: 395mL - 425mL



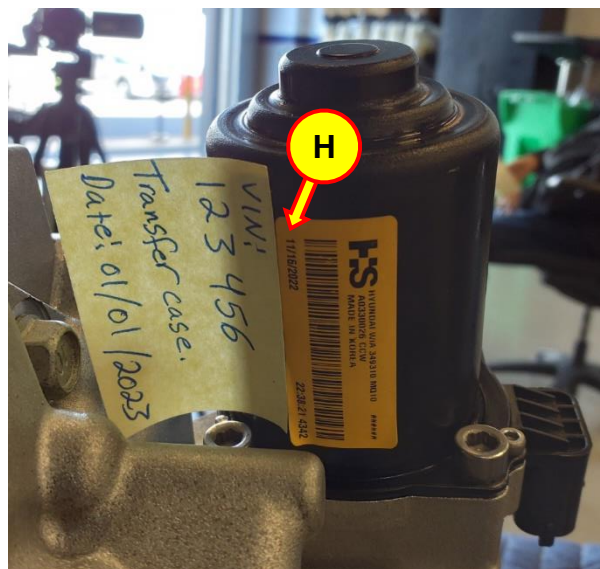
- Install the new actuator.
- Before reinstalling the transfer case assembly, take a STUI photo.

STUI



Using STUI, take a clear photo of the installed actuator with the last 6 digits of the VIN and the date of repair on a piece of paper. The manufacture date of the actuator (H) must be clearly visible. See example shown to the right.

Upload the photos to STUI.



12. Install parts in the reverse order of removal.

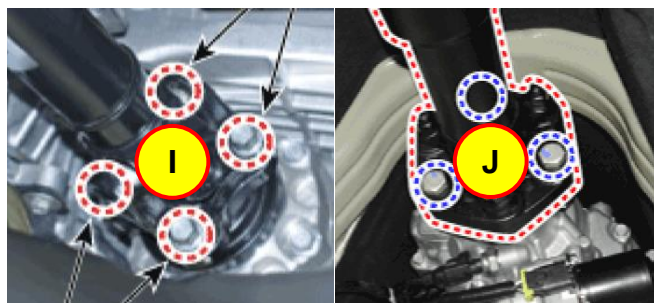
Refer to the applicable shop manual for tightening torque specifications.

NOTICE

The following new parts must be used during reassembly:

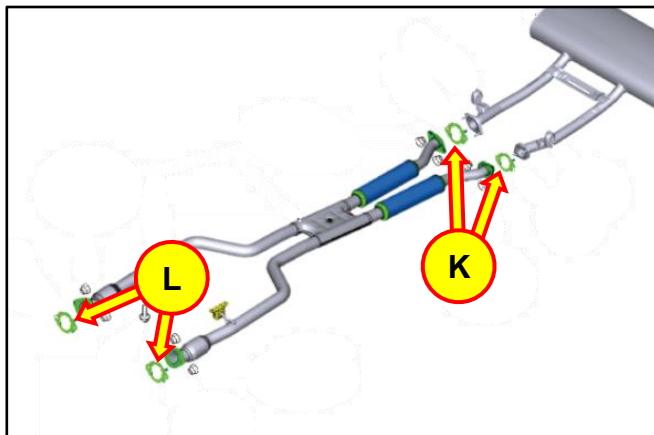
Part Name	Part Number	Qty
Front Propeller Shaft Bolts (I) (to front differential)	49129-B1100	4
Rear Propeller Shaft Bolts (J) (to transfer case)	49319-T6100	3
Rear Exhaust Gasket (K) (to exhaust muffler)	28751-2S000	2
Front Exhaust Gasket (L) (to catalyst)	28751-3J000	2

Reusing parts will not provide the correct clamping force and can cause the exhaust to leak.



Front propeller shaft to front differential

Rear propeller shaft to transfer case



13. The service procedure is now complete.