

November 30, 2023

Version 2

Safety Recall: 2023–24 Pilot EPS Gearbox

AFFECTED VEHICLES

Year	Model	Trim Level	VIN Range
2023–24	Pilot	ALL	Check iN VIN status for eligibility.

BACKGROUND

Due to a manufacturing error, a loose ball bearing may have entered the gearbox assembly and may fall into the gap of a rotating part within the gearbox. If this occurs, the steering function may be lost, and the steering may lock up, increasing the risk of a crash or injury.

CUSTOMER NOTIFICATION

Owners of affected vehicles will be sent a notification of this safety recall.

Do an iN VIN status inquiry to verify eligibility.

Some vehicles affected by this campaign may be in your new or used vehicle inventory.

Failure to repair a vehicle subject to a recall or campaign may subject your dealership to claims or lawsuits from the customer or anyone else harmed as a result of such failure. To see if a vehicle in inventory is affected by this safety recall, do a VIN status inquiry before selling it.

CORRECTIVE ACTION

Replace the EPS gearbox.

NOTE: Photos are required for warranty submission.

PARTS INFORMATION

Part Name	Part Number	Quantity
Power Steering Rack Assembly (AWD: LX, EX-L)	53620-T90-A03	1
Power Steering Rack Assembly (AWD: Sport)	53620-T90-A13	1
Power Steering Rack Assembly (AWD: Elite, Touring)	53620-T90-A23	1
Power Steering Rack Assembly (AWD: TrailSport)	53620-T90-A33	1
Power Steering Rack Assembly (2WD: LX, EX-L)	53620-T91-A03	1
Power Steering Rack Assembly (2WD: Touring)	53620-T91-A13	1
Power Steering Rack Assembly (2WD: Sport)	53620-T91-A23	1
Drain Washer 18mm (AWD)	90471-PX4-000	2
Drain Plug Washer 20mm (AWD)	94109-20000	2
Gasket 10mm (AWD)	90471-59C-000	1

CUSTOMER INFORMATION: The information in this bulletin is intended for use only by skilled technicians who have the proper tools, equipment, and training to correctly and safely maintain your vehicle. These procedures should not be attempted by “do-it-yourselfers,” and you should not assume this bulletin applies to your vehicle, or that your vehicle has the condition described. To determine whether this information applies, contact an authorized Honda automobile dealer.

Sealing Bolt 10mm (AWD)	90030-RT4-003	1
Castle Nut (14mm)	90309-TAA-000	2
Split Pin (M14)	90701-SKC-003	2
Nut (12mm)	90215-S3N-003	2
Flange Nut (12mm)	90362-SZA-A00	2
Split Pin (3.0x22)	94201-30220	2
Exhaust Pipe Gasket	18212-SA7-003	2
Nut 10mm	90212-SA5-003	9
Pre-Chamber Gasket	18393-SDB-A00	1
Exhaust Chamber Gasket (AWD)	18115-5G0-A01	1
Self-Lock Nut 8mm (AWD)	90212-RCA-A01	4
Spindle Nut (AWD)	90305-S3V-A11	1
Set-Ring (32x2.2)	44319-STX-A60	1
Flange Bolt (10x29) (AWD)	90382-SH9-003	2
Flange Nut (12mm)	90371-SAA-010	4
Flange Bolt (10x35)	90163-SDA-A01	2
Flange Bolt (10x35)	90170-TYA-A00	3
Flange Bolt (14x140)	90163-TYA-A01	4
Flange Bolt (14x120)	90161-TYA-A00	2
Flange Bolt (10x45)	90167-TRT-A00	4
Gear Box Mounting Washer Bolt (14x82)	90105-T90-A00	4

REQUIRED MATERIALS

Part Name	Part Number	Quantity
Transfer Case Fluid HGO-1 (AWD Only)	08200-9014	1
Trans fluid ATF Type 2.0 (AWD Only)	08200-9015	5

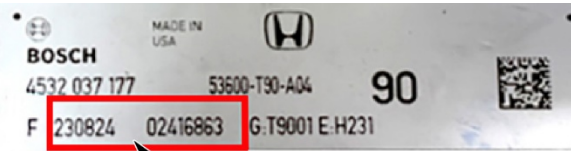
TOOL INFORMATION

Tool Name	Tool Number	Quantity
Ball Joint Nut	07MAC-SL00202	1
Ball Joint Separator	07AAF-SDAA100	1
Engine Support Hanger	VSB02C000019	1
Engine Support Hanger	AAR-T1256	2
Trans Jack	NRI72475	1
Subframe Alignment Pin	070AG-SJAA10S	1

WARRANTY CLAIM INFORMATION

NOTE:

- Attach the photo of the EPS label to the warranty claim form. Required photos **must be included** when submitting your claim, or the claim may be subject to a debit. Retake any unclear photos prior to submitting.



EPS SERIAL NUMBER

- Input the EPS serial number into the Test Code field in the warranty claim form when the claim is being submitted. Note that letter and spaces cannot be used. Use a dash in place of the space in the serial number.

Repair Information					View Flat Rate Labor Time
Defect Code (Exclude Dash)*		Test Code			230824-02416863
Item	Labor Operation No.*	Labor Description	Time*		
1	5131C0	STEERING GEARBOX, ELECTRIC POWER STEERING - REPLACE	3.0	Delete	
2				Delete	
3				Delete	
Total Time			3.0	More >	
M.I.L. On <input type="button" value="NO"/>		Diagnostic Trouble Codes			

2WD: LX, EX-L

Operation Number	Description	Flat Rate Time	Defect Code	Symptom Code	Template ID	Failed Part Number
5131L8	2WD: Replace the EPS gearbox (includes VSA relearn and alignment)	4.2 hr	6BK00	FFX00	A23090A	53620-T91-A03

2WD: Touring

5131L8	2WD: Replace the EPS gearbox (includes VSA relearn and alignment).	4.2 hr	6BK00	FFX00	A23090B	53620-T91-A13
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2WD: Sport

5131L8	2WD: Replace the EPS gearbox (includes VSA relearn and alignment).	4.2 hr	6BK00	FFX00	A23090C	53620-T91-A23
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AWD: LX, EX-L

5131L9	AWD: Replace the EPS gearbox (includes VSA relearn and alignment).	6.0 hr	6BK00	FFX00	A23090D	53620-T90-A03
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AWD: Sport

5131L9	AWD: Replace the EPS gearbox (includes VSA relearn and alignment).	6.0 hr	6BK00	FFX00	A23090E	53620-T90-A13
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AWD: Elite, Touring

Operation Number	Description	Flat Rate Time	Defect Code	Symptom Code	Template ID	Failed Part Number
5131L9	AWD: Replace the EPS gearbox (includes VSA relearn and alignment).	6.0 hr	6BK00	FFX00	A23090F	53620-T90-A23

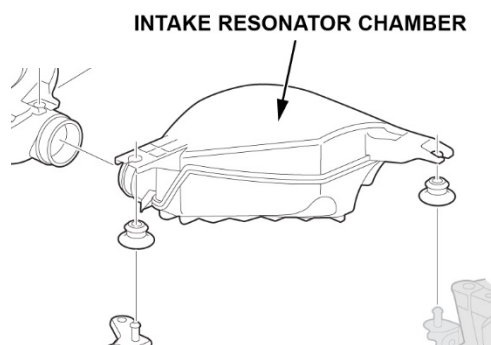
AWD: TrailSport

5131L9	AWD: Replace the EPS gearbox (includes VSA relearn and alignment).	6.0 hr	6BK00	FFX00	A23090G	53620-T90-A33
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Skill Level: Repair Technician

REPAIR PROCEDURE

1. Make sure the vehicle is in the OFF (LOCK) mode.
2. Remove the intake resonator chamber.

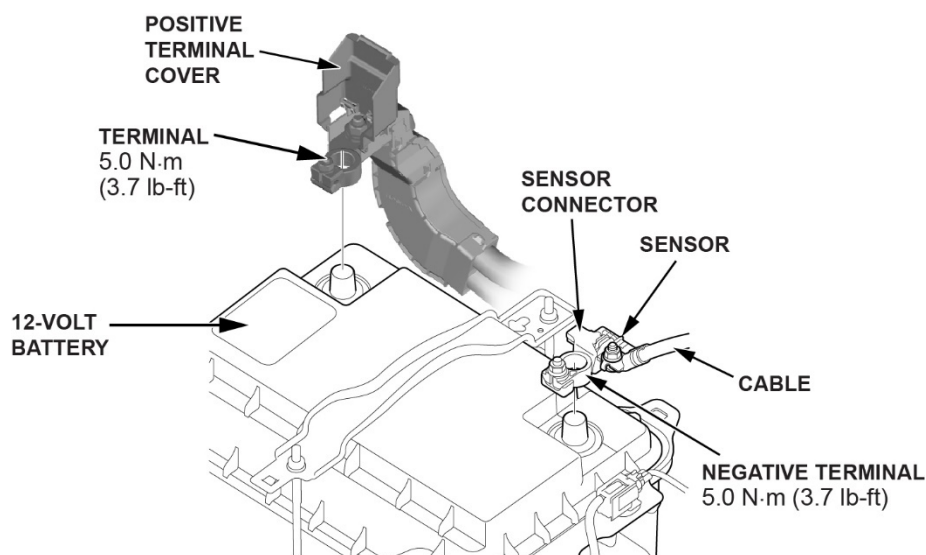


3. Disconnect and isolate the 12-volt battery sensor with the cable from the 12-volt battery.

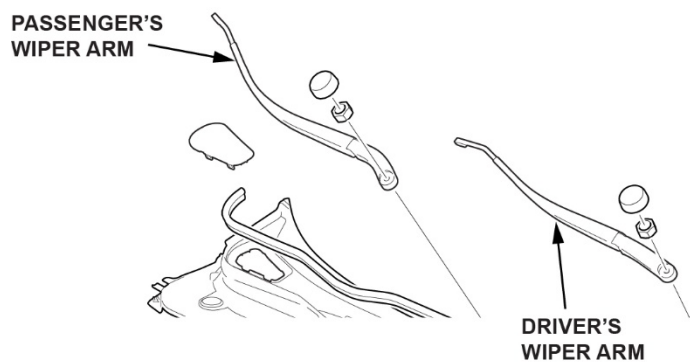
NOTE:

- Do not hold the 12-volt battery sensor connector when removing the terminal to protect it from damage.
- Do not disconnect the 12-volt battery sensor from the cable.

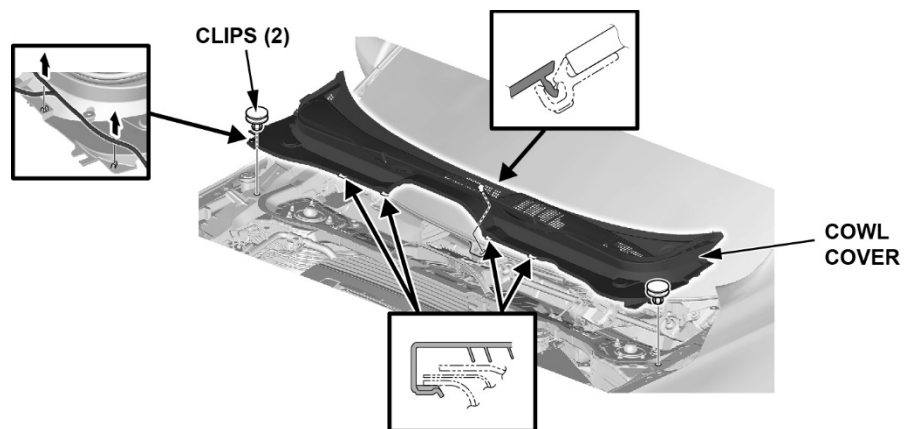
4. Open the positive terminal cover.
5. Disconnect the negative terminal from the 12-volt battery.



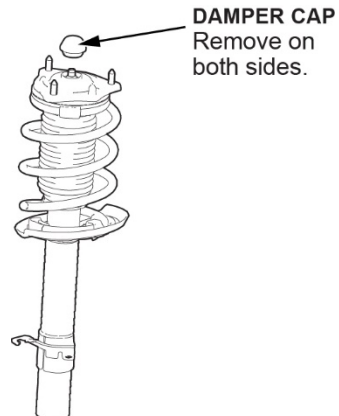
6. Remove the wiper arms.



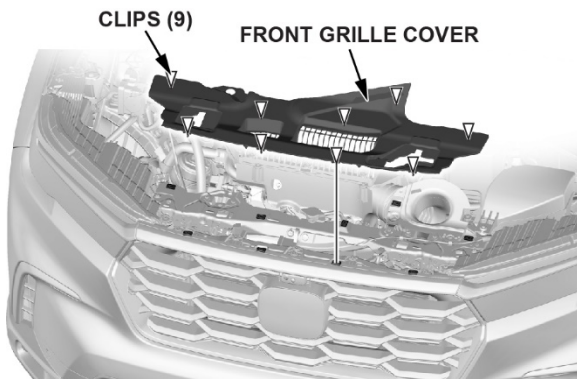
7. Remove the cowl cover.



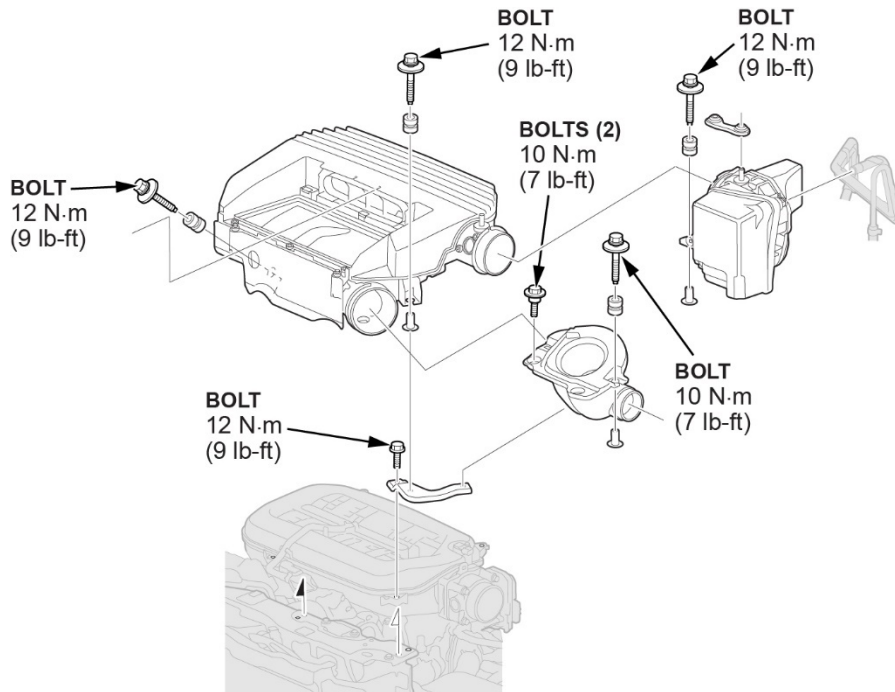
8. Remove the damper cap on both sides.



9. Remove the front grille cover.



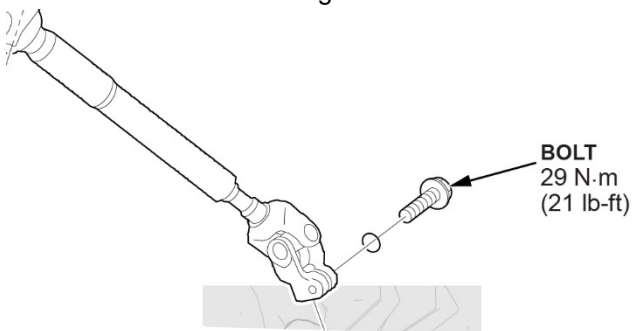
10. Remove the air intake tube, air cleaner housing, and airflow chamber.



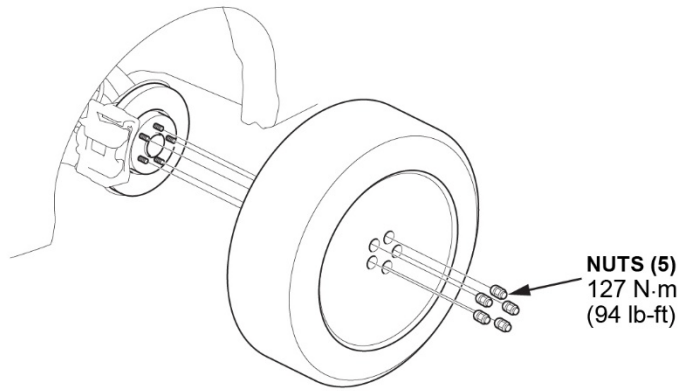
11. Disconnect the steering joint.

NOTE

- Set the steering wheel to the straight-ahead position before disconnecting the shaft.
- Do not turn the steering wheel while disconnecting the steering joint.

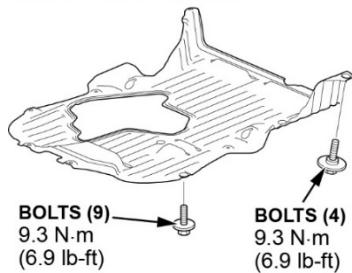


12. With the vehicle on a lift, remove both front wheels.

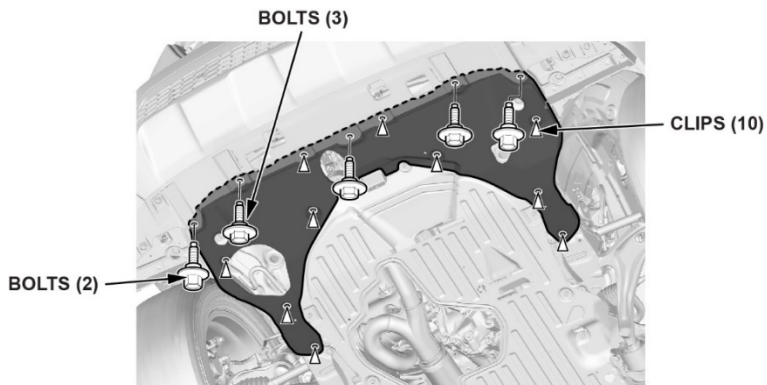
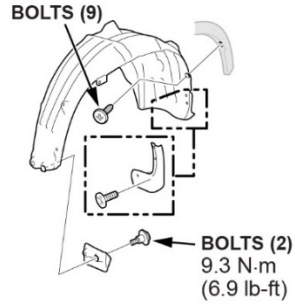
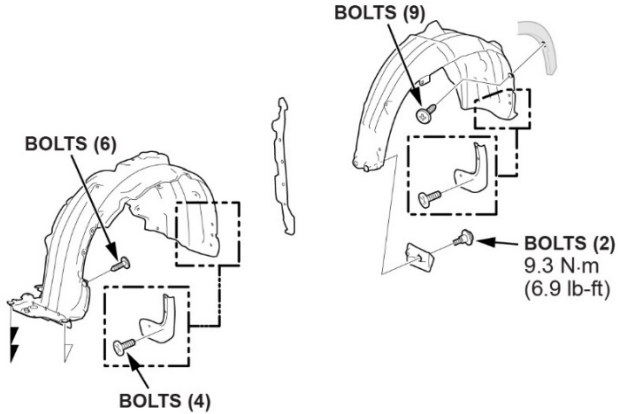
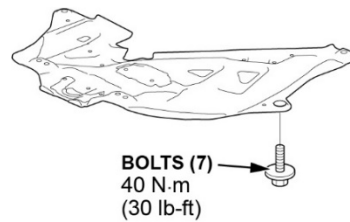


13. Remove the splash shield, the engine undercover (except Trailsport), the front skid plate (Trailsport), the left front inner fender, and the right inner fender.

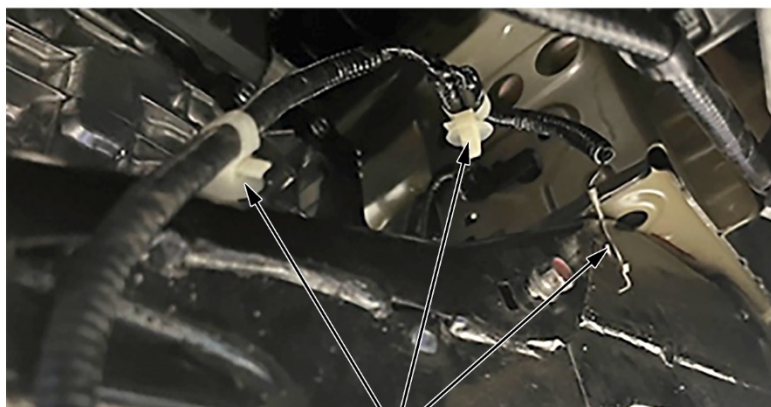
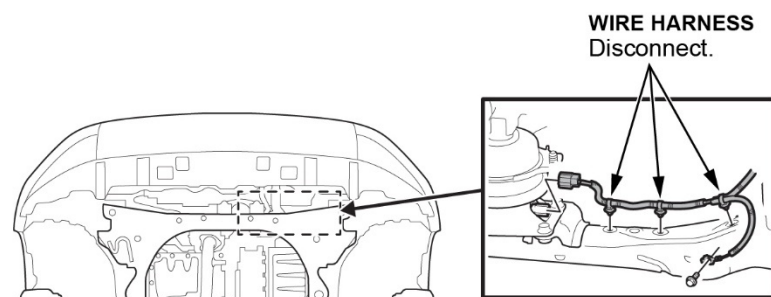
EXCEPT TRAILSORT:



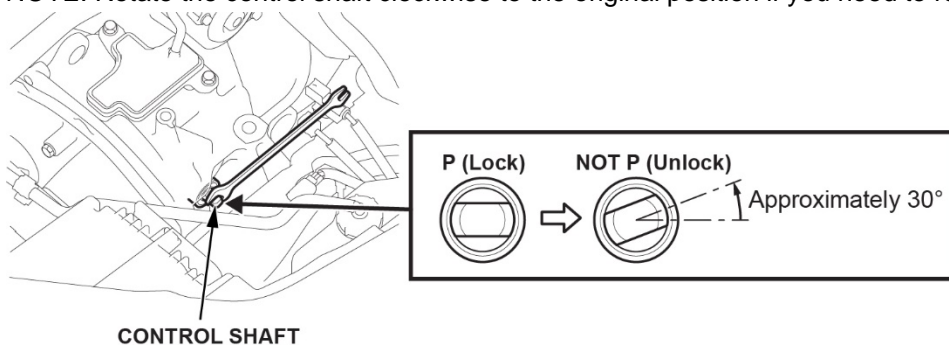
TRAILSORT:



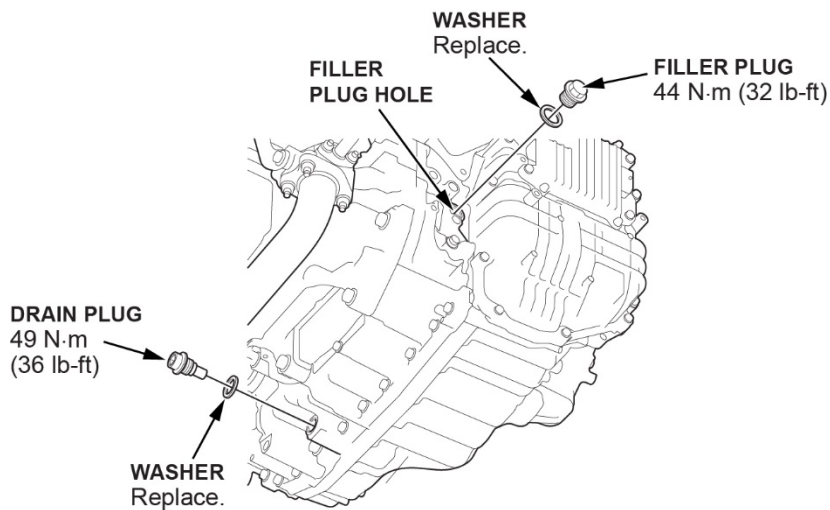
14. Disconnect the wire harness.



15. **AWD ONLY:** Release the park lock, then rotate the control shaft counterclockwise with an open-end wrench.
NOTE: Rotate the control shaft clockwise to the original position if you need to return to the P position/mode.

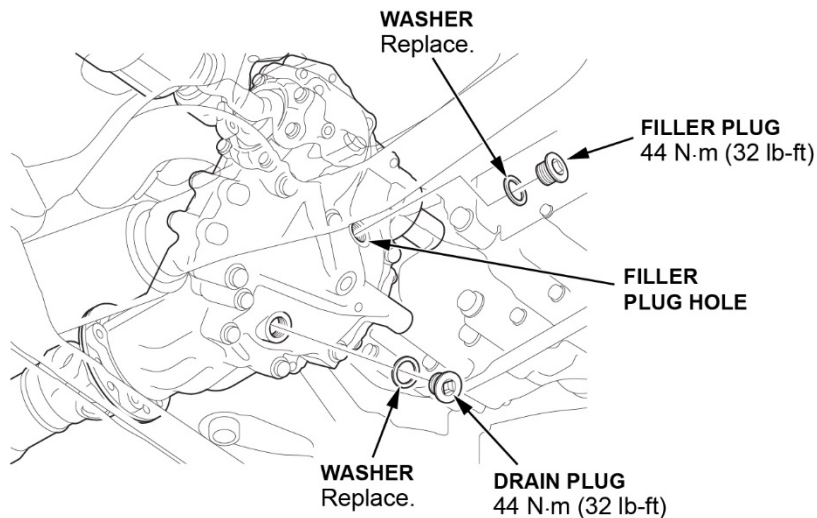


16. **AWD ONLY:** Remove the drain plug with a sealing washer and drain the transmission fluid.



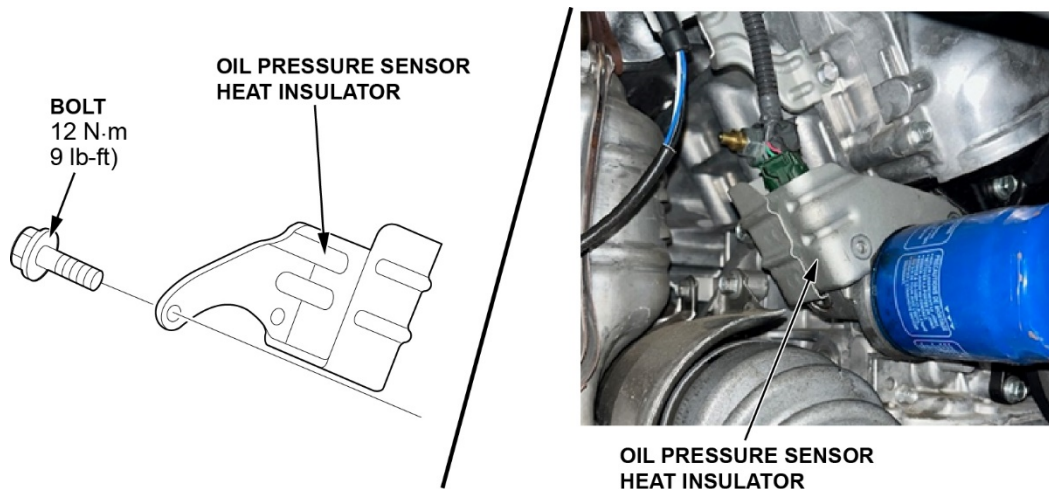
17. **AWD ONLY:** Install the drain plug with a new sealing washer.

18. **AWD ONLY:** Remove the drain plug with the sealing washer and drain the transfer assembly fluid.

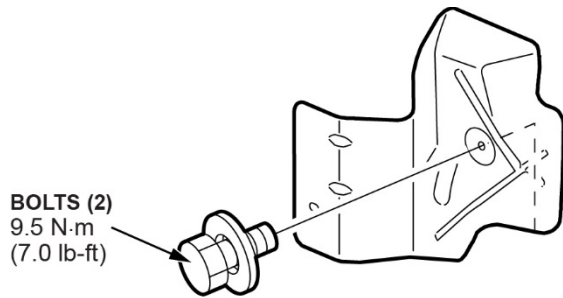


19. **AWD ONLY:** Install the drain plug with a new sealing washer.

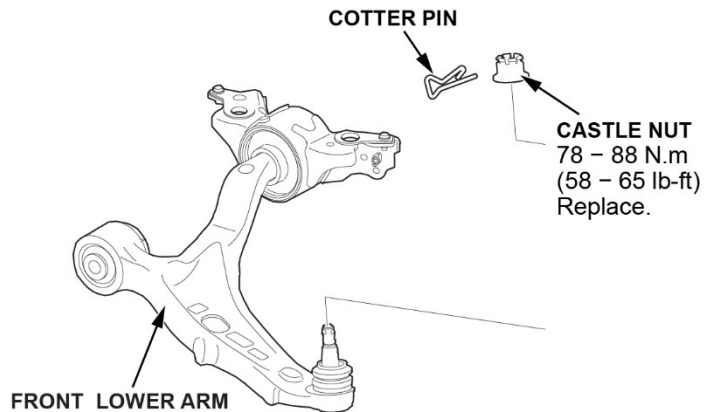
20. **AWD ONLY:** Remove the engine oil pressure sensor heat insulator (2 bolts).



21. Remove the steering gearbox heat baffle.

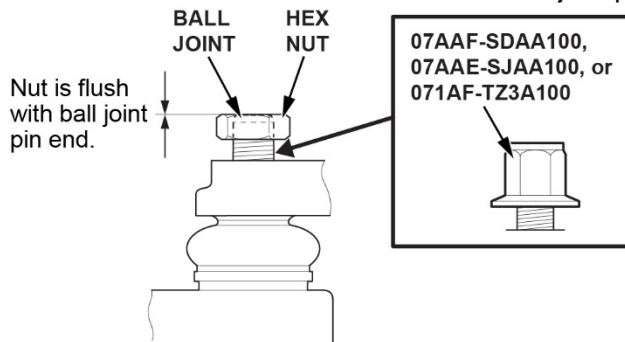


22. Separate the front lower arm ball Joint (both sides).



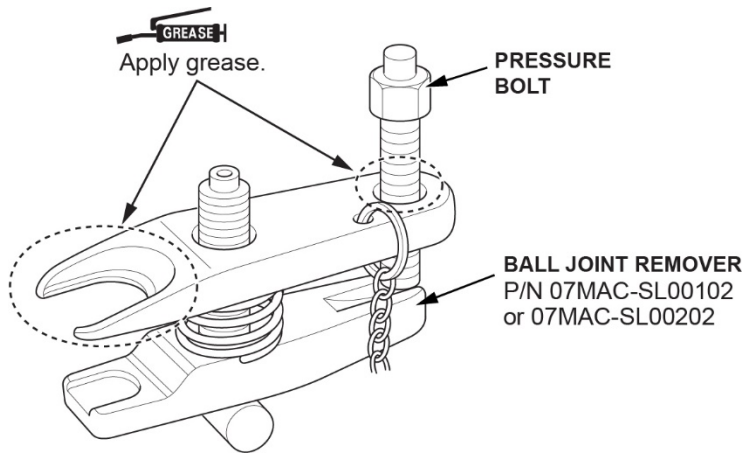
23. Install a hex nut or the ball joint thread protector onto the ball joint threads.

NOTE: Make sure the nut is flush with the ball joint pin end to prevent damage to the threaded end of the ball joint pin.



24. Apply grease to the ball joint remover on the areas as shown.

NOTE: This will ease the installation of the tool and prevent damage to the pressure bolt threads.



25. Loosen the pressure bolt and install the ball joint remover.

NOTE:

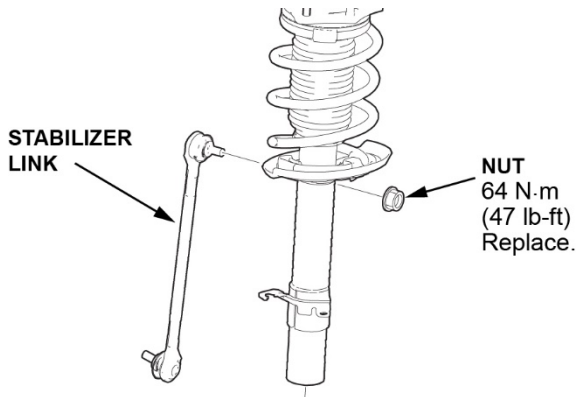
- Insert the jaws carefully, making sure not to damage the ball joint boot.
- Fasten the safety chain securely to a suspension arm or the subframe. **Do not** fasten it to a brake line or wire harness.

26. Make sure the head of the adjusting bolt is in the position shown above to allow the jaw to pivot.

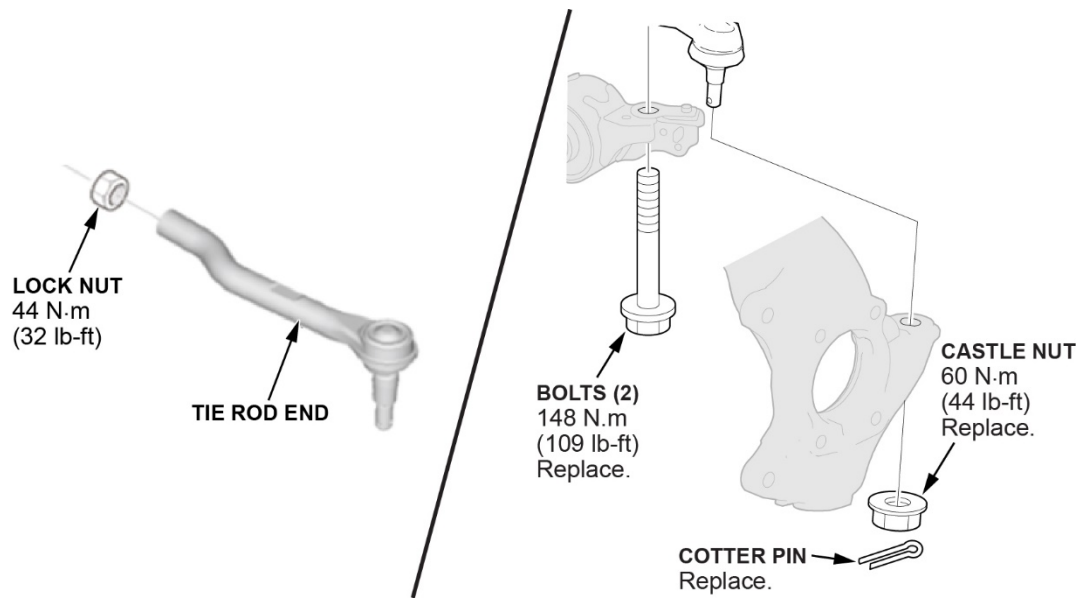
27. Tighten the pressure bolt until the ball joint pin pops loose from the ball joint connecting hole. If necessary, apply penetrating-type lubricant to loosen the ball joint pin.

NOTE: **Do not** use pneumatic or electric tools on the pressure bolt.

28. Separate front stabilizer link on both sides of the vehicle.



29. Loosen the tie rod end lock nut. Remove the cotter pin and castle nut and release the upper tie rod.

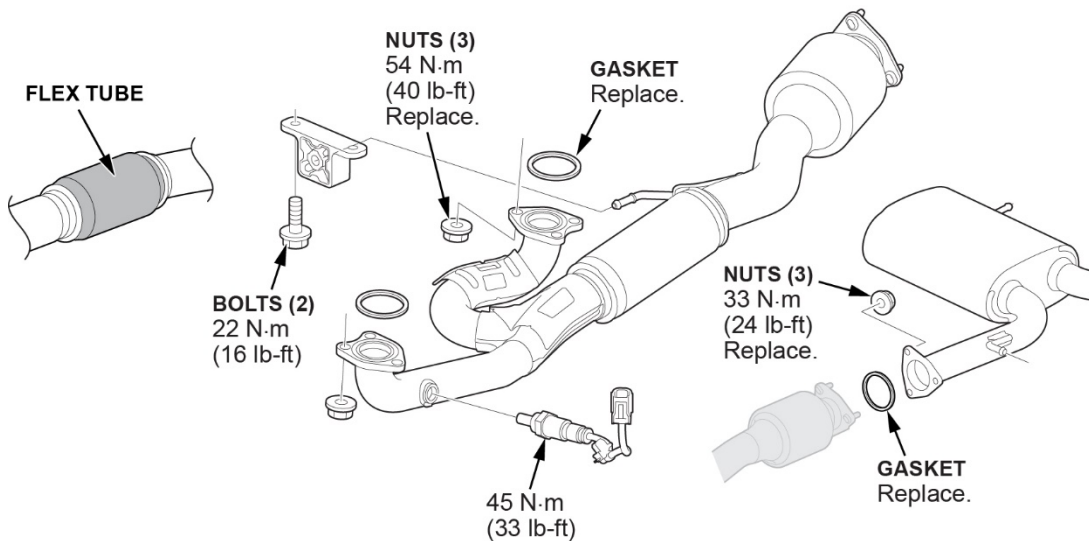


30. Remove the tie rod ends.

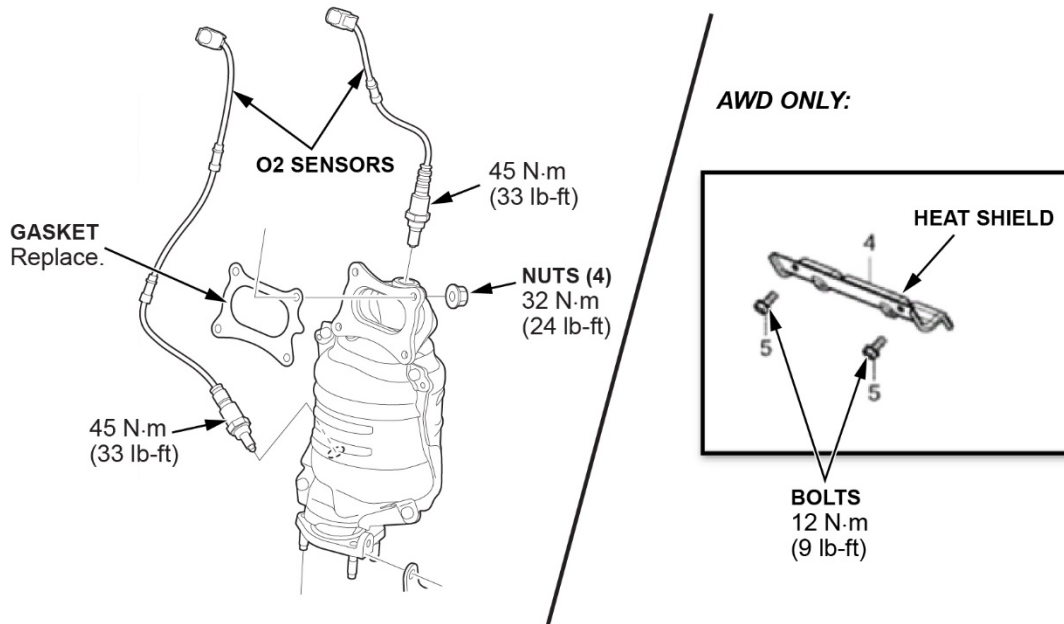
NOTE: Count the number of turns when removing the tie rod ends.

31. Remove the under-floor three-way catalytic converter (under-floor TWC).

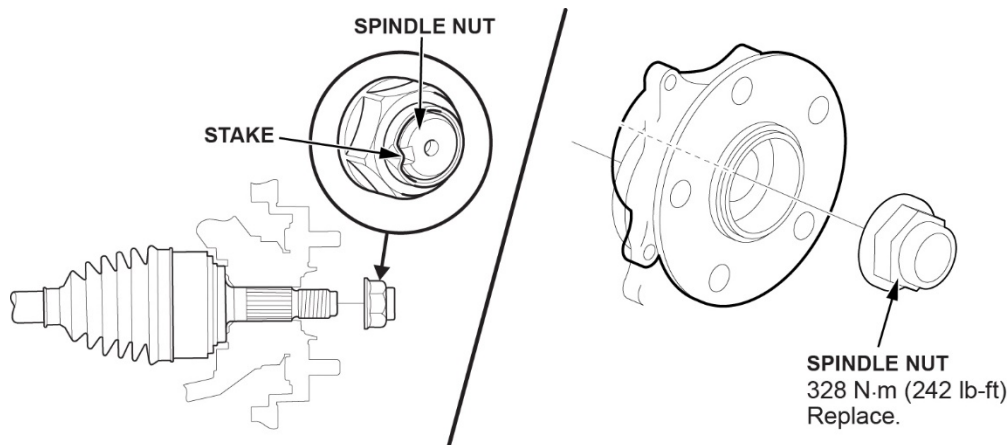
NOTE: Do not bend the flex tube of the underfloor three-way catalytic converter excessively.



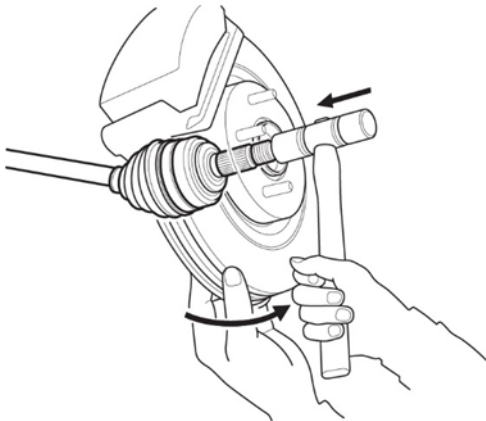
32. **AWD ONLY:** Remove the heat shield from the O2 sensor shield, then disconnect and remove both oxygen sensors. Remove the rear warm up three-way catalytic converter (WU-TWC) (Bank 1).



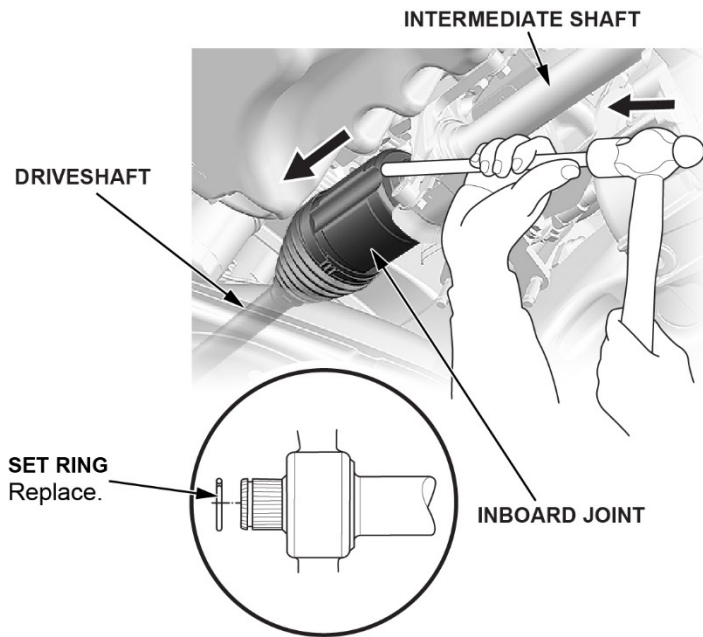
33. **AWD ONLY:** Pry up the stake on the spindle nut, remove the spindle nut, then remove the front axle and intermediate shaft.



34. **AWD ONLY:** Use a hammer to disconnect the outer CV joint from the right knuckle. Be careful not to damage the wheel speed sensor.

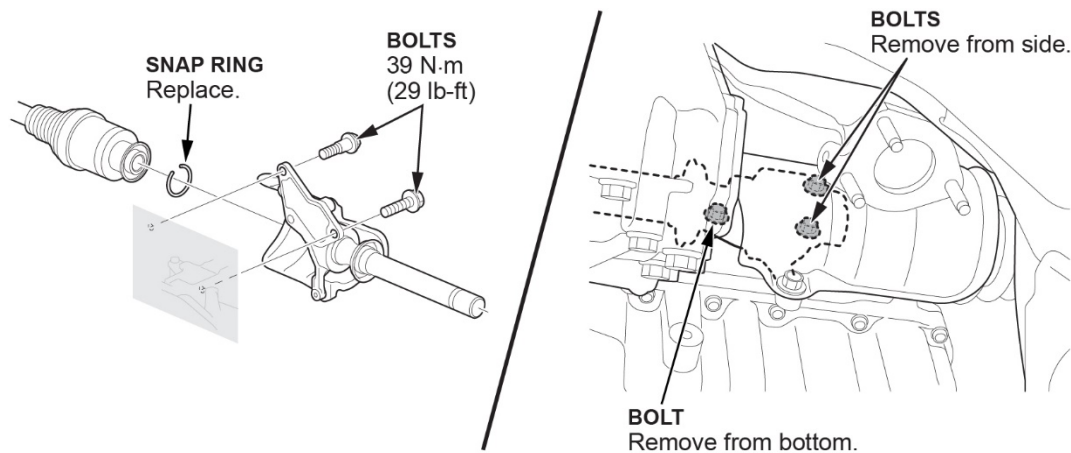


- Drive the inboard joint off the driveshaft using a drift punch and a hammer to release the set ring. Then, remove the front outboard axle.

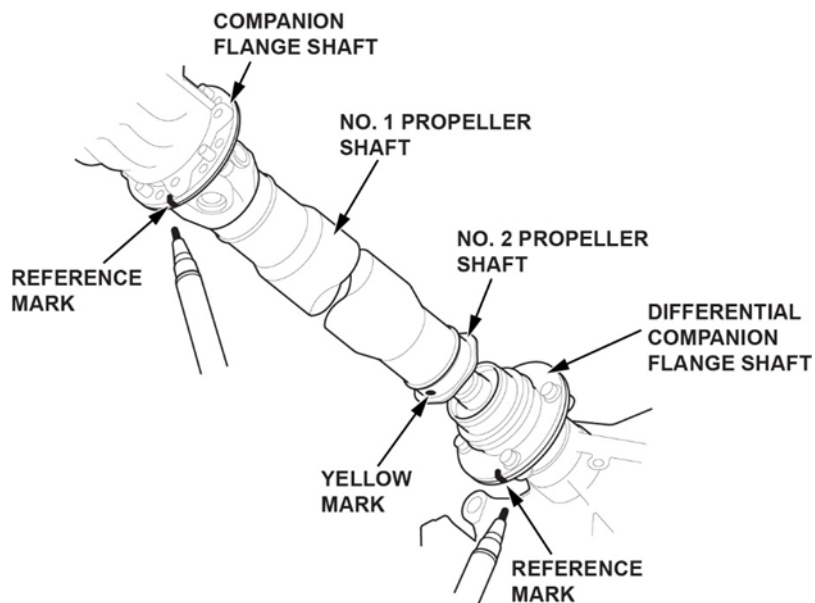


NOTE:

- Remove the right side driveshaft as an assembly
- Do not pull on the driveshaft or the inboard joint may come apart. Pull the inboard joint straight out.
- Remove the set ring.
- Pull the intermediate shaft straight out to avoid damaging the oil seal.
- Bolt remove from the bottom and bolts removed from the side.



35. **AWD ONLY:** Turn the propeller shaft so that the yellow mark is facing down.

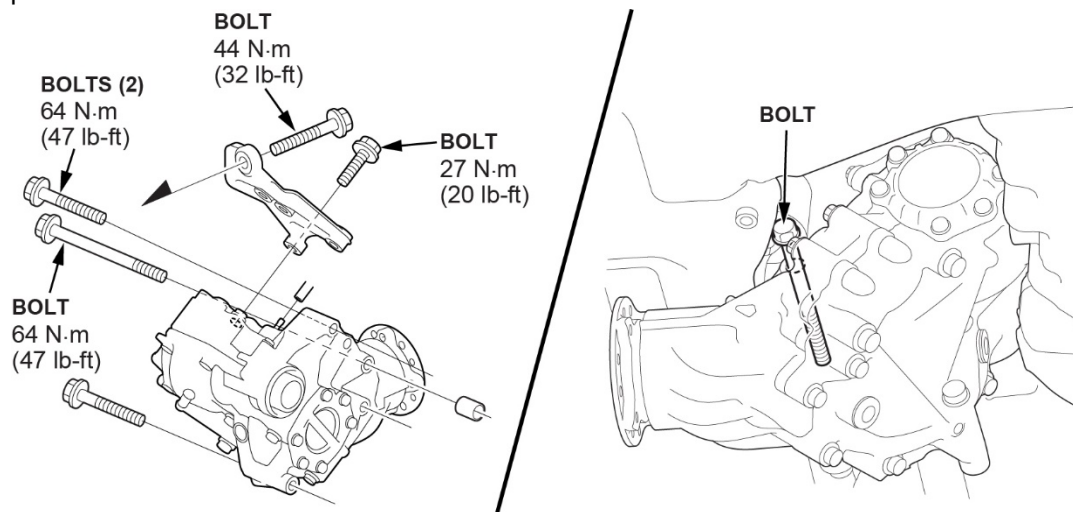


36. **AWD ONLY:** Make reference marks across the No. 1 propeller shaft, the companion flange shaft, and across the No. 2 propeller shaft and the rear differential companion flange.

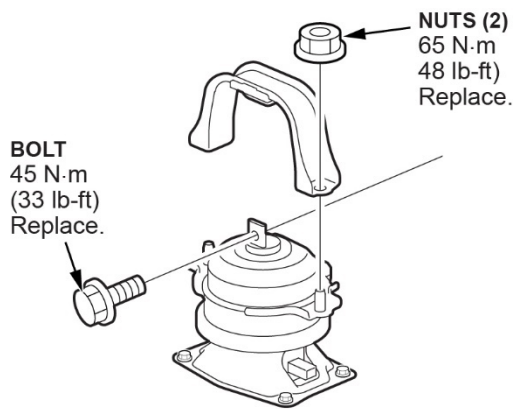
37. **AWD ONLY:** Remove the drive shaft protector, center support bearing, and drive shaft bolts on each end.

38. **AWD ONLY:** Remove the transfer assembly.

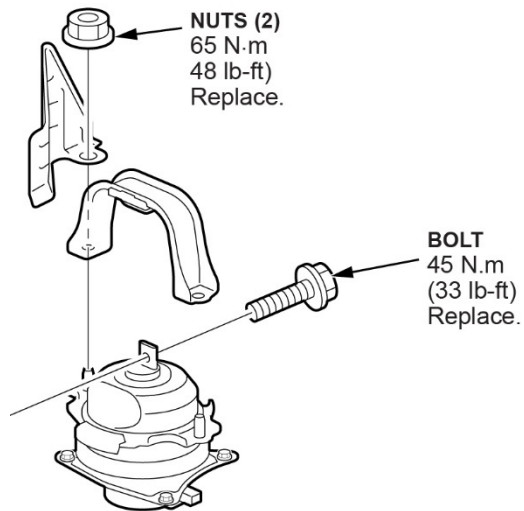
NOTE: The bolt cannot be completely removed due to interference with surrounding parts. Leave the bolt in the position shown.



39. Remove the front engine mount stop.

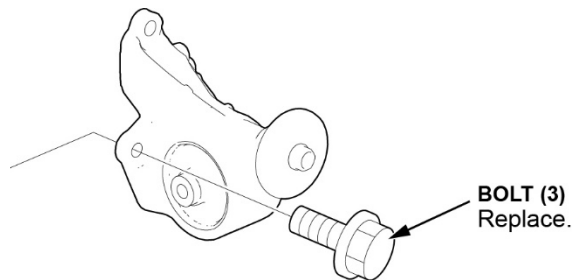


40. Remove the rear engine mount stop.



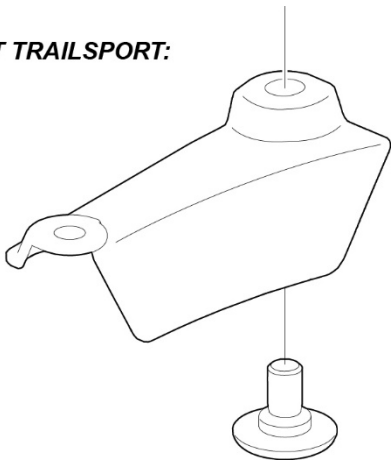
41. Remove the rear engine mount (engine side).

42. Remove the transmission mount (transmission side).

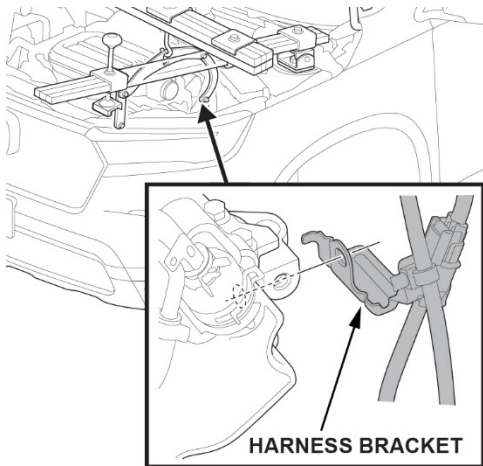


43. Remove the front subframe strake (except TrailSport).

EXCEPT TRAILSport:



44. Remove the harness bracket.

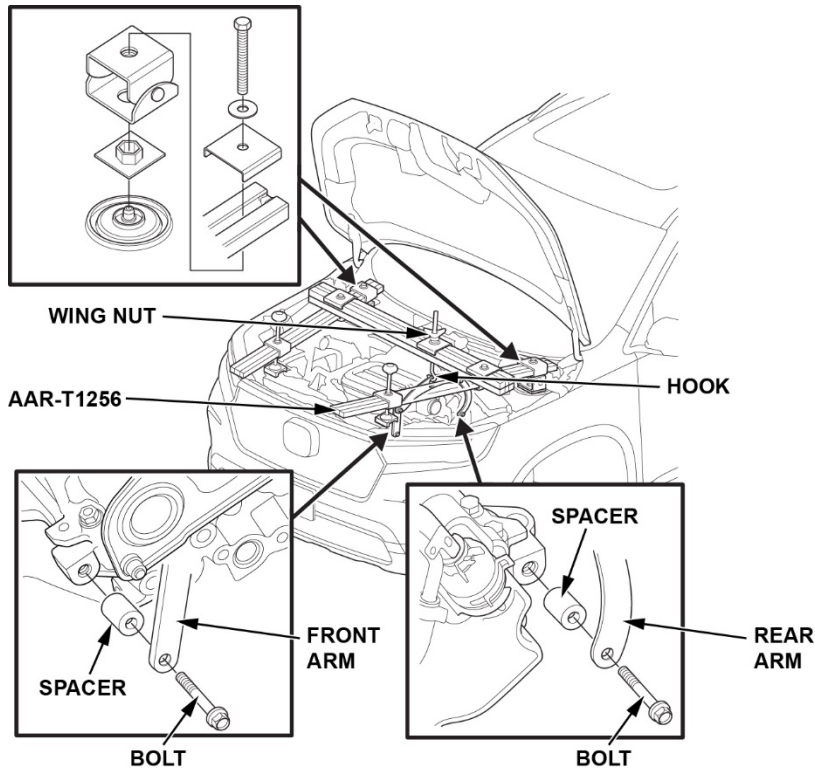


45. Install the engine support hanger.

NOTE:

- Be careful when working around the windshield.
- Two sets of AAR-T1256 are required for stacking an additional cross bar.
- Be careful not to damage the hood opener cable when installing the engine support hanger at the front bulkhead.

46. Install the engine hanger balance bar.



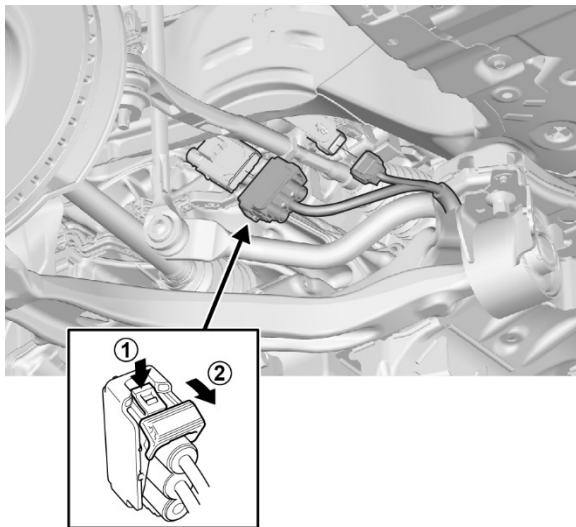
47. Attach the front arm and the rear arm.

48. Install the engine support hanger onto the vehicle.

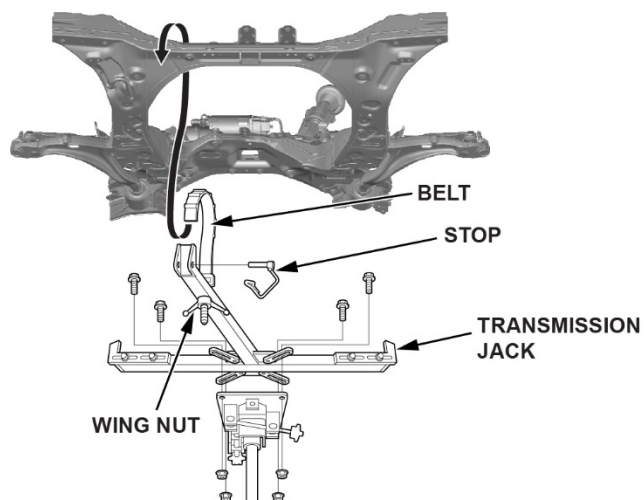
49. Attach the hook to the slotted hole in the engine hanger balance bar.

50. Tighten the wing nut by hand to support the engine/transmission.

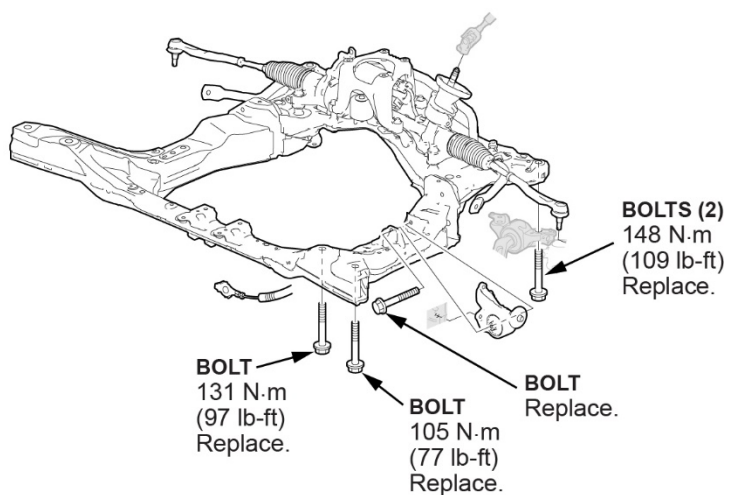
51. Disconnect the connector.



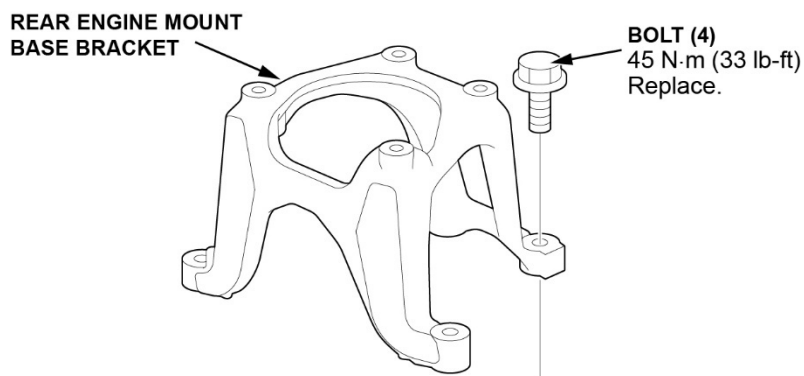
52. Attach the subframe adapter to the front subframe by looping the belt over the front of the front subframe, then secure the belt with its stop, and tighten the wing nut.



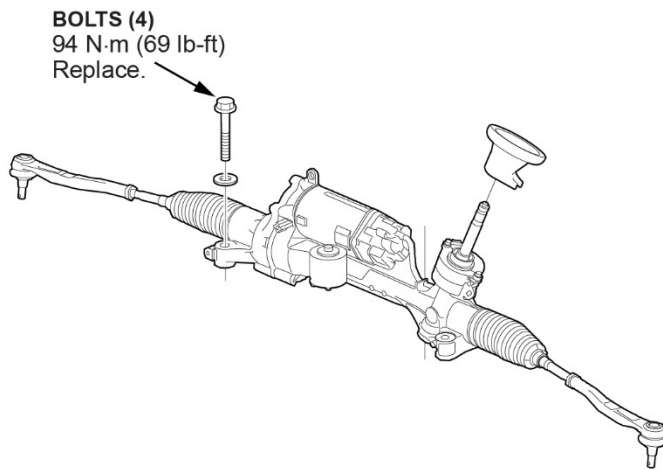
53. Raise a transmission jack and line up the slots in the subframe adapter arms with the bolt holes on the transmission jack base, then securely attach them with four bolts.
54. Remove the front subframe.



55. Remove the rear engine mount base bracket.

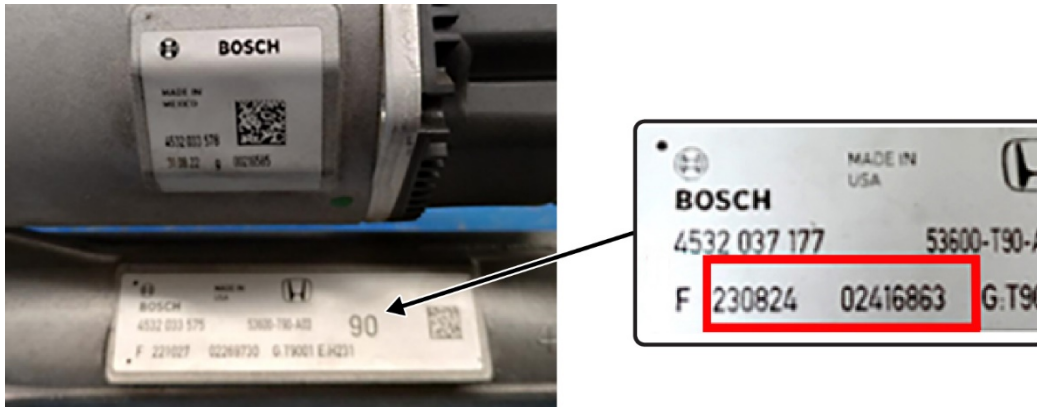


56. Remove the steering gearbox.

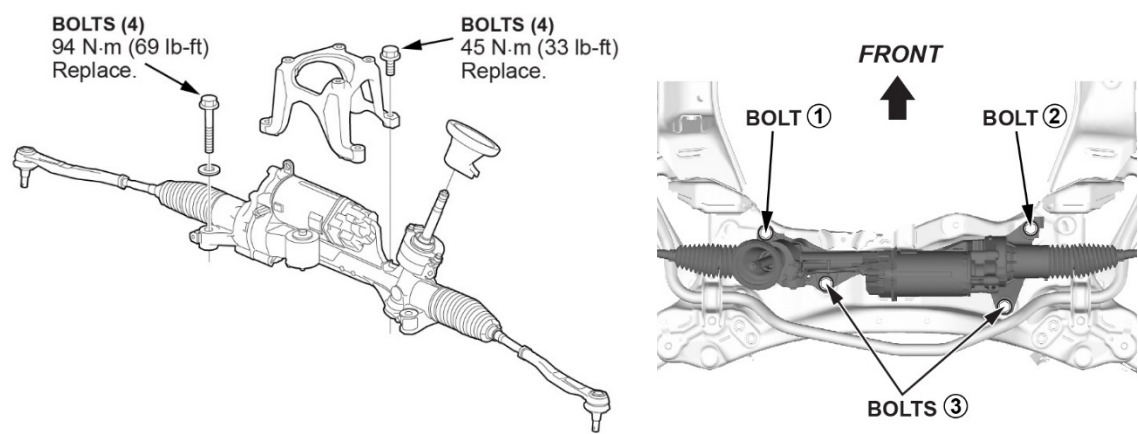


57. Take a photo of the label on the EPS rack.

NOTE: The 14-digit serial number is on the bottom left corner of the label. The photo and serial number **will need** to be entered in the warranty claim.



58. Install the new steering gearbox and rear engine mount base bracket.



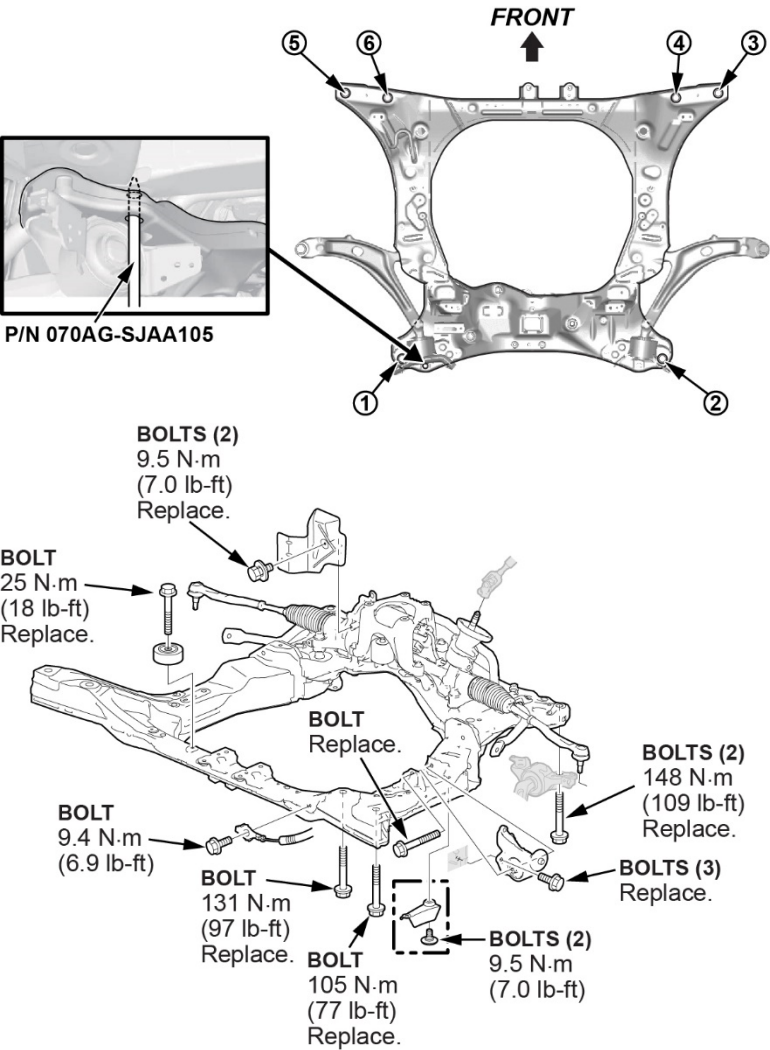
Tightening Procedure

Step	Operation	Object	Specification
1	Temporarily Tighten	All Bolts	—
2	Tighten	All Bolts	①→②→③

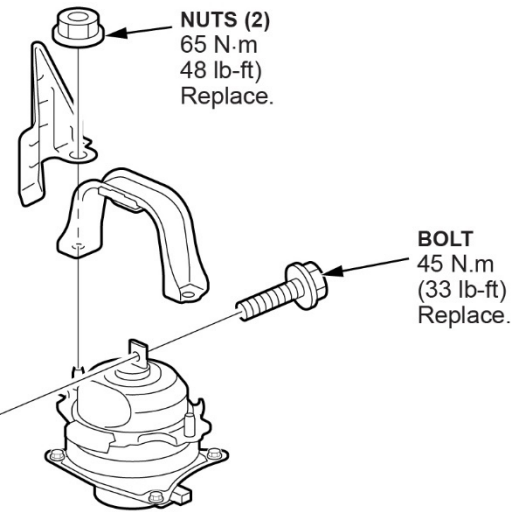
59. Install the subframe.

NOTE: Do the following procedure while using the subframe alignment pin.

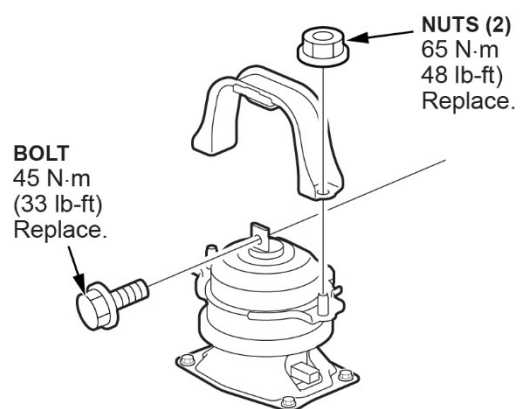
Step	Operation	Object	Specification
1	Temporarily Tighten	All Bolts	—
2	Align	Subframe	—
3	Tighten	All Bolts	①→②→③→④→⑤→⑥



60. Torque the rear engine mount.

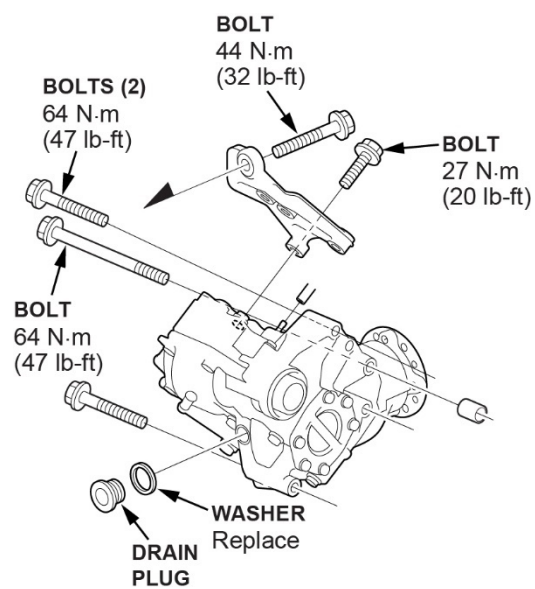


61. Torque the front engine mount.

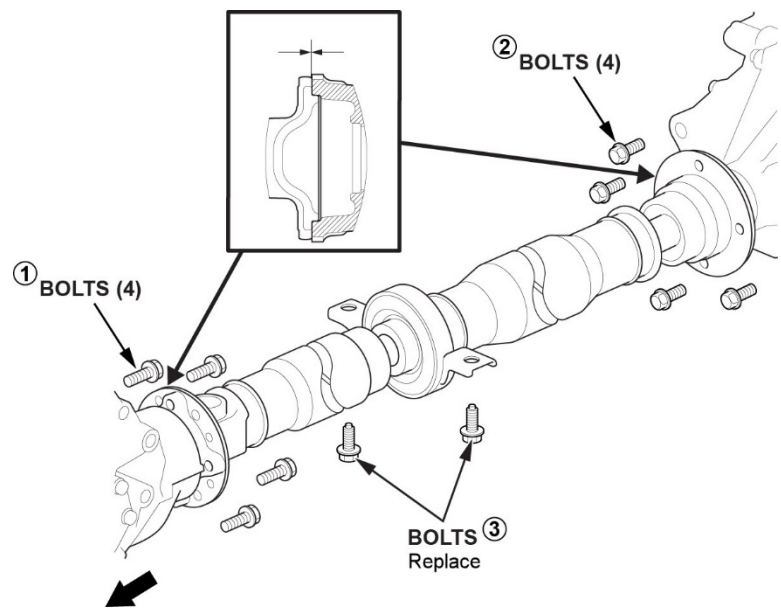


62. Remove the engine hanger.

63. **AWD ONLY:** Install the transfer assembly.



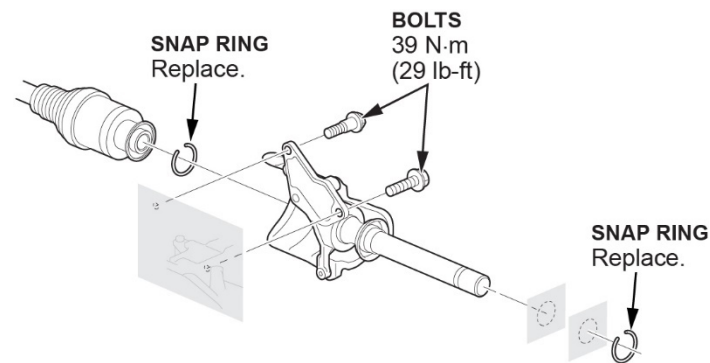
64. **AWD ONLY:** Install the driveshaft.



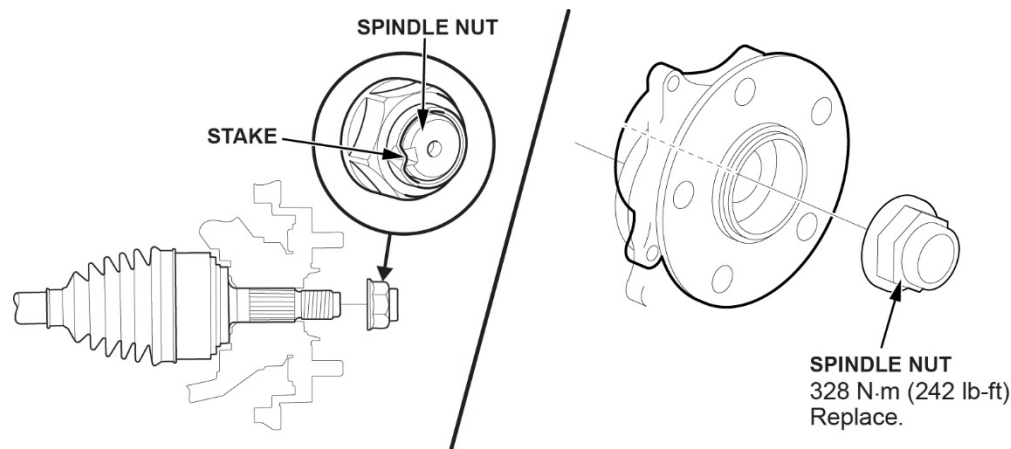
Tighten the bolts to specifications in the following procedure.

Step	Operation	Object	Specification
1	Temporarily Tighten	All Bolts	—
2	Tighten	All Bolts	①→②→③

65. Install the intermediate shaft.

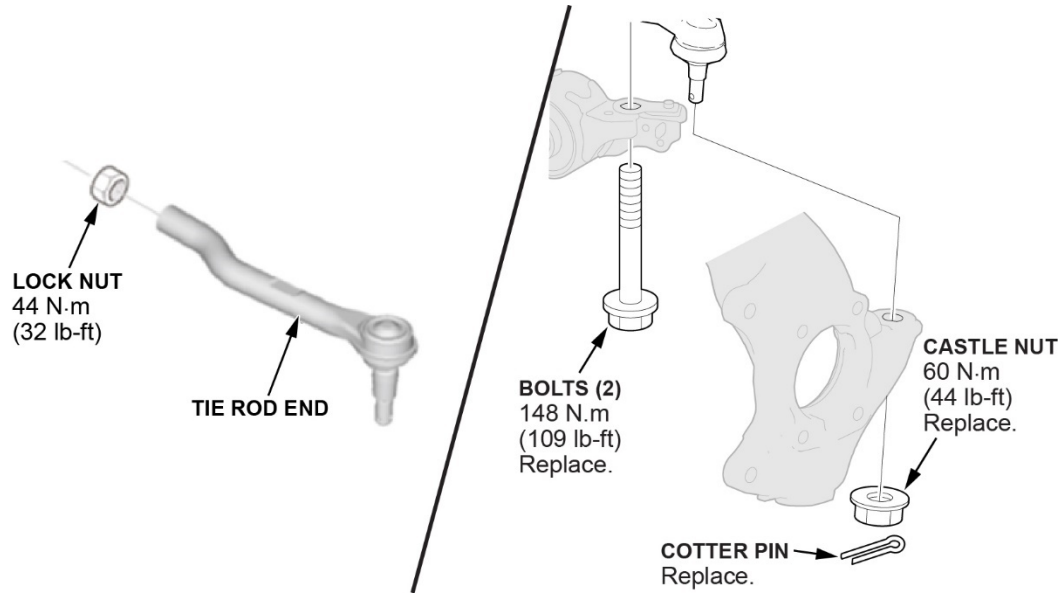


66. Install the spindle nut.

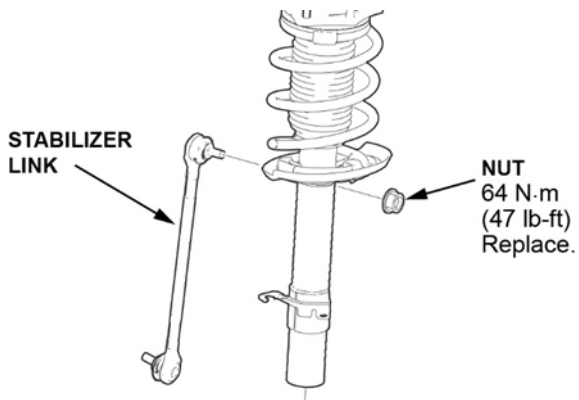


67. Install the tie rod ends, counting the same number of turns used when removing. Then, install the tie rod ends and torque.

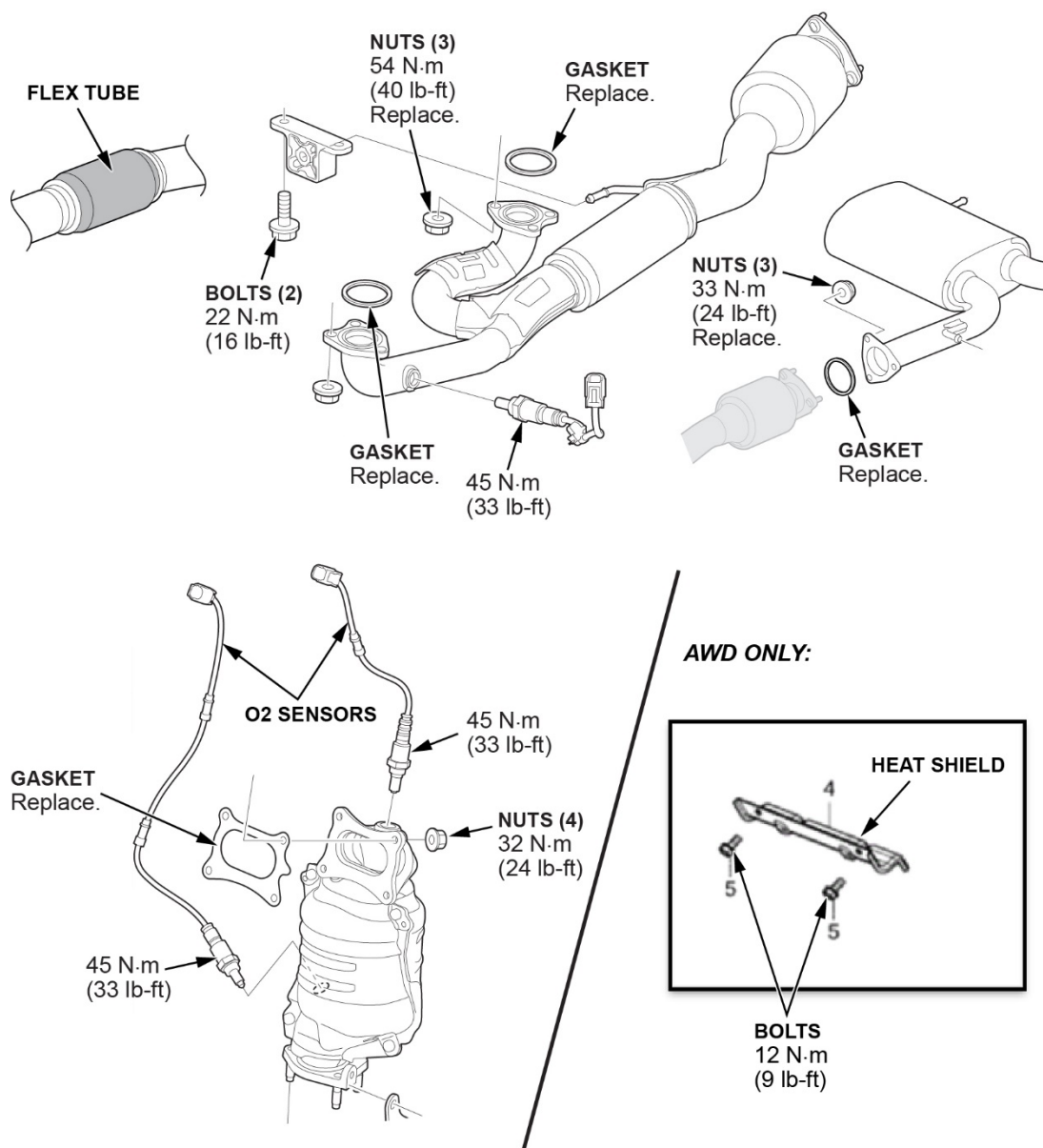
NOTE: Final torque of locknut to be done after doing the wheel alignment.



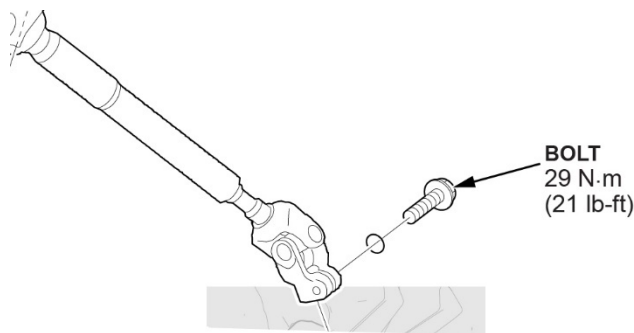
68. Install the stabilizer link.



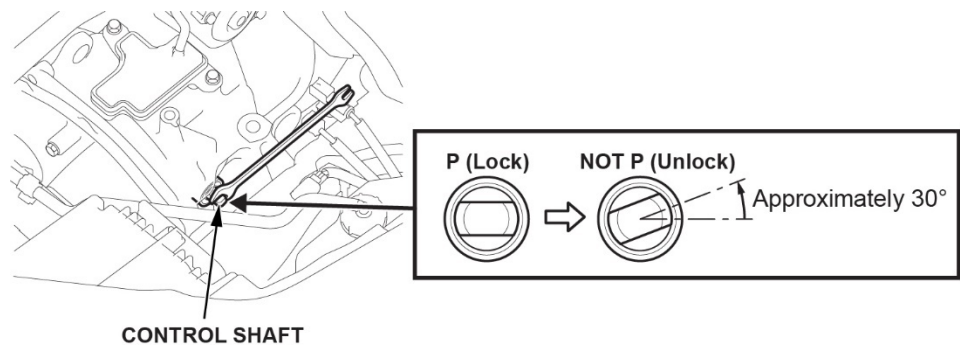
69. Install the catalytic convertor.



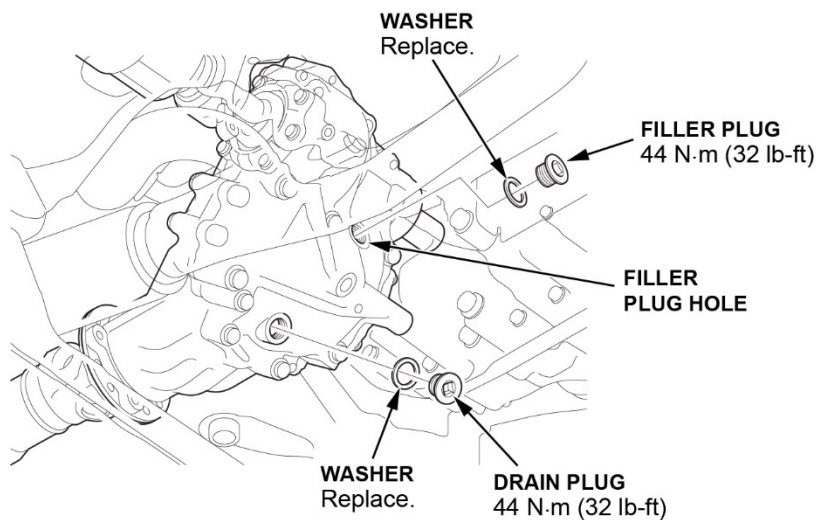
70. Install the steering joint.



71. Return the transmission to the P Position mode.



72. **AWD ONLY:** Remove the filler plug with the sealing washer.



73. **AWD ONLY:** Refill the transfer assembly with the recommended fluid through the filler plug hole until the fluid overflows.

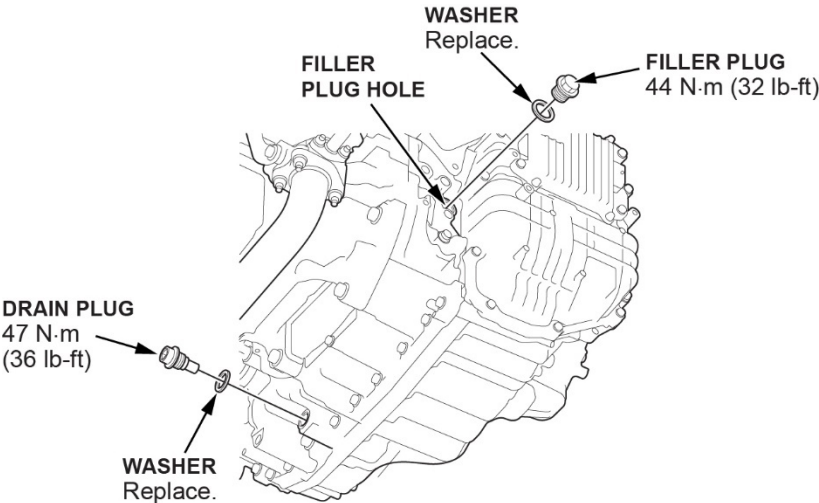
Fluid Details

Type
Honda HGO-1

Fluid Amount Details

Operation	Specified Amount
At Fluid Change	0.55 L (0.58 US qt)
At Overhaul	0.60 L (0.63 US qt)

74. **AWD ONLY:** Install the filler plug with the sealing washer.
75. Remove the filler plug with the sealing washer on the transmission.



76. Refill the transmission with the recommended fluid through the filler plug hole.
- NOTE: Using the wrong type of fluid **will damage** the transmission.

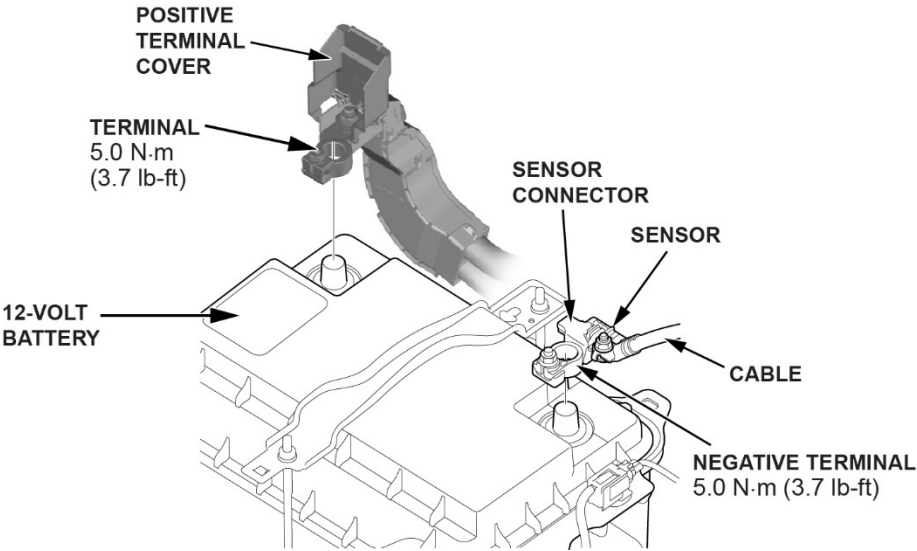
Fluid Details

Type
Honda ATF TYPE 2

Fluid Amount Details

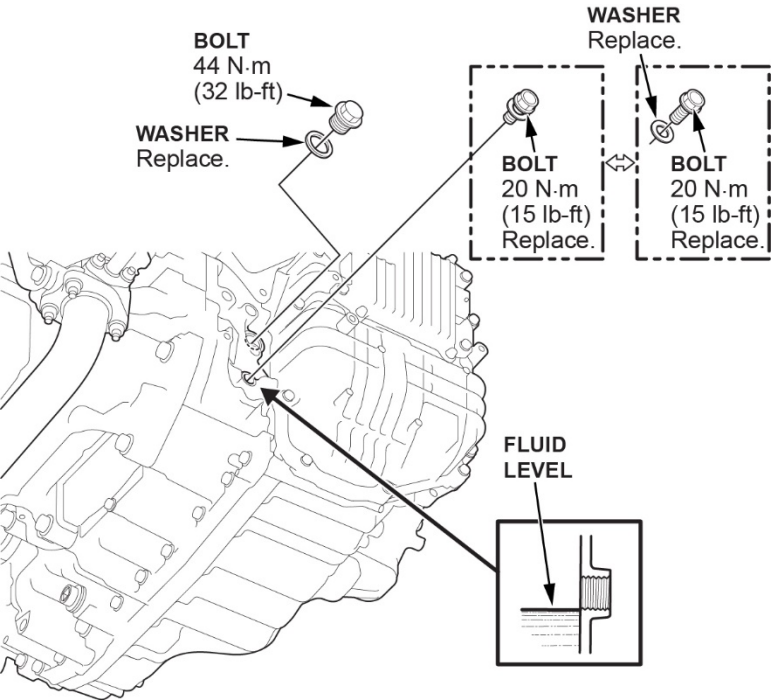
Application	Operation	Specified Amount
2WD	At Fluid Change	3.7 L (3.9 US qt)
	At Overhaul	7.8 L (8.2 US qt)
AWD	At Fluid Change	4.2 L (4.4 US qt)
	At Overhaul	8.3 L (8.8 US qt)

77. Temporarily install the filler plug with the sealing washer.
78. Connect the negative terminal to the 12-volt battery.



79. Start the engine to do the transmission fluid level check.

NOTE: There are two types of level plugs: integrated washer type and separated washer type.



80. While pressing the brake pedal firmly, shift the transmission to P-R-N-D-S 2nd-S-D-N-R-P position/mode, and wait at least **3 seconds** in each position/mode.

NOTE: To shift to 2nd gear, enter the sequential sport shift mode by pressing the paddle shifter in the S position/mode.

81. Turn the engine to OFF.

82. **Integrated washer type:** remove the level plug.
Separated washer type: remove the level plug with the sealing washer.

83. Check the transmission fluid level.

Specifications

Position	Specification
c	The transmission fluid is dripping from the level plug hole.

84. If necessary, remove the filler plug with the sealing washer and add the recommended fluid through the filler plug hole until the transmission fluid overflows from the level plug hole.

NOTE: Using the wrong type of fluid will damage the transmission.

Fluid Details

Type
Honda ATF TYPE 2

85. **Integrated washer type:** Install a new level plug.
Separated washer type: Install the level plug with a new sealing washer.

86. Install the filler plug with a new sealing washer.

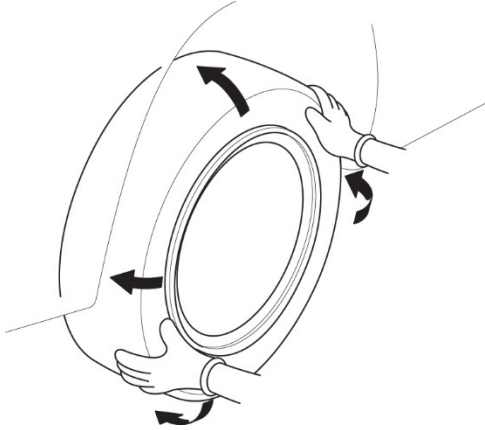
87. Update the EPS control unit.

88. After installing the steering gearbox, check these items:

- With the front wheels straight ahead, make sure the steering wheel is centered and the turning revolutions from center to full lock (left and right) are equal. If not, check the installation of the steering wheel and the engagement of the joint/pinion shaft splines.
- With the tires raised off the ground, check for noise and abnormality by turning the steering wheel fully to the right and left several times.
- Check that the EPS indicator does not come on.

89. Check the wheel alignment:

NOTE: Set up the vehicle on an alignment machine according to the directions in the operation manual furnished with the equipment you are using.



Procedure

NOTE: For proper inspection and adjustment of the wheel alignment, do these checks:

- Release the parking brake to avoid an incorrect measurement.
- Make sure the suspension is not modified.
- Make sure the fuel tank is full and that the spare tire or temporary tire repair kit, jack, and tools are in place inside the vehicle.
- Check the tire size and tire pressure according to the tire information.
- Set the steering column to the middle tilt position and telescopic position (if equipped).
- Check the runout of the wheels and tires.
- Check the suspension ball joints (raise and support the vehicle). Hold a tire with your hands and move it up and down and right and left to check for movement.
- Before doing alignment inspections, move all extra weight from the vehicle, and no one should be inside the vehicle (driver or passengers).
- Lower the vehicle to the ground. Bounce the vehicle up and down several times to stabilize the suspension.

90. Inspect the following items:

NOTE:

- Make sure the neutral position holding mode is entered.
- If the measurement is not within specifications, check for bent or damaged suspension components.

Front Caster Angle

Item	Type	Standard Value
Front Caster Angle	A	$5^{\circ} 00' \pm 30'$
	B	$4^{\circ} 48' \pm 30'$

Camber Angles

Item	Type	Standard Value
Front Camber Angle	A	$-0^{\circ} 30' \pm 40'$
	B	$-0^{\circ} 17' \pm 40'$
Maximum Difference Between Right and Left Side (Front)	All models	$0^{\circ} \pm 40'$
Rear Camber Angle	A	$-1^{\circ} 00' \pm 45'$
	B	$-0^{\circ} 19' \pm 45'$
Maximum Difference Between Right and Left Side (Rear)	All models	$0^{\circ} \pm 45'$

NOTE:

- Do the rear toe inspection before the front toe inspection.
- Make sure the parking brake is released, if the automatic parking brake function is turned on, do the temporarily cancel automatic electric parking brake.

Rear Toe

Specifications

Item	Standard Value
Rear Total Toe-In	$2 \pm 2 \text{ mm } (0.08 \pm 0.08 \text{ in})$

NOTE:

- Set the steering column to the middle tilt and telescopic position.
- Center the steering wheel spokes and hold it.
- Check the front toe with the wheels pointed straight ahead.

Front Toe

Specifications

Item	Standard Value
Front Total Toe-In	$0 \pm 2 \text{ mm } (0 \pm 0.08 \text{ in})$

NOTE:

- Make sure the neutral position holding mode is entered.
- Turn the wheel right and left while applying the brake and measure the turning angle of both wheels.

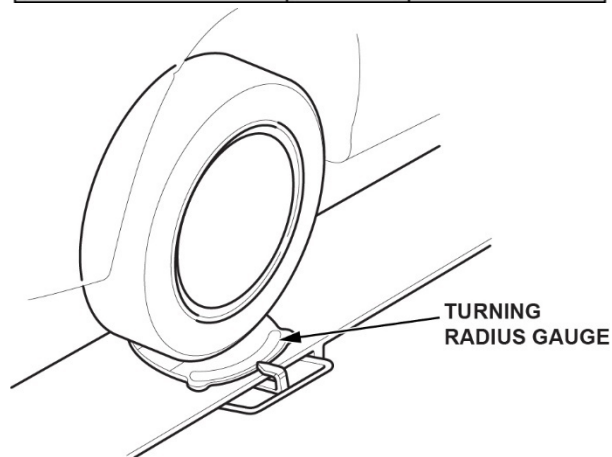
Turning Angle

Tool Details

Name	
a	Turning Radius Gauge

Specifications

Item	Type	Standard Value
Turning Angle Inward	A	$38^{\circ} 36' \pm 2^{\circ}$
	B	$39^{\circ} 12' \pm 2^{\circ}$
Turning Angle Outward (reference)	A	$32^{\circ} 30' \pm 1^{\circ}$
	B	$32^{\circ} 54' \pm 1^{\circ}$

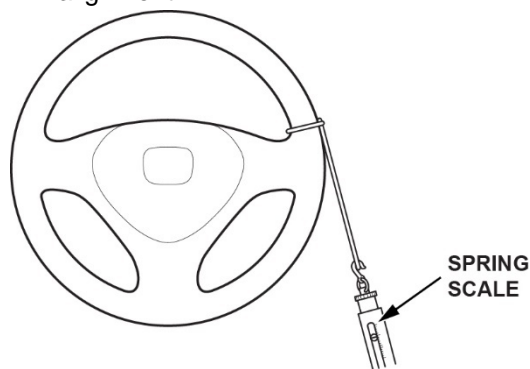


NOTE: If the measurement is not within specifications, even up both sides of the tie-rod threaded section while adjusting the front toe. If they are even, but the turning angle is not within the specifications, check for bent or damaged suspension components.

91. Check the power steering assist:

NOTE:

- Make sure the vehicle is parked on a clean, dry floor with the engine started.
- This test should be done with original equipment tires and wheels at the correct tire pressure.
- Pull the scale as shown and read it as soon as the tires begin to turn.
- If the measurement is not within specifications, check these items: steering linkage, EPS system, and wheel alignment.



Tool Details

Name	
a	Spring Scale

Specifications (Initial Turning Load)

Standard Value
28 N (6.3 lbf) max.

92. VSA sensor neutral position memorize. Select the following menu buttons on the i-HDS screen in this order: **ABS/VSA (System Selection Menu) > Adjustment > All Sensor.**

NOTE:

- Do not press the brake pedal during this procedure.
- Make sure the steering wheel is straight ahead and the vehicle is on level ground.