

March 8, 2024

Version 1

Safety Recall: 2023 Passport, Ridgeline EPS Gearbox Inspection

AFFECTED VEHICLES

Year	Model	Trim Level	VIN Range
2023	Passport	AWD Elite, AWD EX-L, AWD TrailSport	Check the iN VIN status for eligibility.
2023	Ridgeline	AWD RTL, AWD RTL-E, AWD Sport	Check the iN VIN status for eligibility.

BACKGROUND

Due to a manufacturing error, two vehicles may have been produced with an improperly fastened inner ball joint housing and rack end in the steering gearbox assembly. Improperly manufactured electronic power steering (EPS) gearbox assemblies can affect steering function, potentially increasing the risk of a crash or injury.

CUSTOMER NOTIFICATION

Owners of the affected vehicles will be sent a notification of this campaign.

Do an iN VIN status inquiry to make sure the vehicle is shown as eligible.

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

Failure to inspect and repair a vehicle, as necessary, 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 verify if a vehicle in inventory is affected, do a VIN status inquiry before selling it.

CORRECTIVE ACTION

Inspect the serial number, and if there is a match, replace the EPS gearbox assembly.

PARTS INFORMATION

To obtain the correct parts for each vehicle repair, **contact your local parts analyst** with the vehicle's VIN and this service bulletin number. The parts center will order the correct parts on behalf of your dealer after the eligibility of the VIN is confirmed.

Part Name	Quantity
Gearbox	1
Flange Bolt (10x35)	2
Flange Bolt (10x16)	2
Flange Bolt (10x103)	1
Flange Bolt (10x30)	3
Flange Bolt (12x80)	3
Split Pin (3.0x22)	2

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.

Steering Joint Yoke Bolt	1
Flange Nut (12mm)	2
Flange Nut (12mm)	2
Flange Nut (12MM)	4
Exhaust Pipe Gasket	2
Self-Lock Nut (10mm)	9
Pre-Chamber Gasket	1
Castle Nut (14mm)	2
Flange Bolt (10x30)	2
Flange Bolt (10x20)	1
Flange Bolt (12x30)	8
Flange Bolt (14x125)	2
Flange Bolt (14x140)	2
Flange Bolt (10x25)	4
Flange Nut (10mm) Ridgeline)	4
O-Ring	1
12 Point Bolt (8x21) (Passport)	4

TOOL INFORMATION

Tool Name	Part Number	Quantity
Steering Wheel Holder Tool	Commercially Available	1
Ball Joint Removal	07MAC-SL00201	1
Ball Joint Removal	071AF-SZNA100	1
Ball Joint Thread Protector	07AAF-SDAA100	1
Subframe Adapter	VSB02C000016	1
Engine Support Hanger	AAR-T1256	1
Engine Hanger Adapter	VSB02C000031	1
Engine Hanger Balance Bar	VSB02C000041	1
Alignment Pin	070AG-SJAA10S	2

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.
- There are only two EPS serial numbers affected by this activity. Any claims submitted with non-affected serial numbers will be subject to debit.

Operation Number	Description	Flat Rate Time	Defect Code	Symptom Code	Template ID	Failed Part Number
5135A8	Inspect the EPS gearbox label. (Include photos)	0.3 hr	6JB00	LHY00	A24018A	53601-T6Z-A01
5131L9	Replace the EPS gearbox (includes inspection and alignment).	3.7 hr	6JB00	LHY00	A24018B	53601-T6Z-A01

Skill Level: Repair Technician

INSPECTION PROCEDURE

1. Open the hood and wait for the engine to cool down.
2. Using a borescope, locate the label on the EPS gearbox.



3. Inspect the label on the EPS gearbox and check the serial number on the label.

- If the EPS serial number is **012138T0167** or **012138T0126**, take a picture of the label, as you will need it to submit your warranty claim. Then go to REPAIR PROCEDURE.

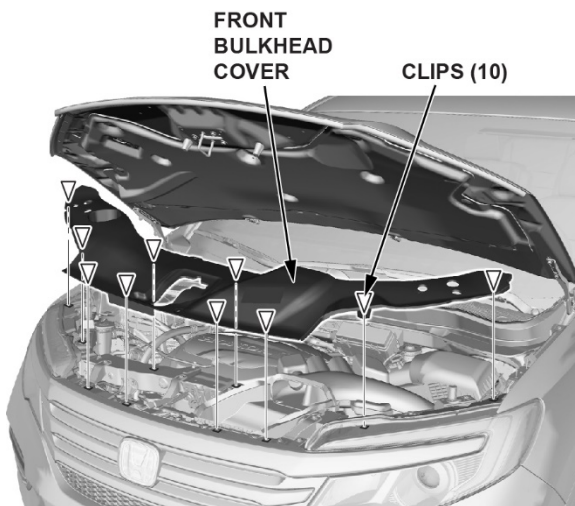


- If the EPS serial number has any other serial number, take a picture of the label and attach it to the warranty claim; no further action is needed.

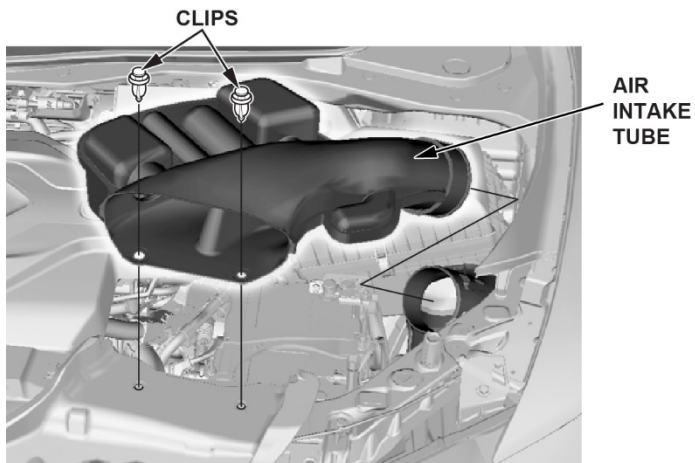
NOTE: There are only two EPS serial numbers affected by this activity.

REPAIR PROCEDURE

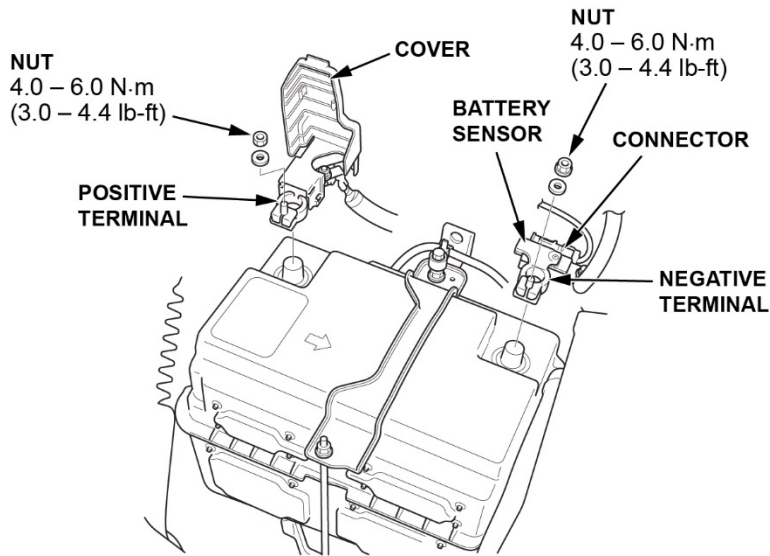
1. Remove the front bulkhead cover.



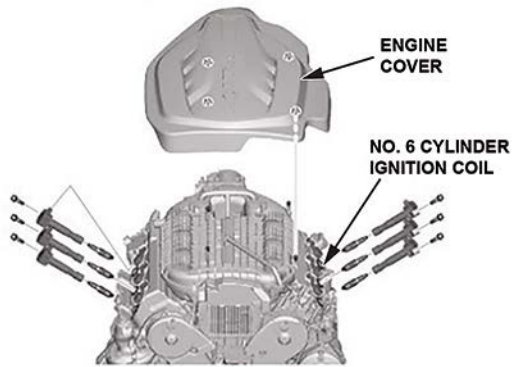
2. Remove the air intake tube.



3. Disconnect the 12-volt battery.



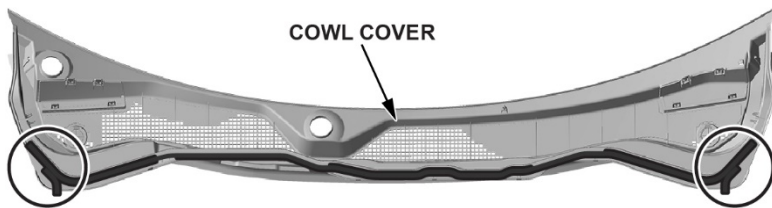
4. Remove the engine cover.



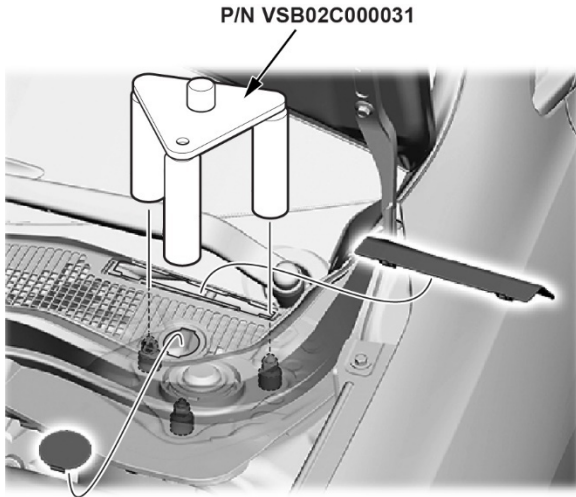
5. Remove the No. 6 cylinder ignition coil.

5. Remove the No. 6 cylinder ignition coil.

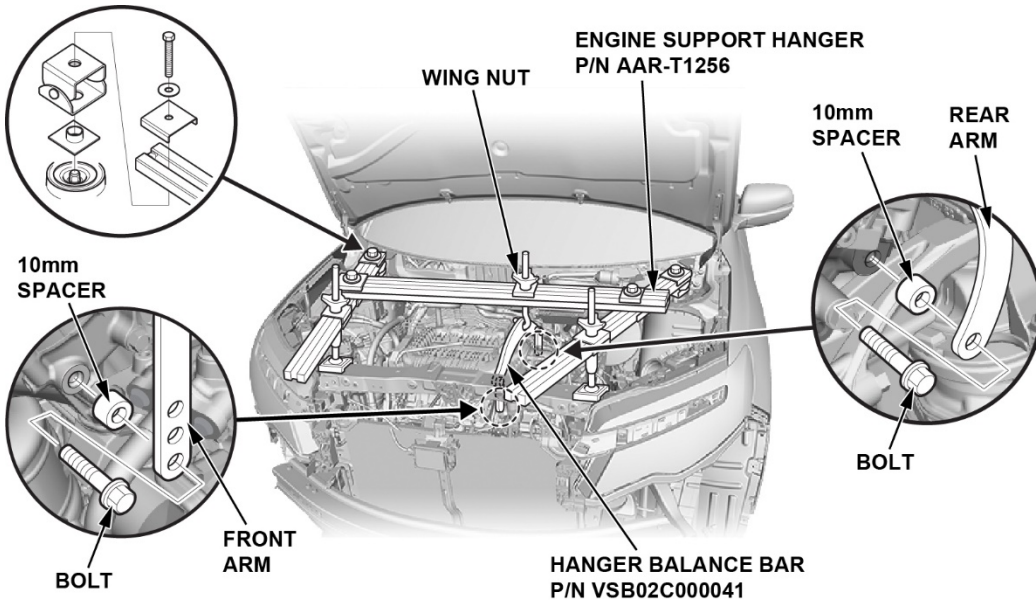
6. Remove the engine cowl cover.



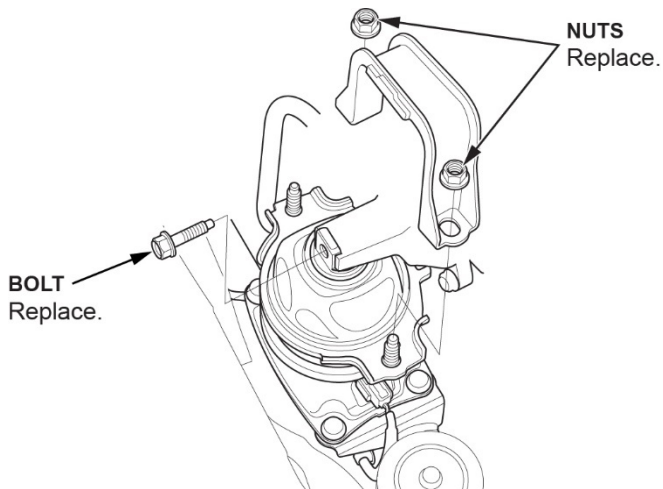
7. Install the engine support hanger.
 - Install engine hanger adapters (T/N: VSB02C000031)



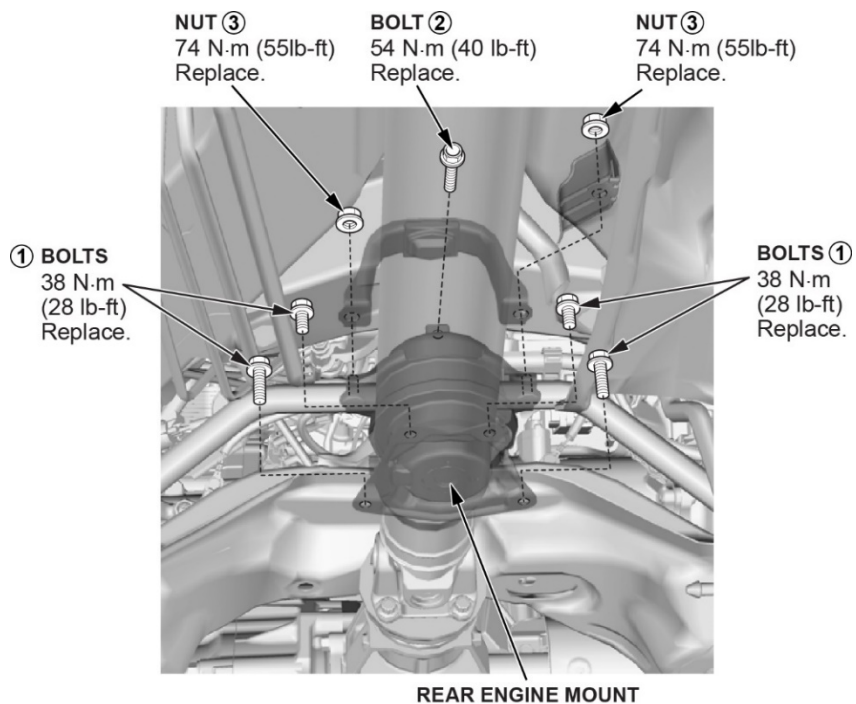
8. Install the engine hanger balance bar. (T/N: VSB02C000041).



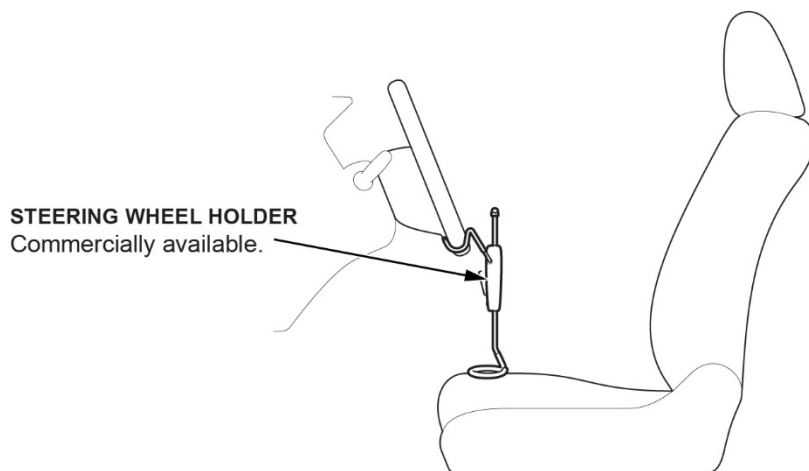
9. Remove the rear engine mount stop.



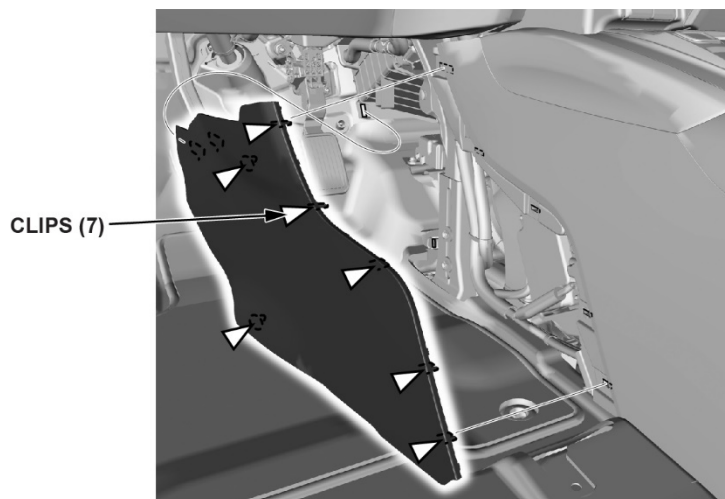
10. Remove the front engine mount stop.



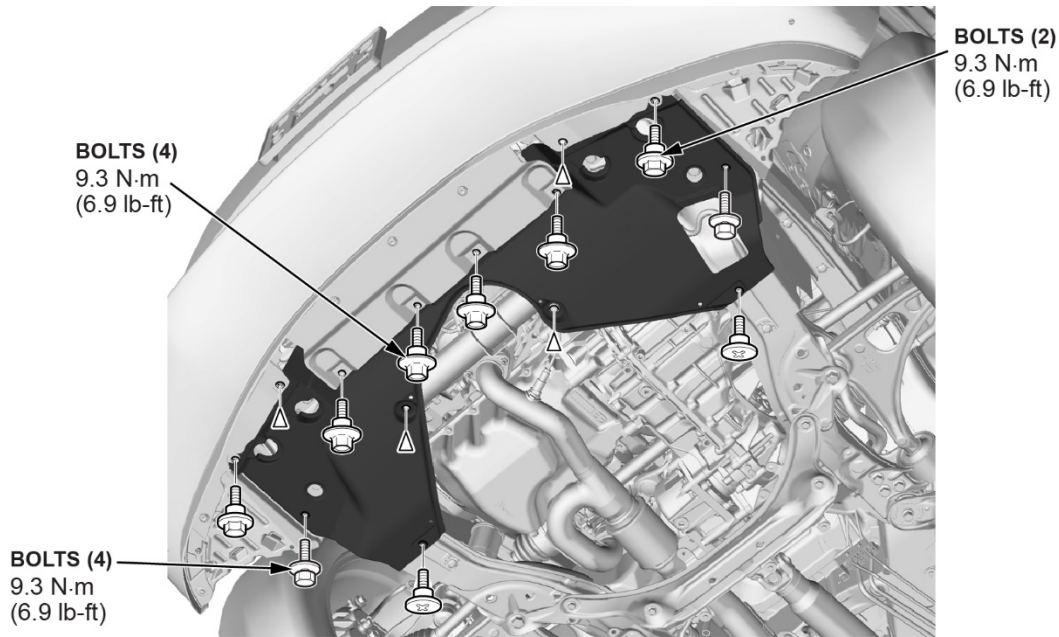
11. Set the steering column to the center tilt position and to the center telescope position and install the steering wheel holder tool.



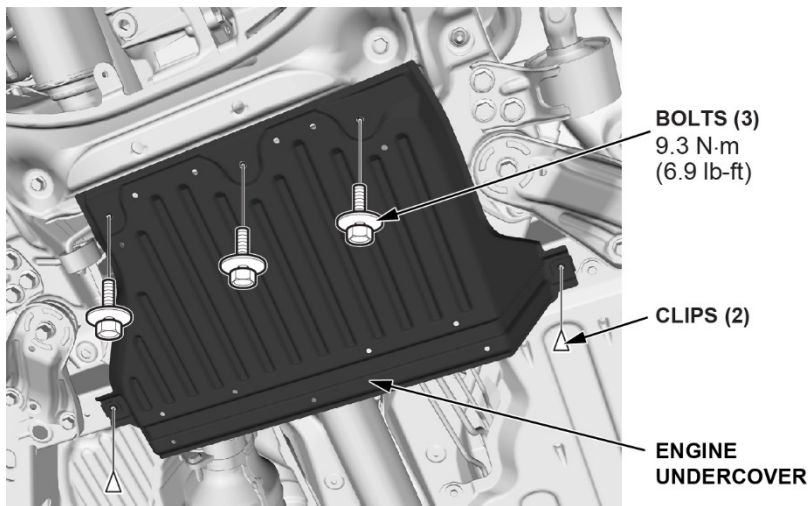
12. Remove the driver's side center console side cover.



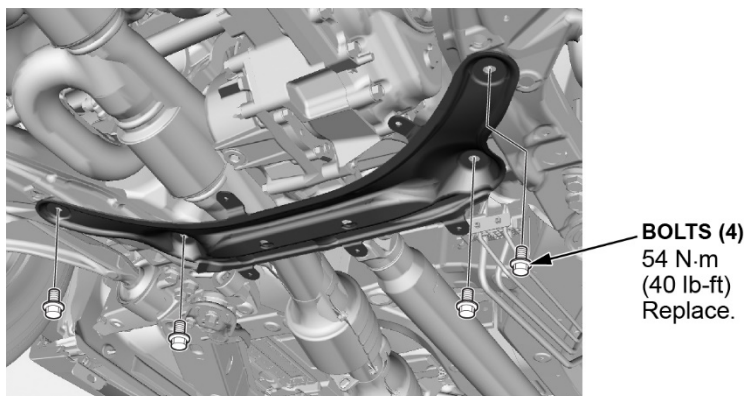
13. Disconnect the steering joint from the pinion shaft.
14. Raise the vehicle on a lift.
15. Remove the front wheels **127 N·m (94 lb-ft)**.
16. Remove the splash shield.



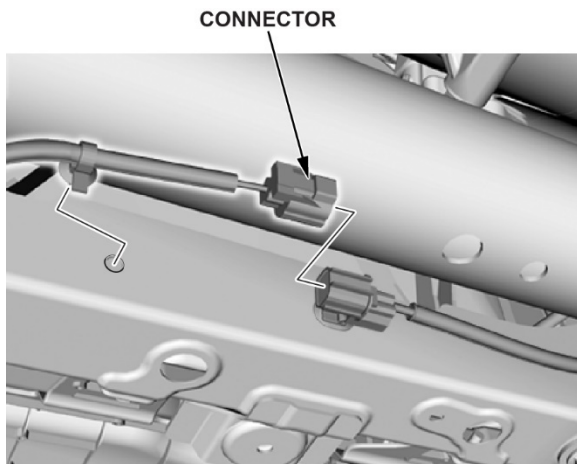
17. Remove the engine undercover.



18. Remove the front subframe stiffener plate.



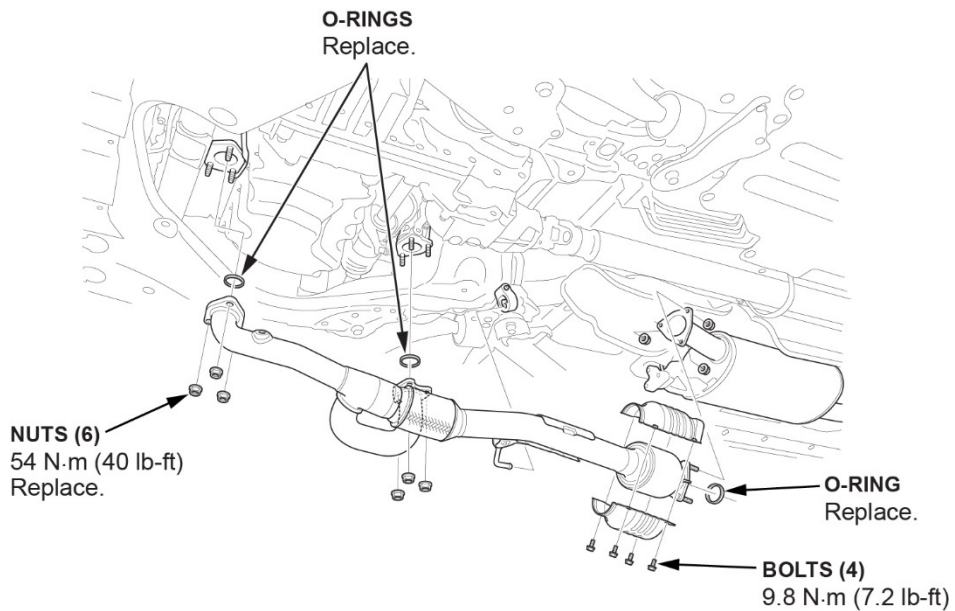
19. Disconnect the front engine mount actuator.



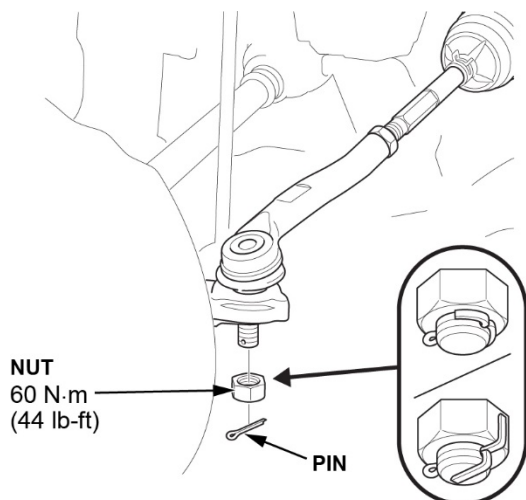
20. Disconnect the rear engine mount actuator.

21. Disconnect the HO2 Sensor.

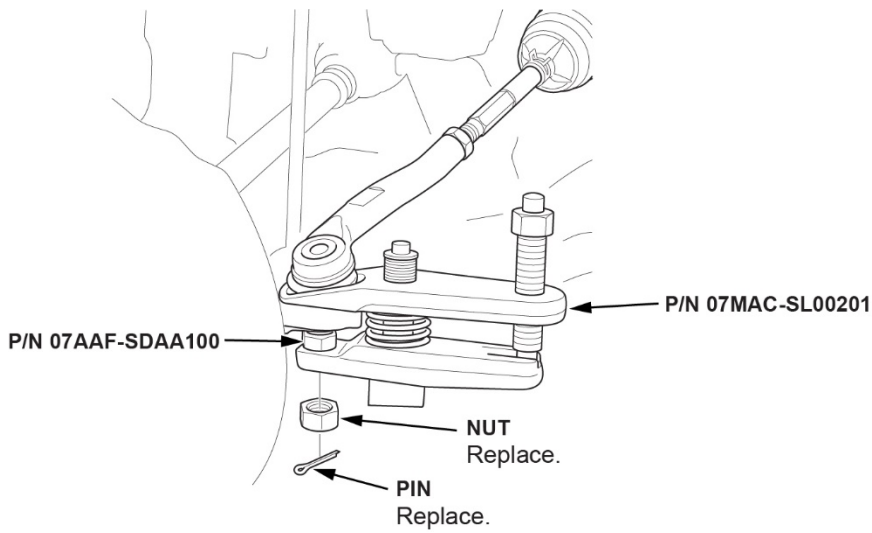
22. Remove underfloor TWC (Three Way Catalytic Converter).



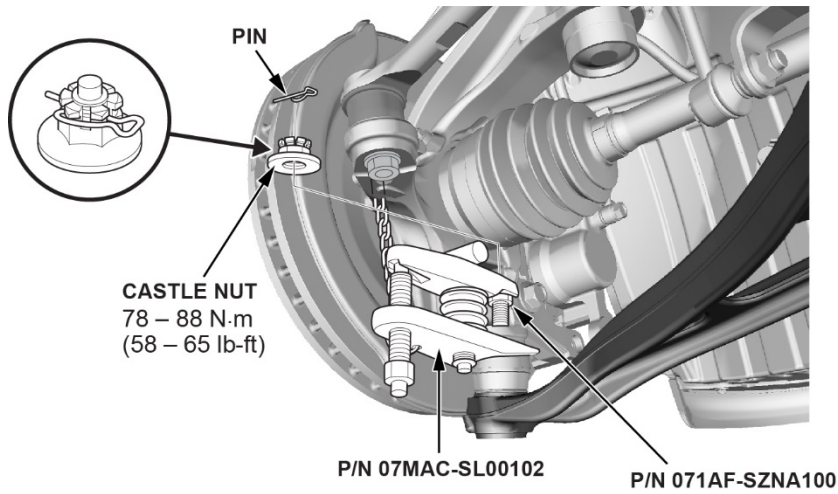
23. Loosen both tie rod end nuts from the steering gearbox.



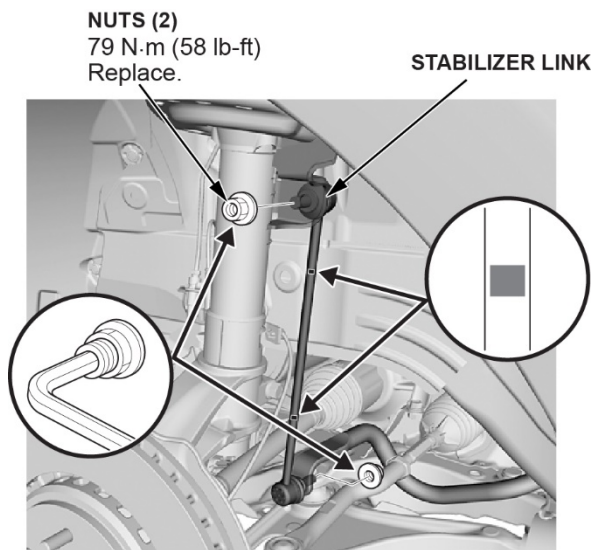
24. Disconnect the tie rod end ball joints.



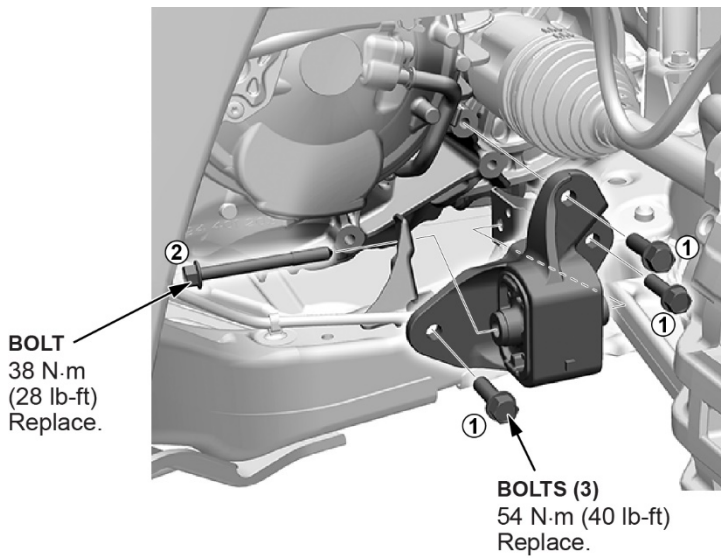
25. Remove the front ball joint.



26. Disconnect the top stabilizer link bolt.

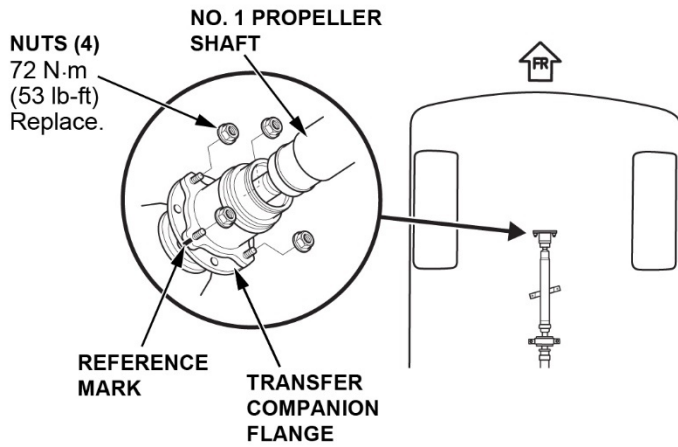


27. Remove the transmission mount center bolt.

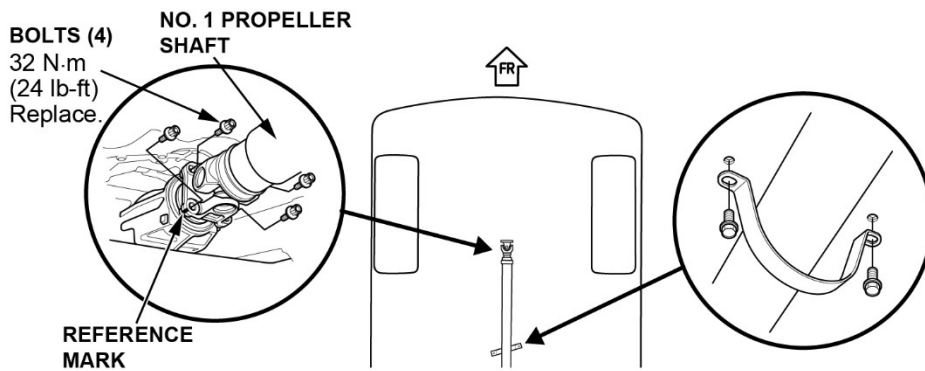


28. Remove the propeller shaft bolts.

RIDGELINE:

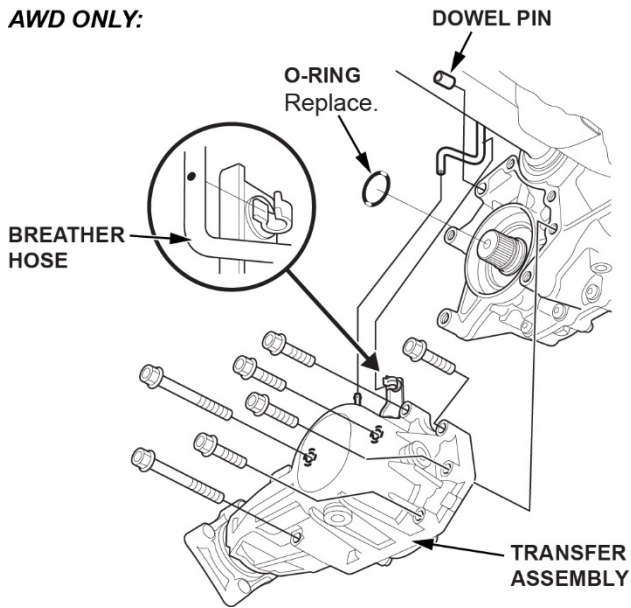


PASSPORT:

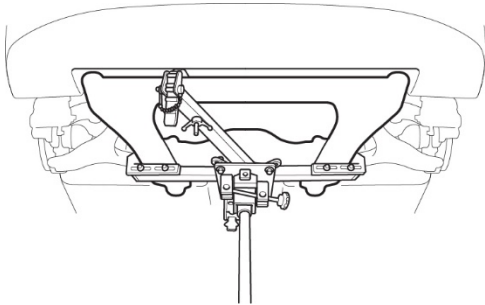


29. Remove the transfer case.

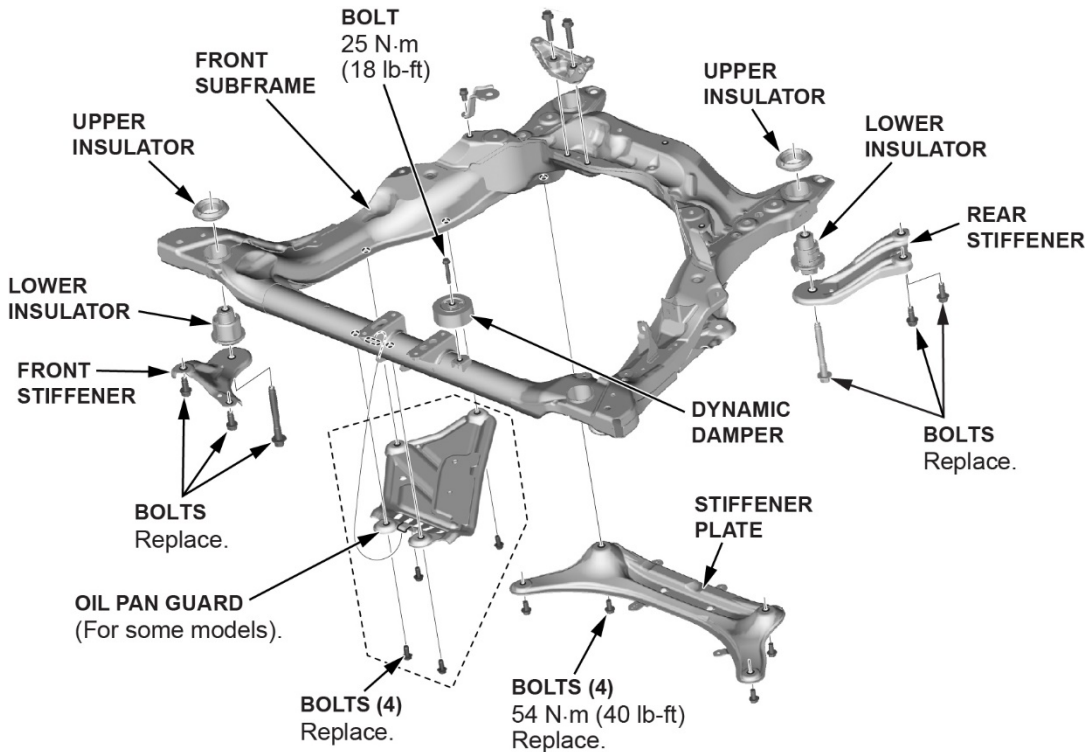
AWD ONLY:



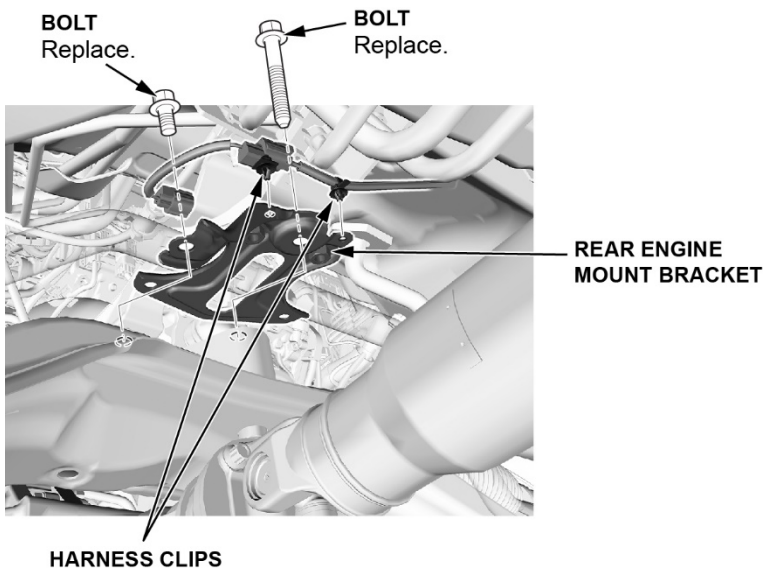
30. Install the subframe jack.



31. Remove the front subframe.

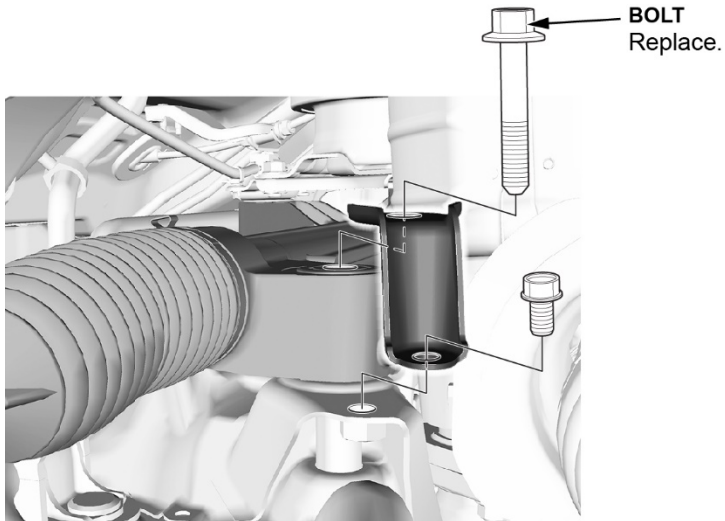


32. Remove the engine mount and rear engine mount bracket.

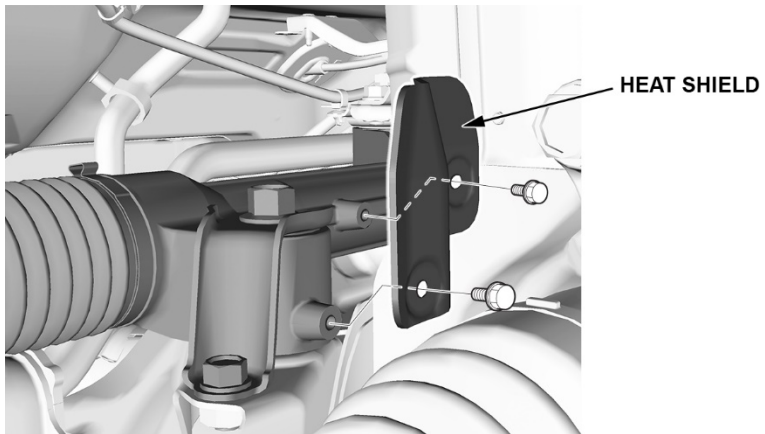


33. Remove the steering gearbox:

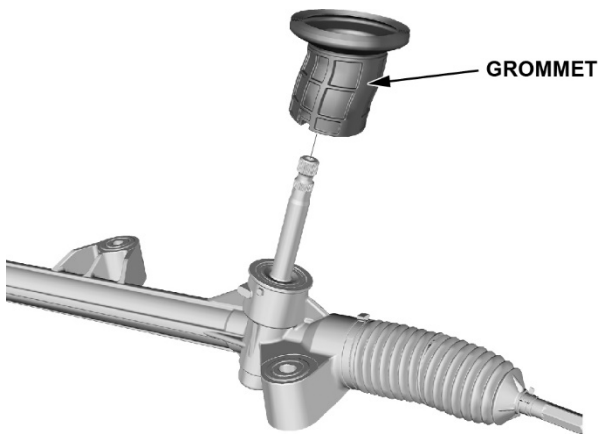
- Remove steering gearbox stiffeners.



- Remove the steering gearbox heat shield.



34. Remove the shaft grommet.



35. Remove the tie rod ends.

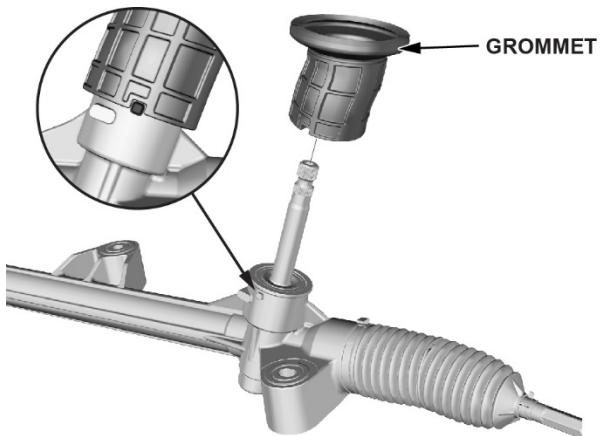
NOTE: Count the turns it takes to remove the tie rod ends and write it down. This helps make the alignment process easier.

INSTALLATION

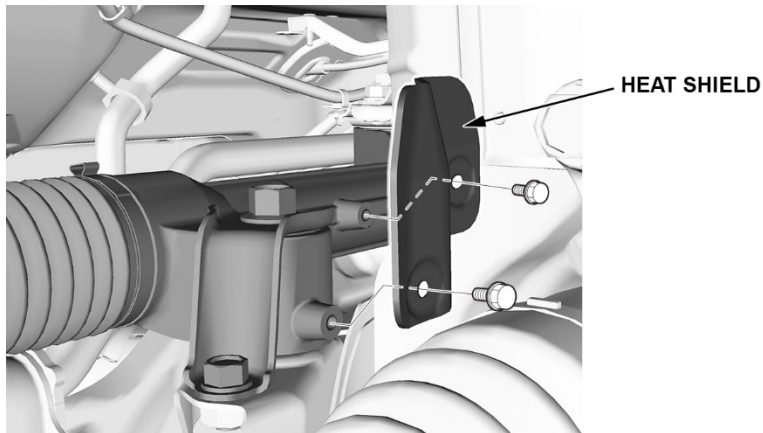
NOTE: During the assembly process, replace all required parts.

1. Install the pinion shaft grommet.

- Align the cutout portion with the tab portion.
- The grommet must not have a gap at the mating surface of the grommet and steering gearbox.



2. Install the gearbox heat shield **9.5 N·m (7 lb-ft)**.

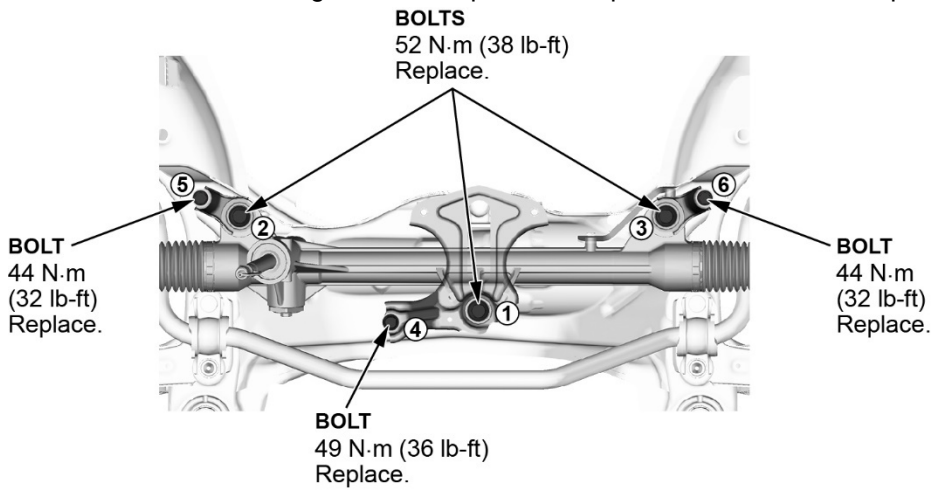


3. Install the tie-rod ends on the steering gearbox.

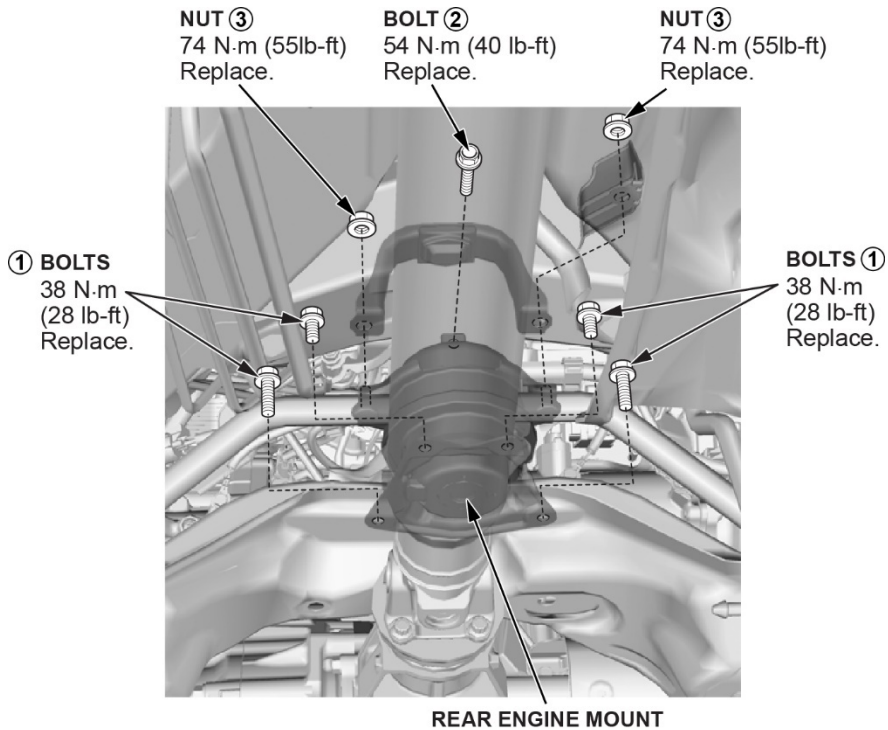
NOTE: Use the information gathered from step 35 to install the tie rod ends.

4. Install the steering gearbox on the front subframe.

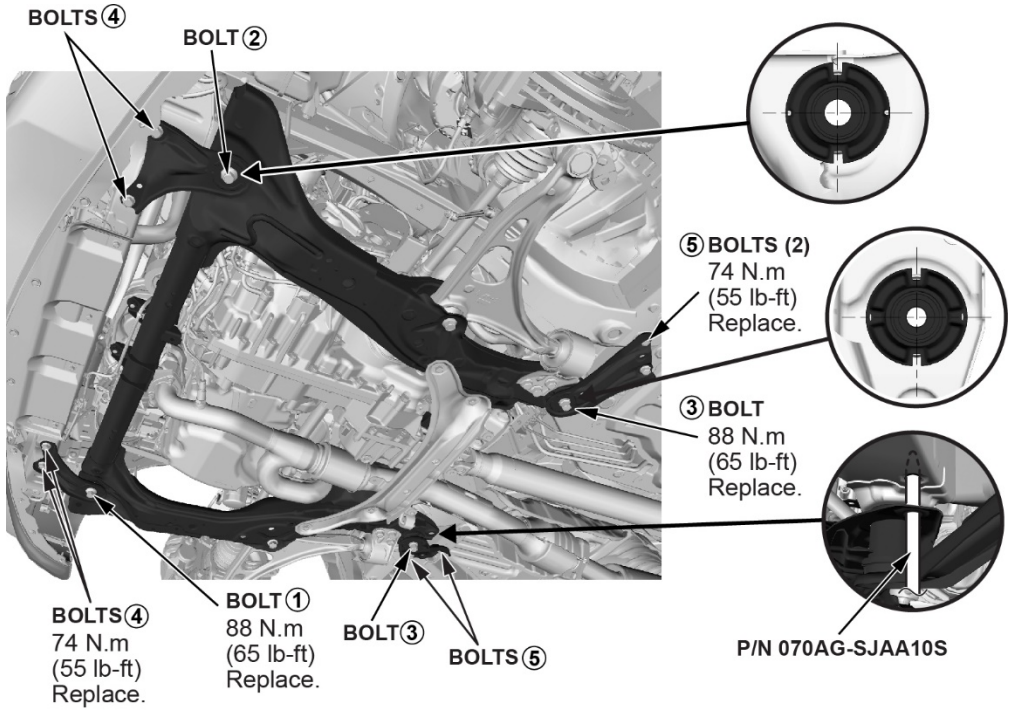
- Tighten the steering gearbox mounting bolt, Install the stiffener mounting bolts, and Install the rear engine mount base bracket mounting bolt to the specified torque in the numbered sequence below.



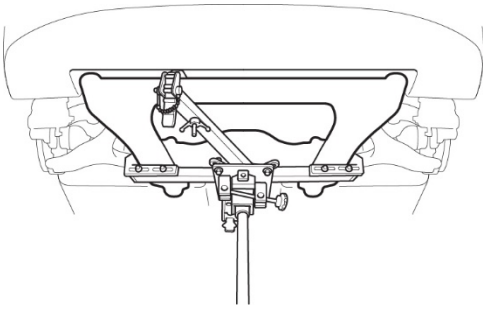
5. Install the rear engine mount and loosely install the bolts.



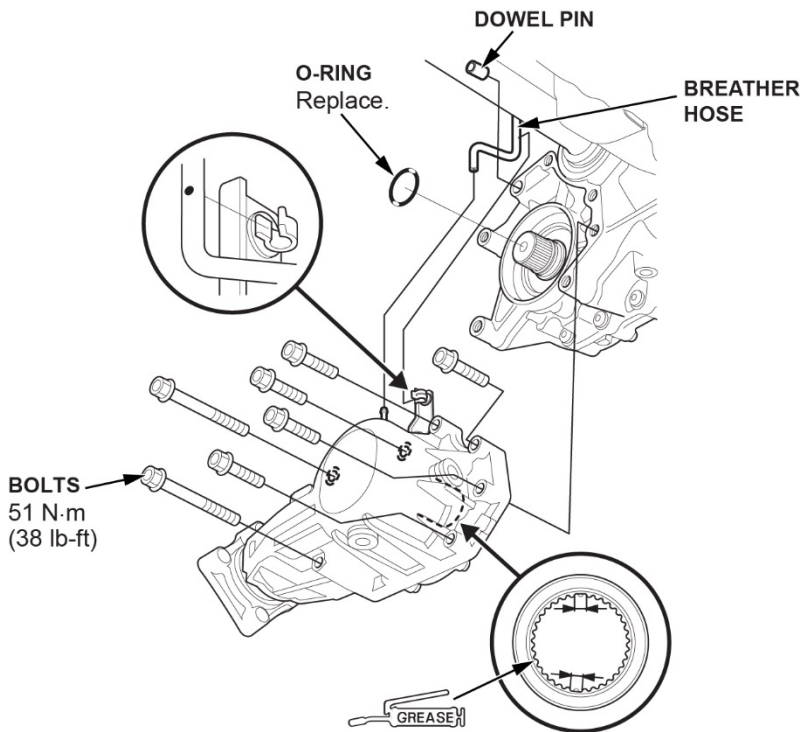
6. Raise the subframe and align the front subframe with the subframe alignment pin.
 - Tighten the mounting bolts to the specified torque in the numbering sequence shown.



7. Release the subframe jack.



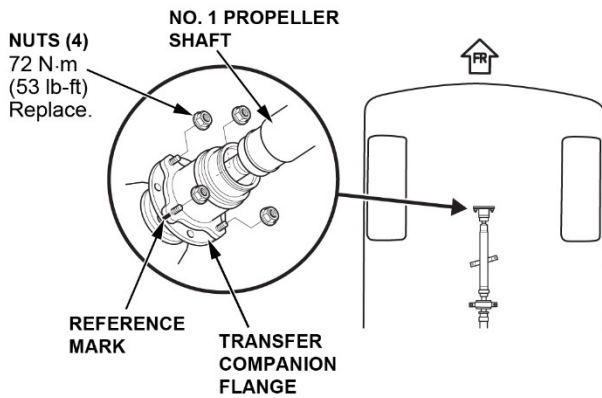
8. Install the transfer case.



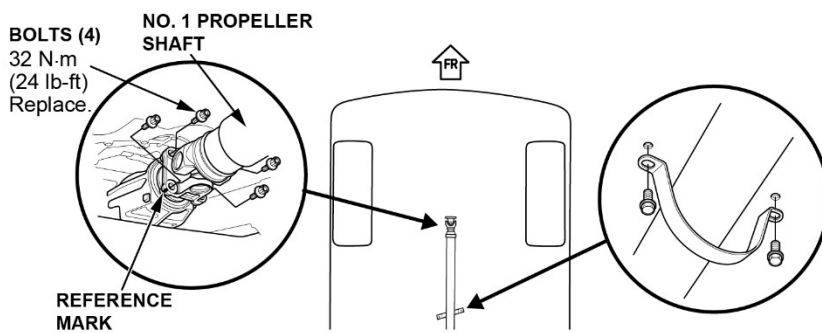
- Clean the areas where the transfer assembly contacts the transmission with solvent and dry with compressed air.
- Install a new O-ring.
- Apply grease to the transfer shaft spines. (P/N: 04360-5P8-305).
- Install the transfer assembly with the dowel pin.
- Connect the breather hose by aligning the paint mark to the bracket.

9. Install the propeller shaft bolts.

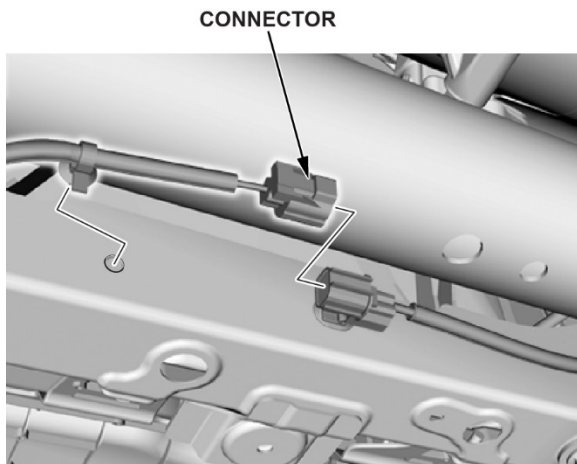
RIDGELINE:



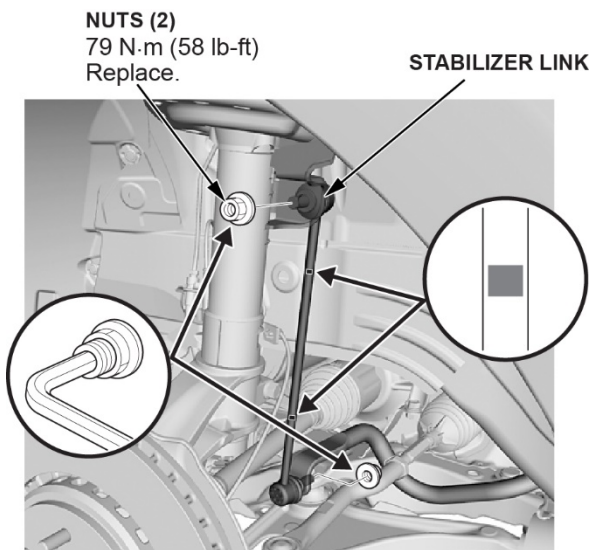
PASSPORT:



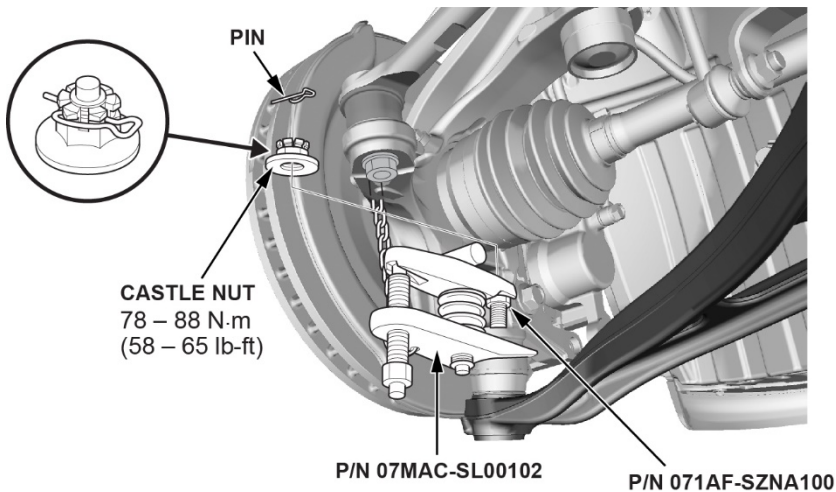
10. Connect the front and rear engine mount actuators.



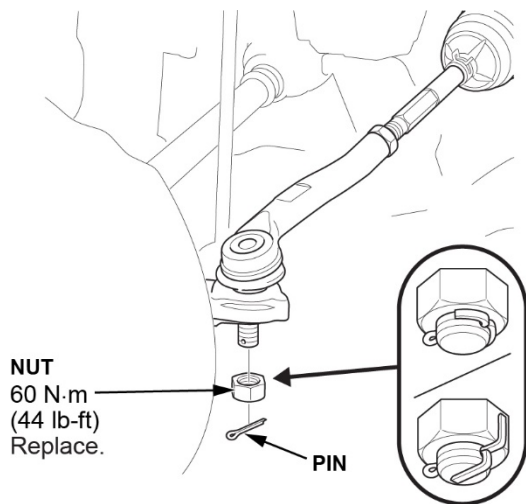
11. Connect the stabilizer link.



12. Connect the lower ball joint.

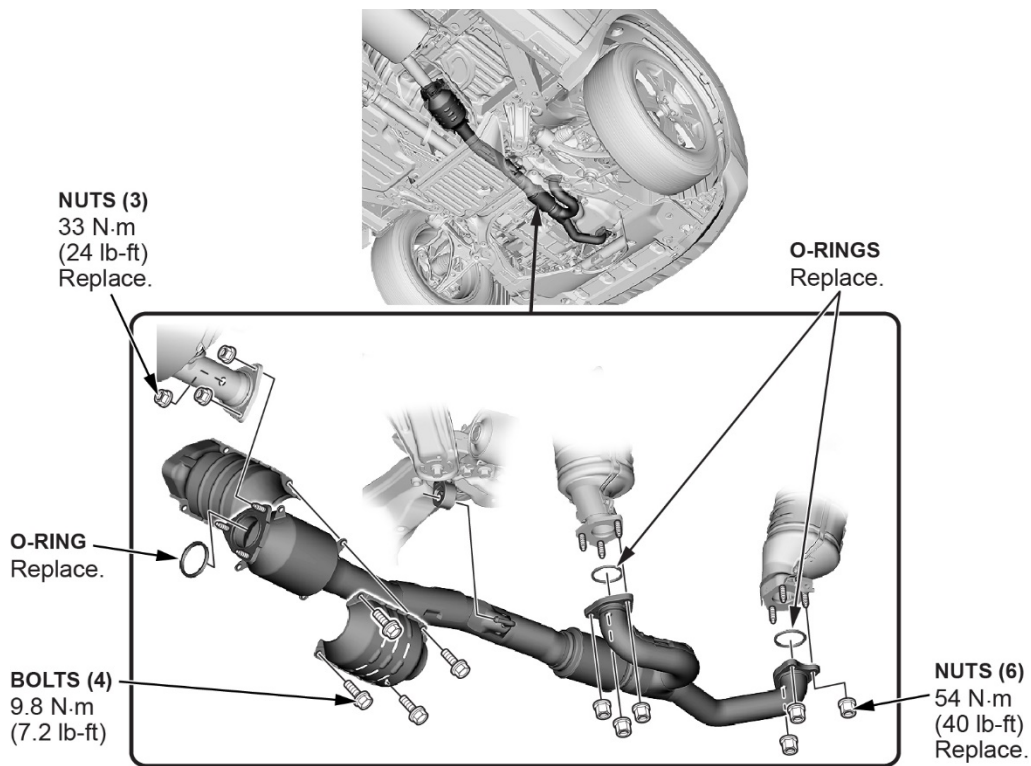


13. Connect the tie rod end ball joint.



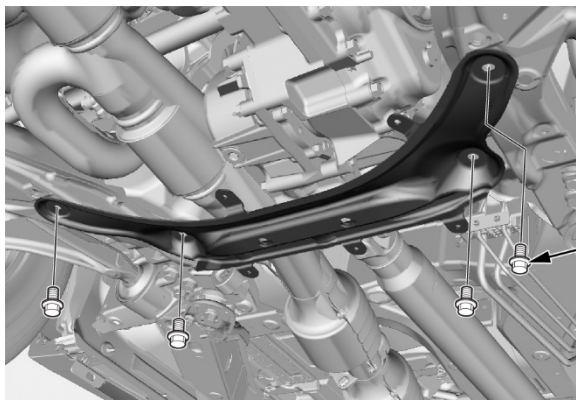
- Wipe off grease contamination from the tapered ball joint section and threads.
- Connect the tie rod ball joint to the knuckle.
- Install a new nut and tighten to the specified torque.
- Install a new cotter pin.

14. Install the underfloor TWC.



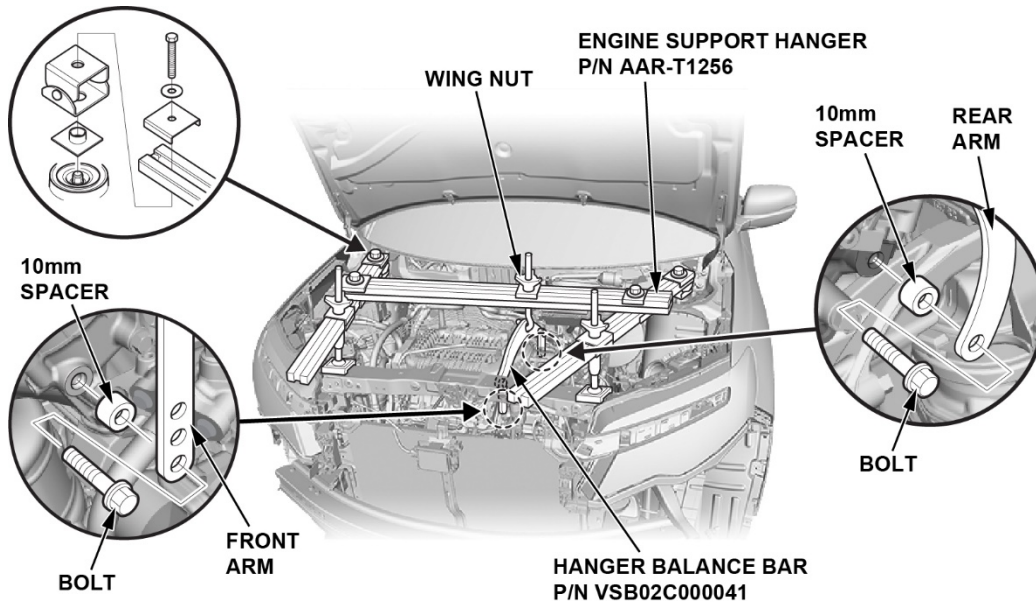
15. Connect the HO2S sensor.

16. Install the front subframe stiffener plate.



BOLTS (4)
54 N.m
(40 lb-ft)
Replace.

17. Remove the engine support hanger.



18. Install the engine and transmission mounts.

NOTE:

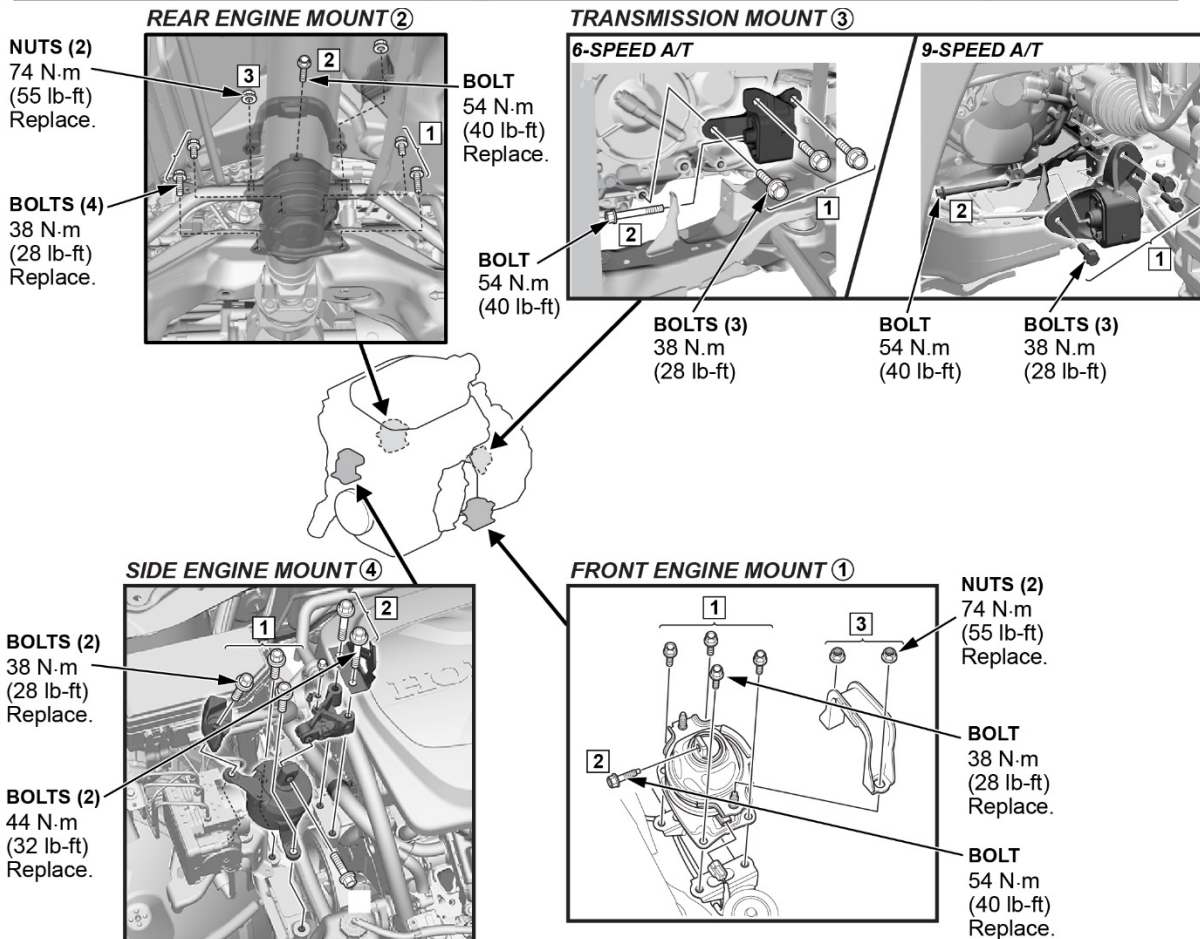
- When the front or rear engine mount is removed, loosen all bolts and nuts of ② and ③ first before tightening. Then tightening all bolts and nuts in the sequence as ①'s ② and ③, ②'s ② and ③, ③'s ②, and then ④'s ② and ③.
- When any mounts other than the front and the rear engine mounts are removed, only tighten the mount you just removed in the sequence listed below.
- Install the VSA modulator-control unit with bracket after tightening the side engine mount mounting bolts.

Tightening Sequence

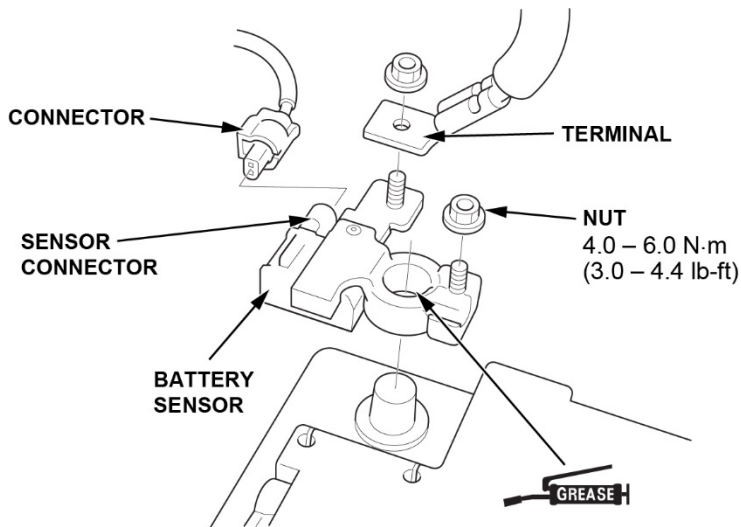
Mount Removed	Mount Tightening Sequence
Front and rear engine mount	①, ②, ③, and ④
Transmission Mount	③
Side Engine Mount	④

Tightening Torque

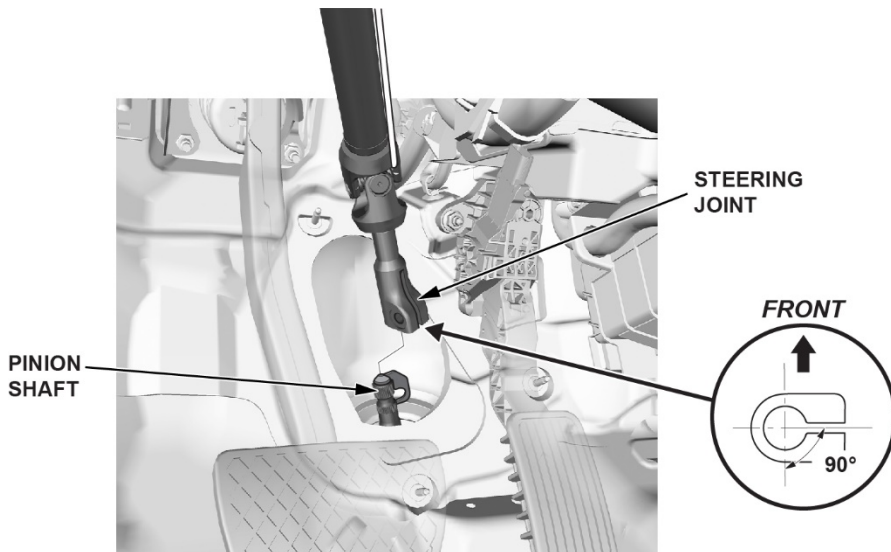
Mount No.	Mount Name	Mount Bolt/Nut Tightening Sequence		
		①	②	③
①	Front Engine Mount	38 N·m (3.9 kgf·m, 28 lbf·ft) Replace.	54 N·m (5.5 kgf·m, 40 lbf·ft) Replace.	74 N·m (7.5 kgf·m, 55 lbf·ft) Replace.
②	Rear Engine Mount	38 N·m (3.9 kgf·m, 28 lbf·ft) Replace.	54 N·m (5.5 kgf·m, 40 lbf·ft) Replace.	74 N·m (7.5 kgf·m, 55 lbf·ft) Replace.
③	Transmission Mount	38 N·m (3.9 kgf·m, 28 lbf·ft)	54 N·m (5.5 kgf·m, 40 lbf·ft) Replace.	
④	Side Engine Mount	38 N·m (3.9 kgf·m, 28 lbf·ft) Replace.	44 N·m (4.5 kgf·m, 32 lbf·ft) Replace.	64 N·m (6.5 kgf·m, 47 lbf·ft) Replace.



19. Install No. 6 cylinder ignition coil.
20. Install the engine cover.
21. Connect the battery terminal.



22. Install the air intake tube.
23. Install the front bulkhead cover.
24. Install the splash shield.
25. Install the engine undercover.
26. Install the front wheel and torque the nuts to **127 N·m (94 lb-ft)**.
27. Release the steering wheel.
28. Connect the steering joint.

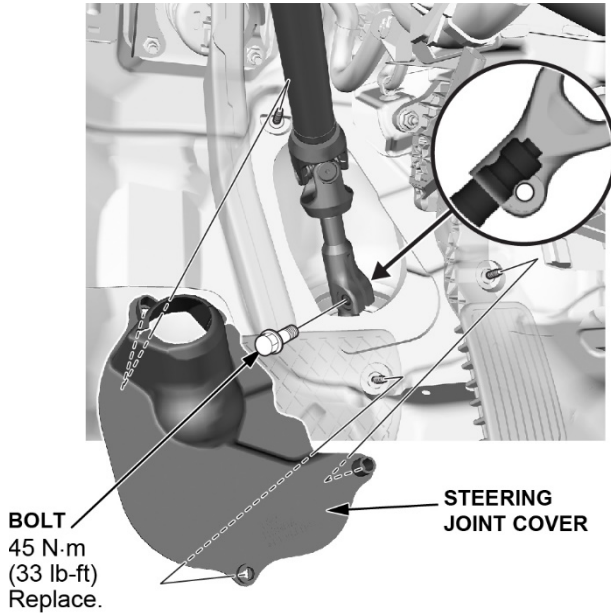


- Align the bolt hole on the steering joint with the groove around the pinion shaft.
- Loosely install the steering joint bolt.
- Be sure that the joint bolt is securely in the groove in the pinion shaft.
- Pull on the steering joint to make sure that the steering joint is fully seated.
- Tighten the steering joint bolt to the specified torque.

NOTE: Install the steering joint bolt and tighten it within 5 minutes using the specified tightening torque.

- Install the steering joint cover.

NOTE: Check the steering joint cover for damage and cracks. If the steering joint cover is cracked, replace the steering joint cover.



29. Install the center console side cover.

30. Check the steering gearbox for the following symptoms.

- With the tires raised off the ground, check for the following symptoms by turning the steering wheel fully to the right and left several times.
- If everything is OK, continue to the next step.

Symptom	Probable Cause
Rubbing sound coming from the lower steering area.	The steering column joint is contacting the cover.
Grating sound from the lower steering column area or a rough feeling during steering.	Poor engagement of the pinion splines.
Noise from around the steering wheel during steering.	Poor engagement of the SRS cable reel with the steering wheel or a damaged cable reel.

31. Check these items with the vehicle on the ground:

- Start the engine, allow it to idle, and turn the steering wheel from lock to lock several times.
- Check that the EPS indicator does not come on.
- Check the steering wheel spoke angle. If steering spoke angles to the right and left are not equal (steering wheel and rack are not centered), reposition the steering wheel on the steering column shaft spines.

32. Do a four-wheel alignment.

33. Do a **VSA sensor Neutral position memorization**.

34. Do a **steering angle sensor neutral position learning procedure**.