Technical Bulletin

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SERVICE BULLETIN

Classification:	Reference:	Date:
ST12-009b	NTB13-017b	August 28, 2013

2013 ALTIMA SEDAN; NOISE FROM THE HYDRAULIC ELECTRIC POWER STEERING (H-EPS)

This bulletin has been amended. On pages 15 and 16, "For vehicles built after the applied VIN and date" was changed to "For vehicles built before the applied VIN and date".
Please discard previous versions of this bulletin.

APPLIED VEHICLE: 2013 Altima Sedan (L33)
APPLIED VINs and DATES: See the **Repair Flow Chart** on page 2.

IF YOU CONFIRM:

The customer is experiencing a noise coming from the passenger side engine compartment
and
The source of the noise is confirmed to be the Hydraulic Electric Power Steering (H-EPS)
and
The noise is louder than the normal operational noise of the H-EPS.

NOTES:

- The 2013 Nissan Altima sedan is equipped with Hydraulic Electric Power Steering (H-EPS). This system uses an electric motor to drive a pump rather than relying on a conventional belt-driven pump. You may hear some normal operational noise from the front of the vehicle generated by the H-EPS when the steering wheel is operated.
- Comparing the incident vehicle to a "known good vehicle" will help determine if the H-EPS noise is louder than normal.

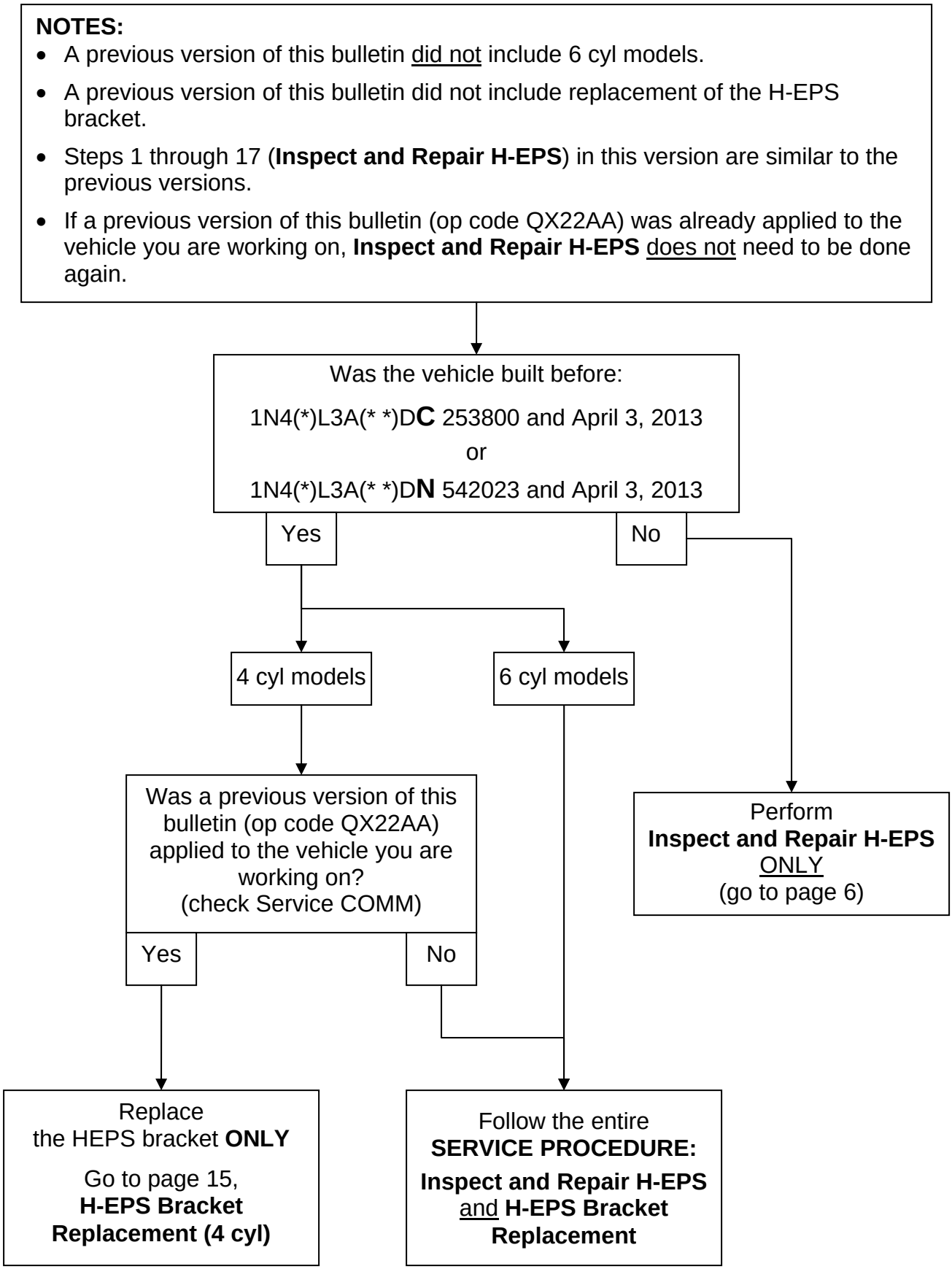
ACTION:

Refer to the **Repair Flow Chart** on page 2.

IMPORTANT: The purpose of ACTION (above) is to give you a quick idea of the work you will be performing. You MUST closely follow the entire SERVICE PROCEDURE as it contains information that is essential to successfully completing this repair.

Nissan Bulletins are intended for use by qualified technicians, not 'do-it-yourselfers'. Qualified technicians are properly trained individuals who have the equipment, tools, safety instruction, and know-how to do a job properly and safely. NOTE: If you believe that a described condition may apply to a particular vehicle, DO NOT assume that it does. See your Nissan dealer to determine if this applies to your vehicle.

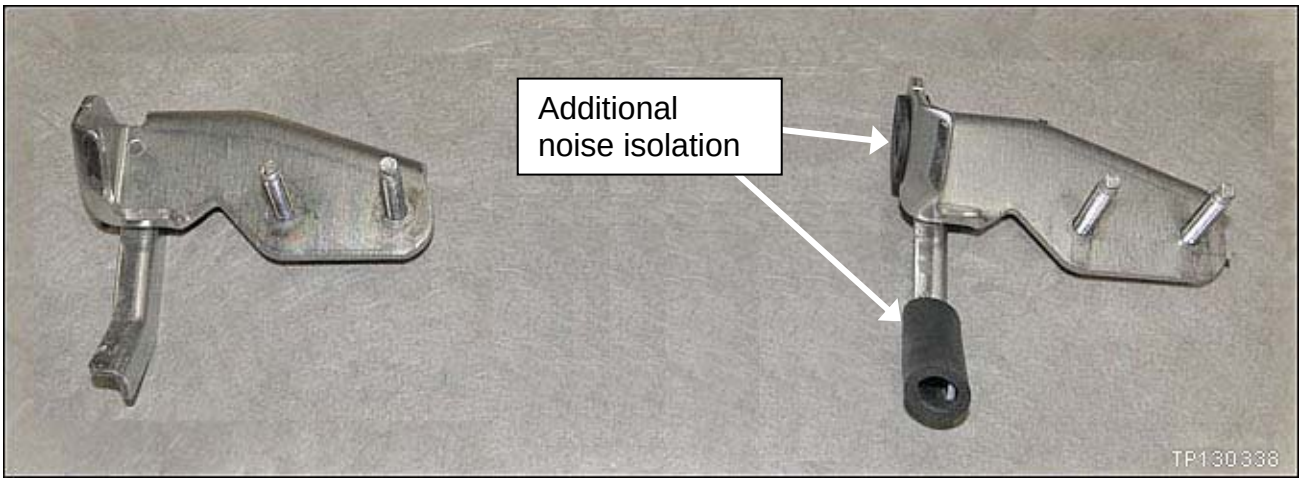
Repair Flow Chart



PARTS INFORMATION

DESCRIPTION	PART NUMBER	QUANTITY
BRACKET * (H-EPS Bracket)	49730 – 3TA0D	1: If needed.
SEAL ASSY * (Hood Ledge Seal)	65820 – 3TA0A	1: If needed.
COVER-BODY, TANK * (H-EPS Pump Felt Cover)	49184 – 3TA0A	1: If needed.
PROTCT FR FND R * (Right Front Fender Protector / Includes Noise Insulator)	63840 – 3TA0D	1: If needed.
BAFFLE FRONT FENDER, LOWER RH * (Baffle)	63134 – 3TA0A	1: If needed.
HOSE CONTL VALV (H-EPS High Pressure Line – 4 Cyl Only)	49720 – 3TA0C	1: If needed.

* For 4 and 6 cyl models.



Old style bracket New style bracket

CLAIMS INFORMATION

Submit a Primary Part (PP) type line claim using the following claims coding:

For 4 cyl Vehicles:

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Inspect and Repair H-EPS noise, includes replacement of the H-EPS bracket	49720 – 3TA0C	QX24AA	ZL	46	0.7

OR

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Inspect and Repair H-EPS noise, includes inspection of the H-EPS bracket	49720 – 3TA0C	QX22AA	ZL	46	0.7

OR

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Replace H-EPS bracket, only	49720 – 3TA0C	QX23AA	ZL	46	0.2

For 6 cyl Vehicles:

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Inspect and Repair H-EPS noise, includes replacement of the H-EPS bracket	49720 – 3TA0C	QX25AA	ZL	46	0.7

OR

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Inspect and Repair H-EPS noise, includes inspection of the H-EPS bracket	49720 – 3TA0C	QX26AA	ZL	46	0.7

Claims Information is continued on the next page.

And on the same line - **Only if part is replaced – 4 and 6 cyl:**

DESCRIPTION	OP CODE	FRT
Replace Seal Assy-Hood FR RR (Right Front Hood Ledge Seal)	UE44AA	(1)

(1) Reference the Nissan Warranty Flat Rate Manual and use the indicated Flat Rate Time.

And on the same line - **Only if part is replaced – 4 and 6 cyl:**

DESCRIPTION	OP CODE	FRT
Replace Protector Assy FR Fender RH (Right Front Fender Protector)	UE12AA	(1)

(1) Reference the Nissan Warranty Flat Rate Manual and use the indicated Flat Rate Time.

And on the same line - **Only if part is replaced – 4 and 6 cyl:**

DESCRIPTION	OP CODE	FRT
Replace Baffle, Right Front Fender	UE15AA	(1)

(1) Reference the Nissan Warranty Flat Rate Manual and use the indicated Flat Rate Time.

And on the same line - **Only if part is replaced – 4 and 6 cyl:**

DESCRIPTION	OP CODE	FRT
Replace H-EPS Pump Felt Cover	QE40AA	(1)

(1) Reference the Nissan Warranty Flat Rate Manual and use the indicated Flat Rate Time.

And on the same line - **Only if part is replaced – 4 cyl ONLY**

DESCRIPTION	OP CODE	FRT
Replace Hose & Tube Assy-Press, PS (H-EPS High Pressure Line)	QE36AA	(1)

(1) Reference the Nissan Warranty Flat Rate Manual and use the indicated Flat Rate Time.

SERVICE PROCEDURE

Inspect and Repair H-EPS

1. Check the Hydraulic Electric Power Steering (H-EPS) fluid level.
    - Check fluid level with the ignition OFF and fluid temperature between 0 – 30°C (**32 – 86°F**).
    - Power steering fluid level should be within the hatching area of the indicator on the power steering reservoir tank cap.
    - If fluid is needed, use only genuine NISSAN E-PSF or equivalent.

Figure 1

2. Make sure the right front hood ledge seal is installed correctly.
    - Install seal correctly, or
    - If damaged, replace seal, or
    - If missing, install a seal.

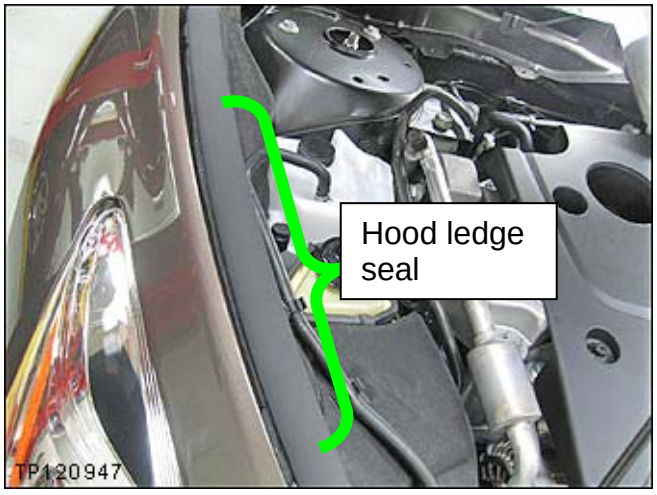


Figure 2

3. Make sure there is no binding on the H-EPS pump mounting isolator as follows:

   a. Loosen the 4 H-EPS pump mounting bolts.

   b. Move the H-EPS pump a small amount from side to side.

   c. Tighten the mounting bolts.

      Torque to:

      13.5 N•m (1.4 kg-m, **10 ft-lb**)

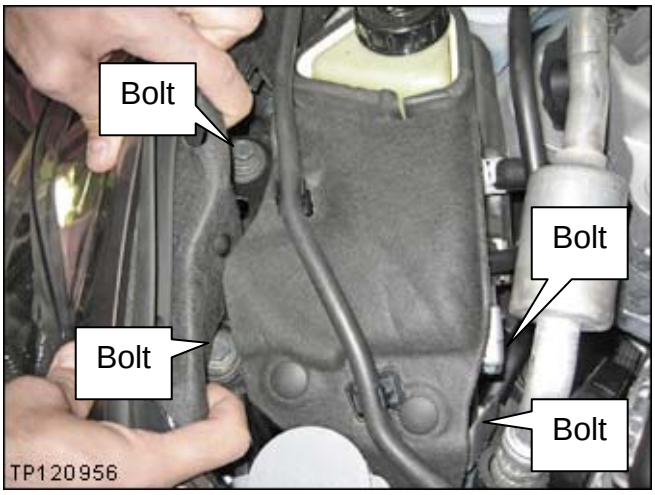


Figure 3

4. Make sure the H-EPS pump felt cover is installed correctly.

   - Install felt cover correctly, or
   - If damaged, replace felt cover, or
   - If missing, install a felt cover.

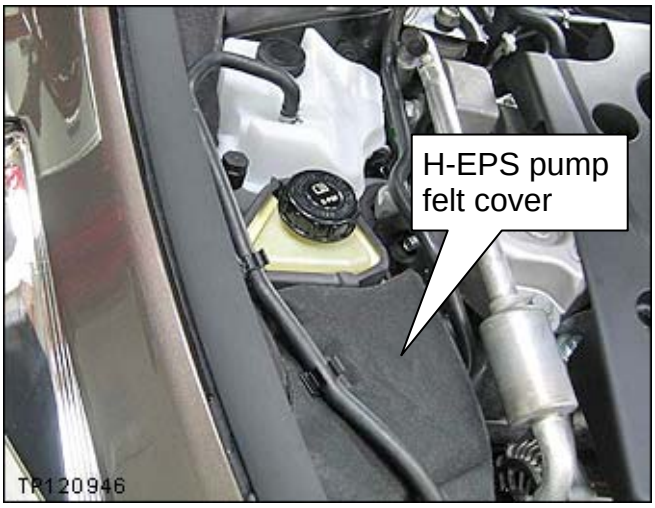


Figure 4

5. Make sure the H-EPS high pressure line and the A/C low pressure line are **not** touching (see Figure 5).

   - Check the two locations circled in Figure 5.
   - If the lines are touching, reposition the lines so they are **not** touching.

6. Make sure the H-EPS high pressure line is **not** touching the coolant reservoir (see Figure 5).

   If touching:

   - Make sure the coolant reservoir is mounted correctly; its locator boss must be seated in the mounting hole.
   - If needed, reposition the H-EPS line so it is **not** touching the reservoir.

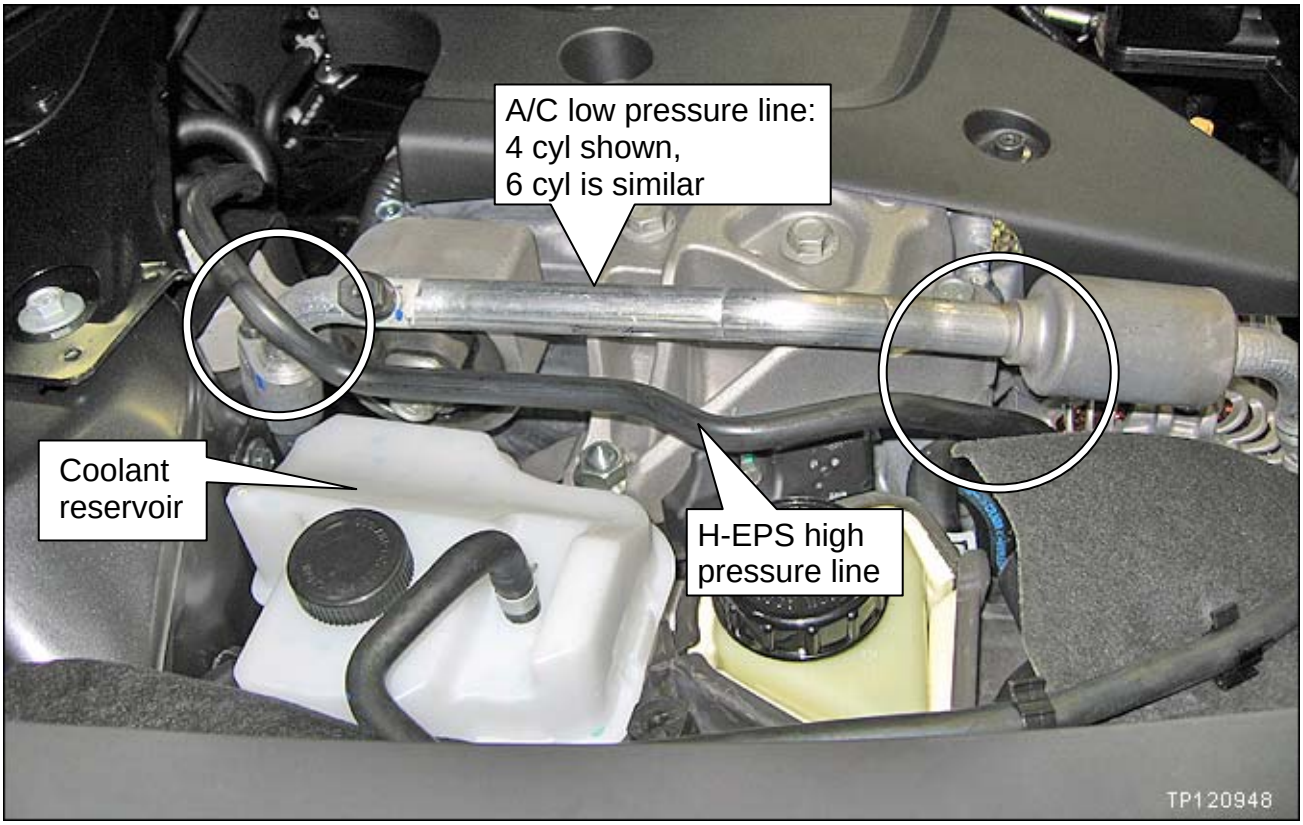


Figure 5

7. Make sure the A/C low pressure line is **not** touching the H-EPS pump.

   - Check the location circled in Figure 6.
   - If needed, <u>reposition the A/C low pressure line so it is **not** touching the H-EPS pump</u>.

4 cyl shown, 6 cyl is similar

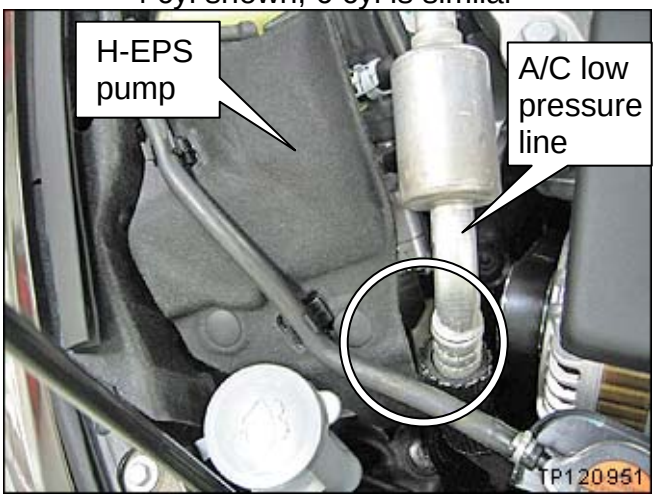


Figure 6

8. Make sure the A/C high pressure line is **not** touching the H-EPS pump.

   - Check the location circled in Figure 7.
   - Wiggle the H-EPS pump and observe the A/C high pressure line. If it moves it is touching.
   - If needed, <u>reposition the A/C high pressure line so it is **not** touching the H-EPS pump</u>.

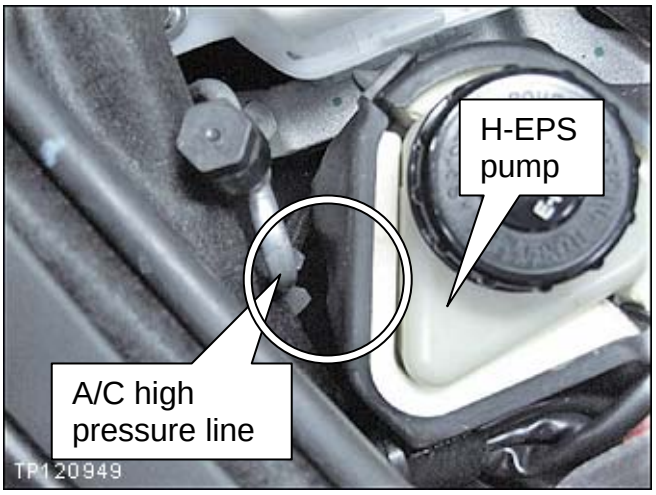


Figure 7

9. Make sure the H-EPS high pressure line is **not** touching the strut tower brace or the torque rod mounting bracket.

   - Check the two locations circled in Figure 8.
   - If needed, <u>reposition the H-EPS high pressure line so it is **not** touching</u>.

4 cyl is shown, 6 cyl is similar

Figure 8

10. **For 4 cylinder models only:** Check the H-EPS high pressure line retaining clamp shown in Figure 9.

    - Make sure the clamp is secured correctly.
    - Figure 9 shows a clamp that **is not** secured correctly.
    - If the clamp is loose like the one shown in Figure 9, replace the H-EPS high pressure line.
      - ➢ Refer to the Service Manual for replacement information.

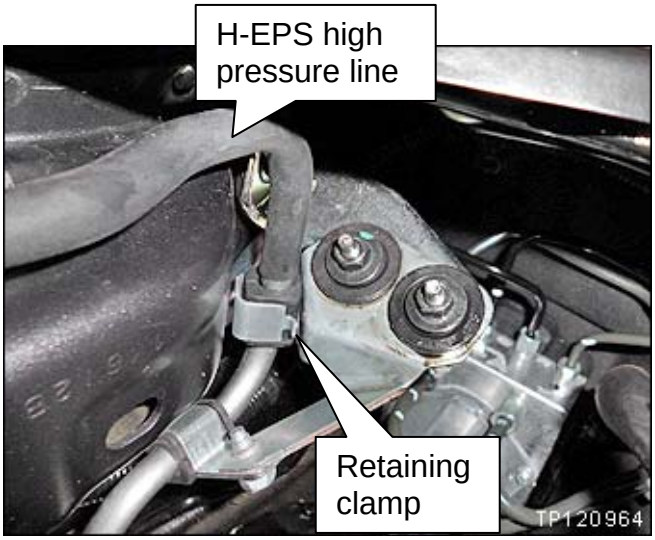


Figure 9

NOTE: If the H-EPS high pressure line needs to be replaced, replace the H-EPS bracket at the same time (see page 15 or 16, as it applies).

11. **For 4 cylinder models only:**
Make sure the H-EPS high pressure line is not touching the A/C line or vehicle body.

    - Check the area circled in Figure 10.
    - If needed, <u>reposition the lines so they are **not** touching</u>.
    - If needed, <u>reposition the H-EPS line so it is **not** touching the vehicle body.</u>

    NOTE: The view in Figure 10 is downward from the inboard side of the passenger side strut tower.

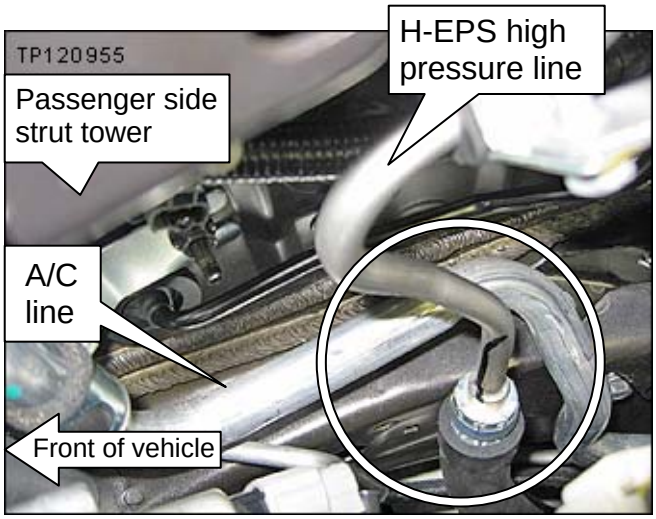


Figure 10

12. Make sure the noise insulator is installed inside the RH (passenger side) front fender protector:

    a. Remove the passenger side front wheel.

    b. Partially remove the fender protector.
        - Refer to the Service Manual as needed.

    c. Confirm the insulator is in place.
        - Make sure the insulator is installed correctly, or
        - If damaged or missing, replace the fender protector with insulator.

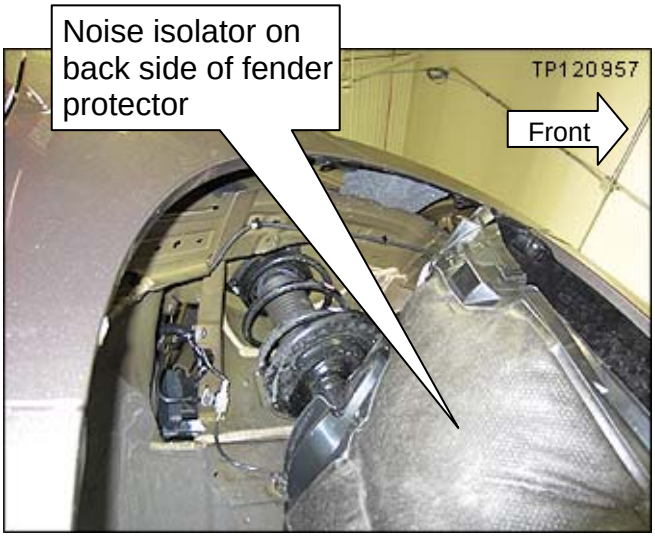


Figure 11

13. Make sure the baffle is positioned properly inside the RH (passenger side) front fender.

    - The baffle should be flush against the fender.
    - When the fender protector is installed there should be no gap between the fender protector and the baffle.
    - If needed, reposition the baffle or install a new one.

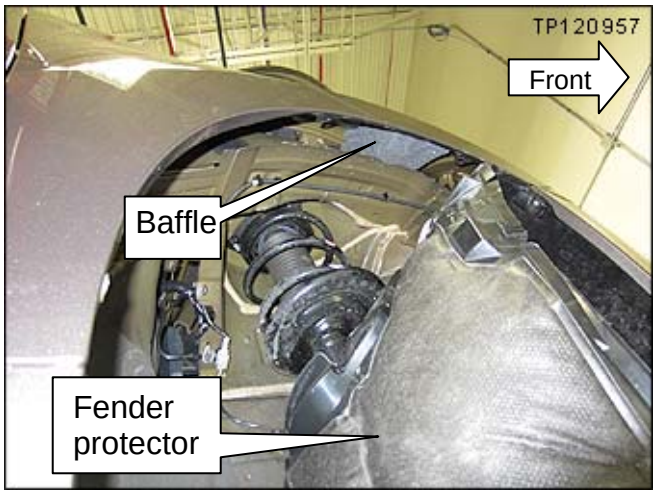


Figure 12

- Figure 13 – baffle is **installed correctly**.

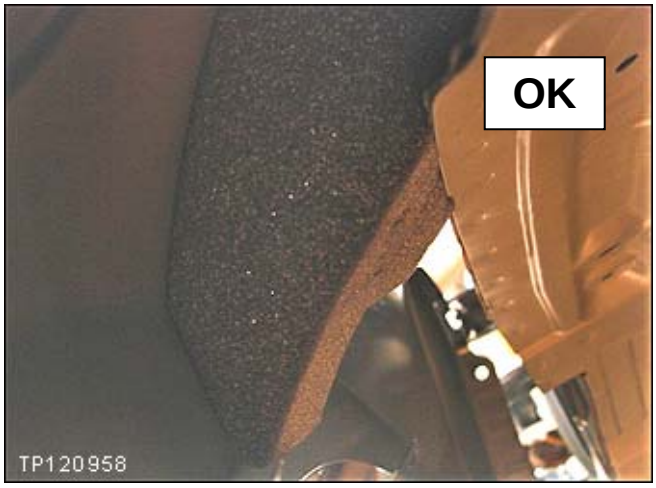


Figure 13

- Figure 14 – example of a baffle **installed incorrectly**.

Figure 14

14. Make sure the H-EPS low pressure line is **not** touching the sub-frame near the front of the engine.

    - If needed, <u>reposition the H-EPS low pressure line so it does **not** touch the sub-frame</u>.

4 cyl is shown, 6 cyl is similar

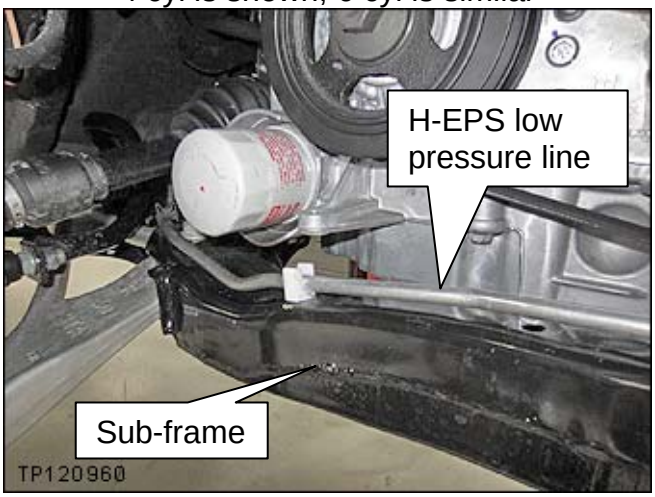


Figure 15

15. **For 4 cylinder models only:** Make sure the H-EPS lines under the vehicle are **not** touching surrounding parts.

    a. Lift the vehicle.

    b. Visually check the routing of the under-vehicle H-EPS lines.

        - If needed, <u>reposition the H-EPS lines so they are **not** touching any surrounding parts.</u>

Figure 16

NOTE: When reinstalling the right front wheel, torque the lug nuts to:

113 N•m (12 kg-m, **83 ft-lb)**.

Additional Inspection For Vehicles Built After the Applied VIN and Date.

16. Make sure the anti-rotation leg of the H-EPS bracket is flush to the bottom of the torque rod mounting bracket (see Figure 17 and 18 as they apply).
    - If needed, reposition the H-EPS bracket so the anti-rotation leg is flush to bottom of the torque rod mounting bracket.
17. Check the torque of Nut 1.
    - Nut 1: 8 N•m (0.81 kg-m, **5.9 ft-lb, 71 in-lb**)

4 cyl Vehicles

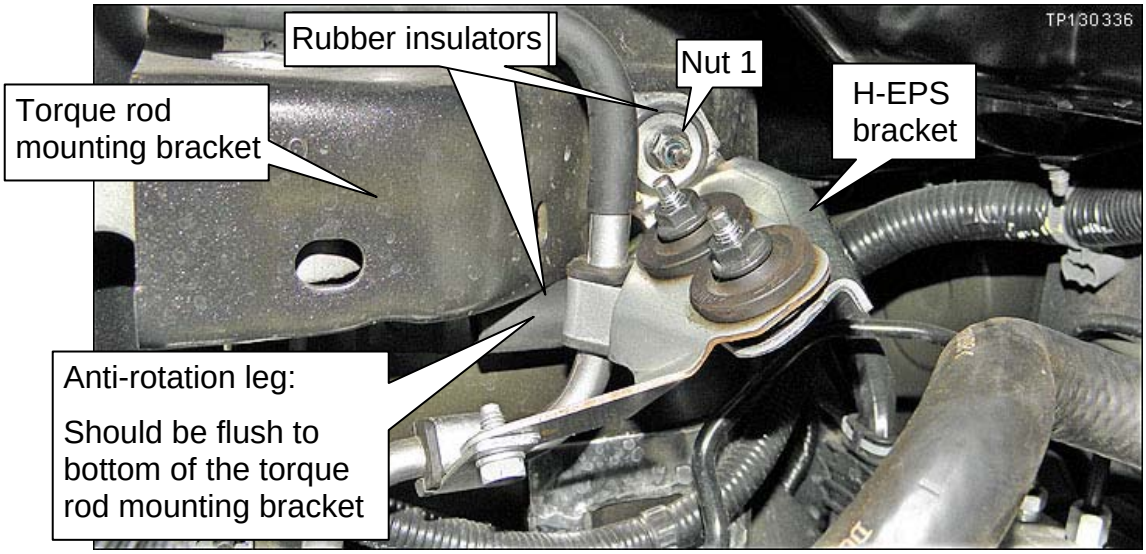


Figure 17

6 cyl Vehicles

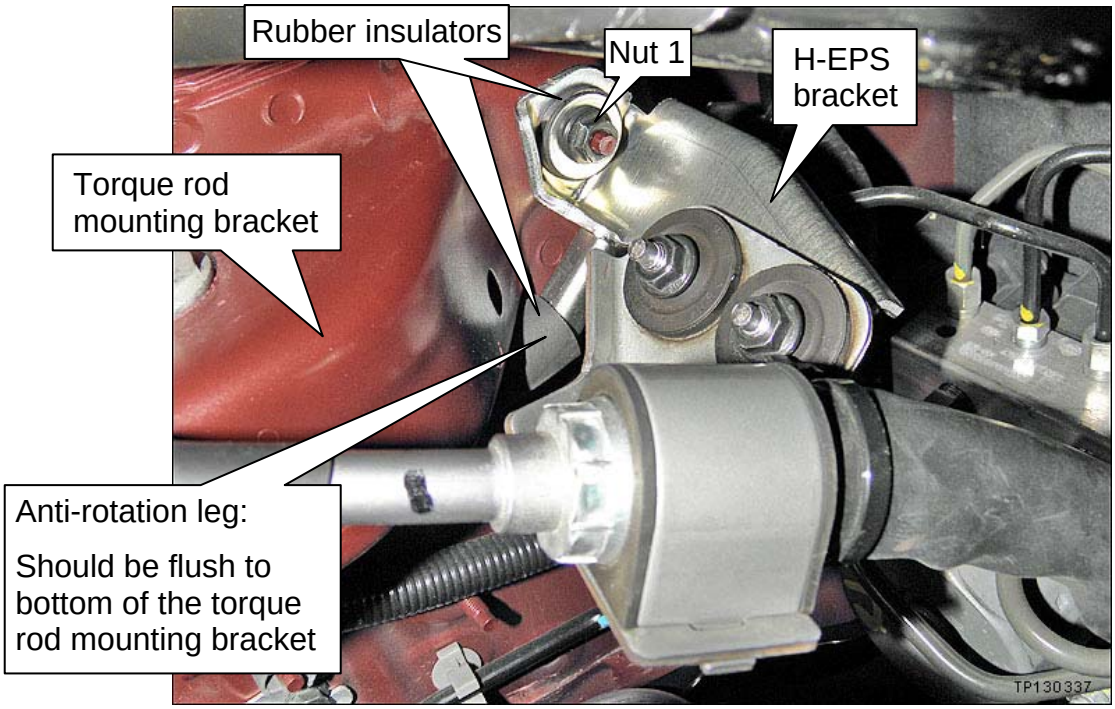


Figure 18

H-EPS Bracket Replacement (4 cyl)

For vehicles built <u>before</u> the applied VIN and date.

1a. Remove the 3 nuts shown in Figure 17.

2a. Remove the old bracket and install the new bracket.

3a. Reinstall the 3 nuts and torque to:

Nut 1: 8 N•m (0.81 kg-m, **5.9 ft-lb, 71 in-lb**)
Nut 2 & 3: 4.9 N•m (0.49 kg-m, **3.6 ft-lb, 43 in-lb**)

4a. Make sure the H-EPS bracket and the H-EPS tube bracket are not touching (see Figure 19).

- There should be a gap between the brackets all the way around.
- Make sure the rubber insulators are seated properly.
- If needed, <u>reposition the brackets so they are not touching</u>.

5a. Make sure the anti-rotation leg of the H-EPS bracket is flush to the bottom of the torque rod mounting bracket (see Figure 19).

- If needed, <u>reposition the H-EPS bracket so the anti-rotation leg is flush to the bottom of the torque rod mounting bracket</u>.

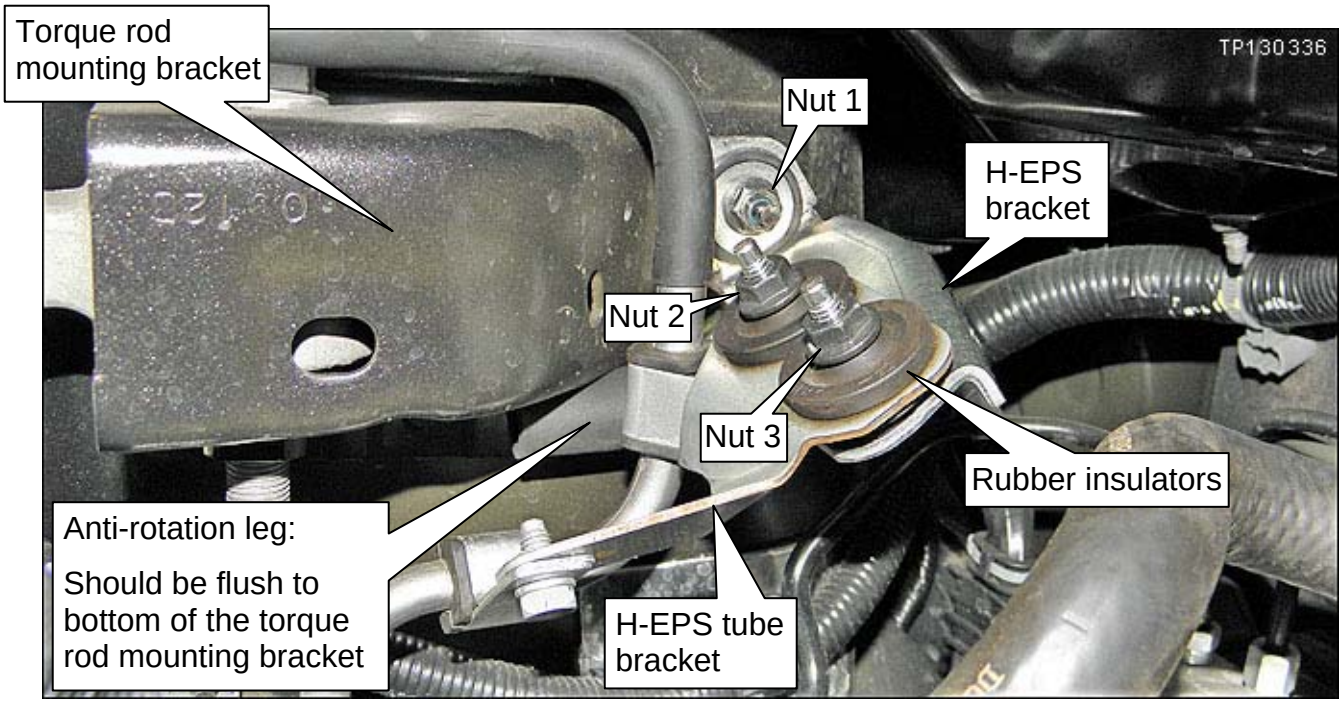


Figure 19

H-EPS Bracket Replacement (6 cyl)

For vehicles built <u>before</u> the applied VIN and date.

1b. Remove the 3 nuts shown in Figure 1.

2b. Remove the old bracket and install the new bracket.

3b. Reinstall the 3 nuts and torque to:

Nut 1: 8 N•m (0.81 kg-m, **5.9 ft-lb, 71 in-lb**)
Nut 2 & 3: 4.9 N•m (0.49 kg-m, **3.6 ft-lb, 43 in-lb**)

4b. Make sure the H-EPS bracket and the H-EPS tube bracket are not touching (see Figure 19).

- There should be a gap between them, all the way around.
- Make sure the rubber insulators are seated properly.
- If needed, <u>reposition the brackets so they are not touching</u>.

5b. Make sure the anti-rotation leg of H-EPS bracket is flush to the bottom of the torque rod mounting bracket (see Figure 18).

- If needed, <u>reposition the H-EPS bracket so the anti-rotation leg is flush to bottom of the torque rod mounting bracket</u>.

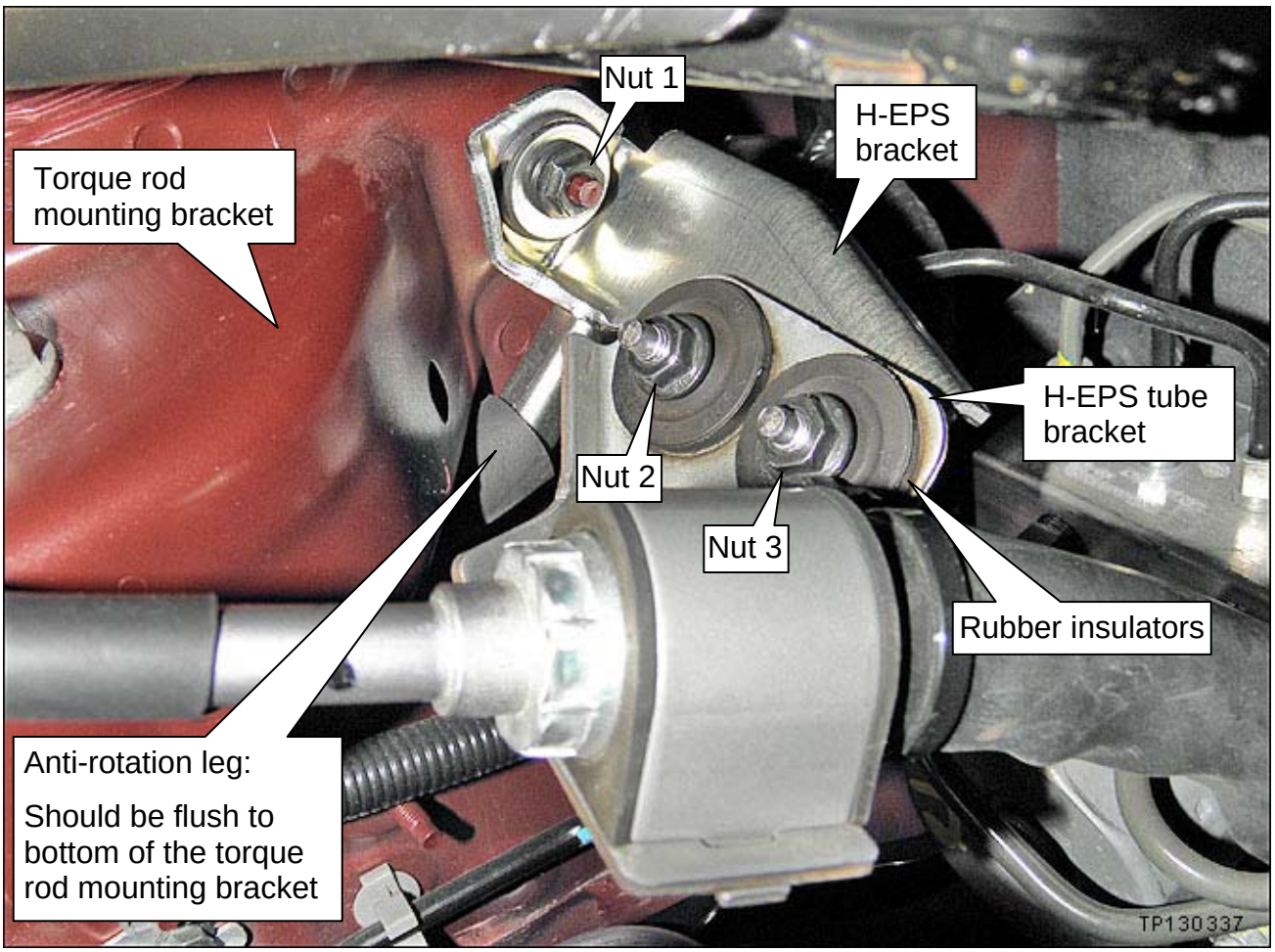


Figure 20