



# SERVICE BULLETIN

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## 2014-2017 ALTIMA; HYDRAULIC ELECTRIC POWER STEERING SERVICE INFORMATION

This bulletin has been amended. The APPLIED VEHICLES section has been revised and information on page 10 has been added. No other changes have been made. Please discard previous versions of this bulletin.

**APPLIED VEHICLES:** 2014-2017 Altima (L33)

### SERVICE INFORMATION

As with other Nissan vehicles, the Altima 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. Some normal operational sound may be heard 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 there is louder than normal H-EPS related sound.

If diagnosed as having louder than normal H-EPS sound, use this bulletin to assist in locating and repairing the cause.

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.

## SERVICE PROCEDURE

If the applied vehicle being worked on is diagnosed as having louder than normal H-EPS related sound, review the following pages for possible causes and related repair.

### Power Steering Fluid

Check the fluid level of the Hydraulic Electric Power Steering (H-EPS) system.

- 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

### Right Front Hood Ledge Seal

Make sure the right front hood ledge seal (passenger side) is installed correctly.

- Install the seal correctly
- or
- If damaged, replace the seal
- or
- If missing, install a seal.

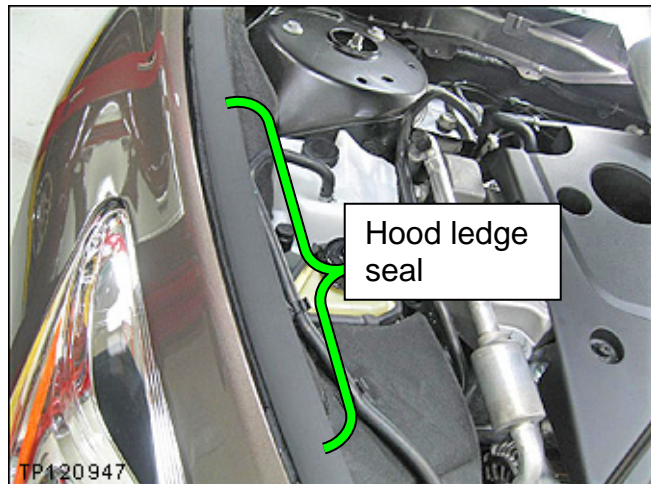


Figure 2

## Pump Mounting Isolator

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

- a. Loosen the four (4) H-EPS pump mounting bolts.
- b. Move the H-EPS pump a small amount from side to side.
- c. Tighten the mounting bolts.

Mounting bolts torque:

13.5 N•m (1.4 kg-m, **10 ft-lb**)

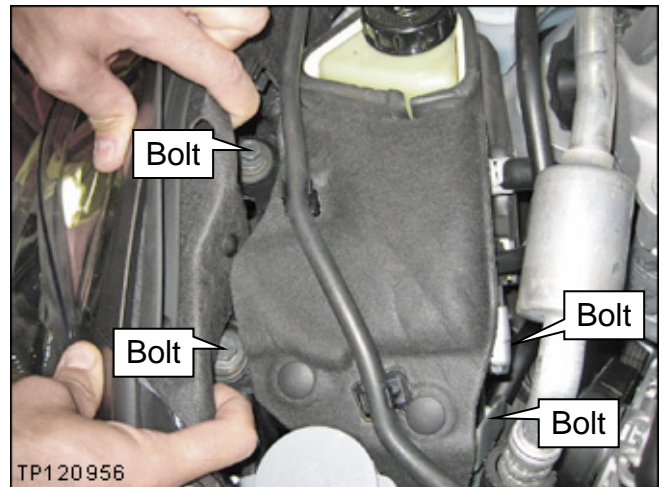


Figure 3

## Pump Felt Cover

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

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



Figure 4

## H-EPS High Pressure Line

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

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

Check the H-EPS high pressure line and coolant reservoir. Make sure they are **not** touching each other (see Figure 5).

If touching:

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

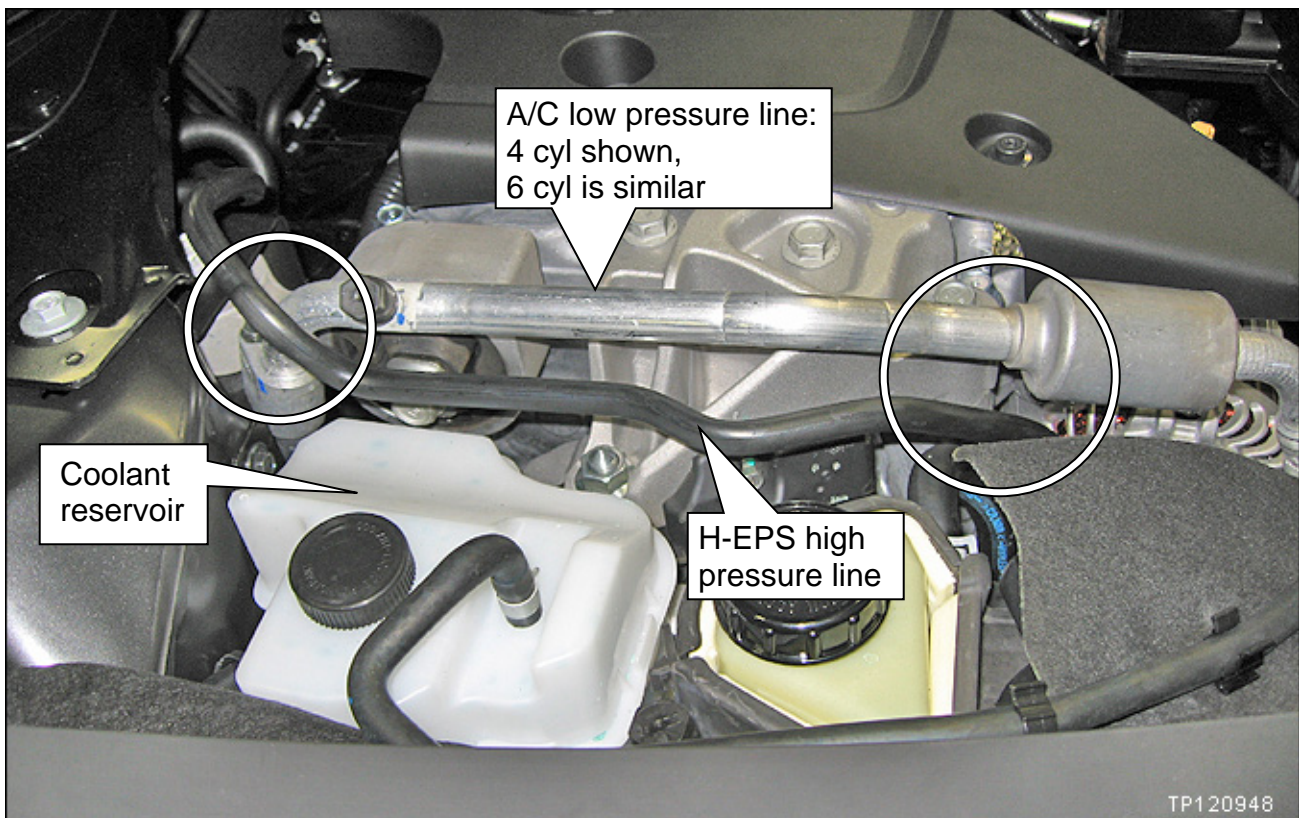


Figure 5

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

- a. Check the two locations circled in Figure 6.
- b. If needed, reposition the H-EPS high pressure line so it is **not** touching.

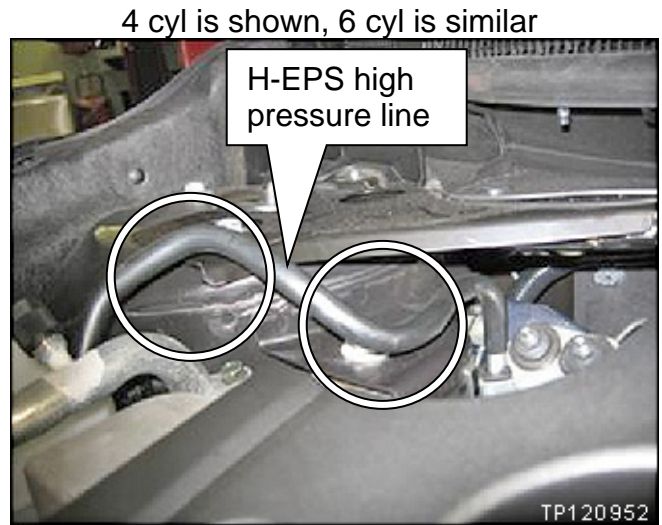


Figure 6

#### 4 Cylinder Models: H-EPS High Pressure Line

Check the H-EPS high pressure line retaining clamp shown in Figure 7.

- a. Make sure the clamp is secured correctly.
  - Figure 7 shows a clamp that **is not** secured correctly.
- b. If the clamp is loose like the one shown in Figure 7, replace the H-EPS high pressure line.
  - Refer to the Electronic Service Manual (ESM), section **ST-Steering System**, for replacement information.

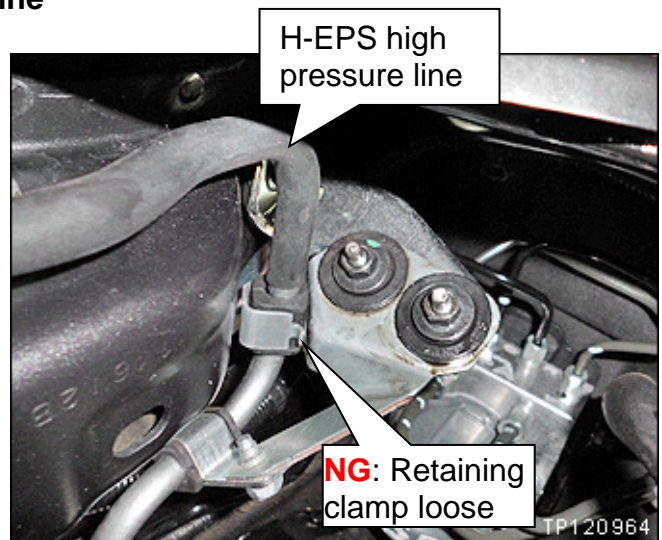


Figure 7

Make sure the H-EPS high pressure line is not touching the A/C line or vehicle body.

- a. Check the area circled in Figure 10.
- b. If needed, reposition the lines so they are **not** touching.
- c. If needed, reposition the H-EPS line so it is **not** touching the vehicle body.

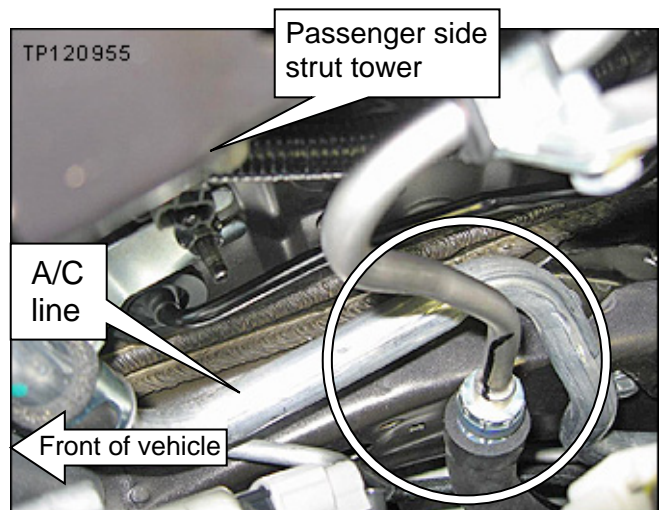


Figure 8

**NOTE:** The view in Figure 8 is downward from the inboard side of the passenger side strut tower.

## H-EPS Low Pressure Line

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

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

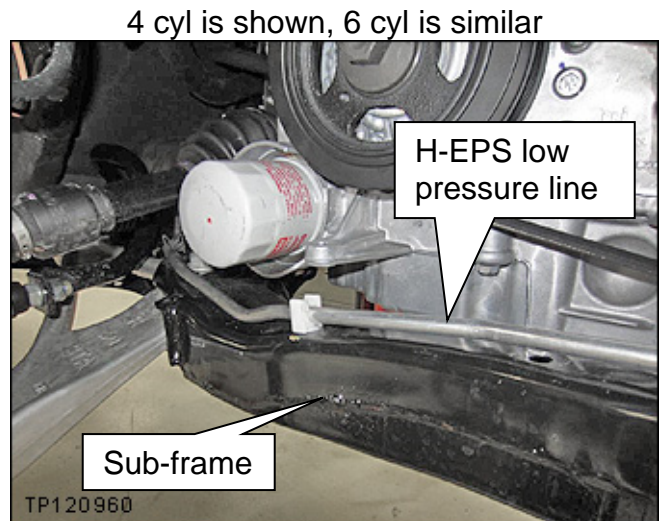


Figure 9

## 4 Cylinder Models: H-EPS High and Low Pressure Lines

Make sure the H-EPS high and low pressure lines under the vehicle are **not** touching surrounding parts.

- a. Lift the vehicle.
- b. Visually check the routing of the under-vehicle H-EPS high and low pressure lines.
- c. If needed, reposition the H-EPS high and low pressure lines so they are **not** touching any surrounding parts.

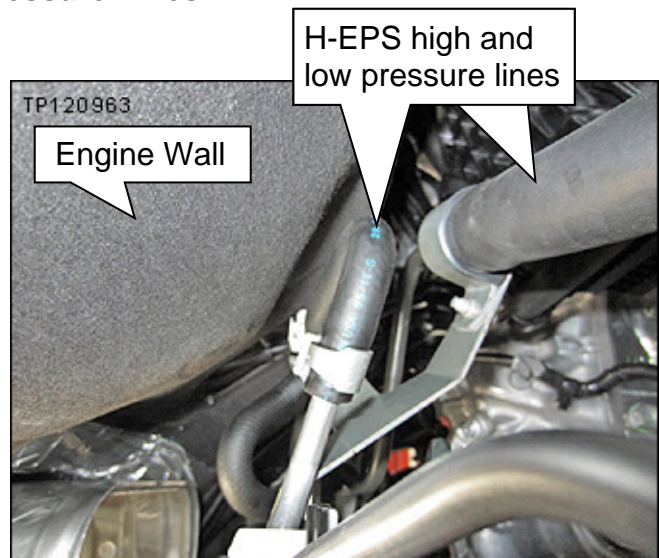


Figure 10

## H-EPS Pump

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

- Check the location circled in Figure 8.
- If needed, reposition the A/C low pressure line so it is **not** touching the H-EPS pump.

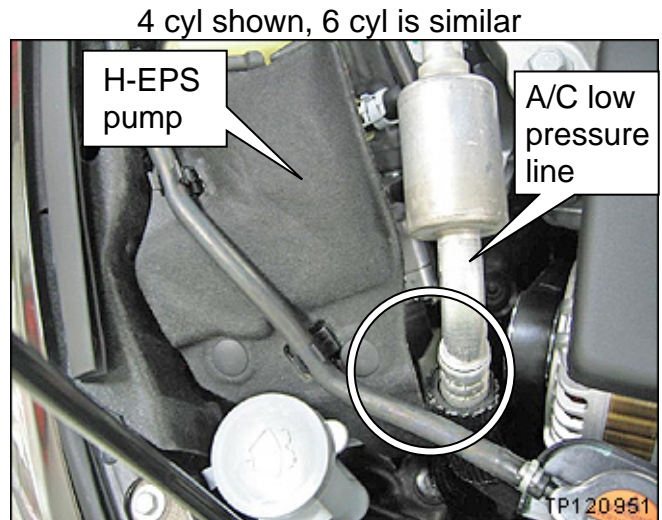


Figure 11

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

- Check the location circled in Figure 9.
- Wiggle the H-EPS pump and observe the A/C high pressure line. If it moves, it is touching.
- If needed, reposition the A/C high pressure line so it is **not** touching the H-EPS pump.

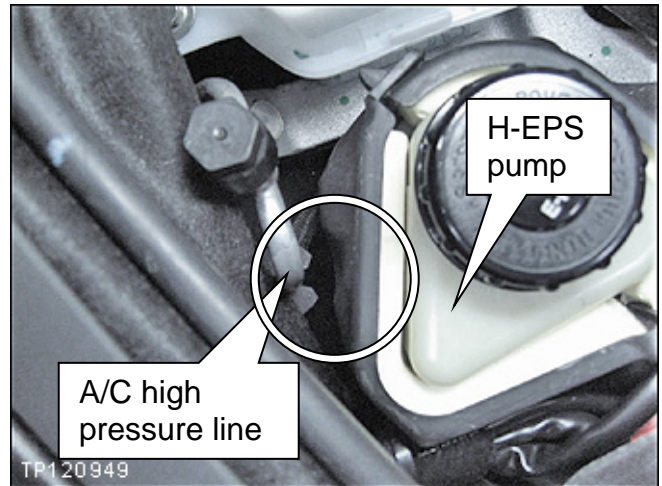


Figure 12

## Noise Insulator

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

- Remove the passenger side front wheel.
  - Partially remove the fender protector.
    - Refer to the ESM, section **EXT-Exterior**, as needed.
  - Confirm the insulator is in place.
    - Make sure the insulator is installed correctly
- or
- If damaged or missing, replace the fender protector with insulator.

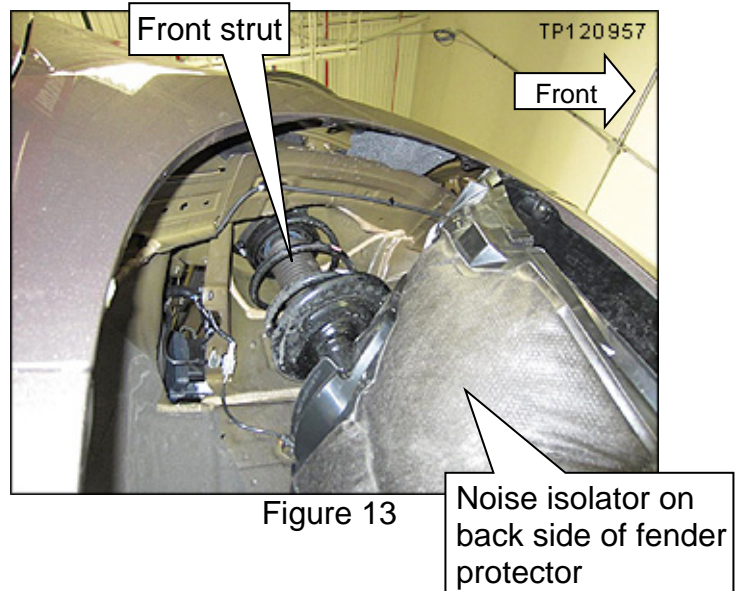


Figure 13

## Baffle

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

- a. Make sure the baffle is flush against the fender.
- b. There should be no gap between the fender protector and baffle when the fender protector is installed.
- c. If needed, reposition the baffle or install a new one.

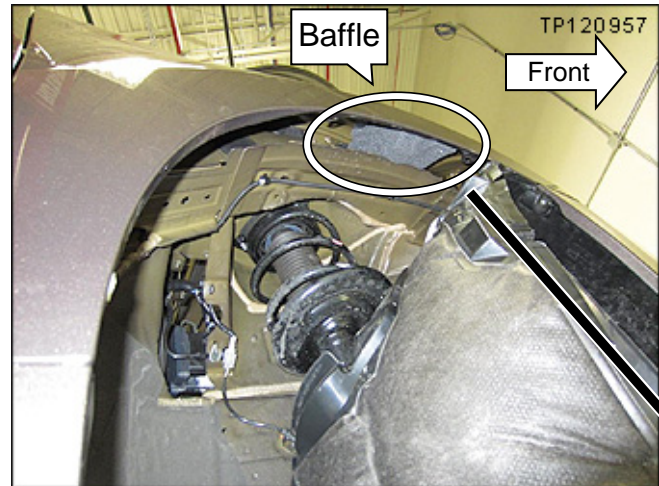


Figure 14

Figure 15 – baffle is **installed correctly**.

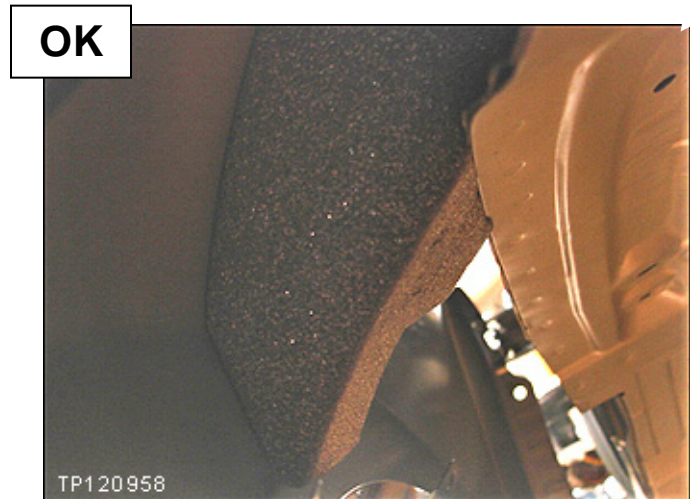


Figure 15

Figure 16 – example of a baffle **installed incorrectly**.



Figure 16

**NOTE:** Lug nuts torque (when reinstalling the right front wheel): 113 N•m (12 kg•m, 83 ft-lb).



#### 4 Cylinder Models: H-EPS Bracket

**NOTE:** All 2014-2017 Altima vehicles have a H-EPS bracket. There is no need for replacement.

Check torque of all three (3) H-EPS bracket nuts:

Nut 1 torque: 8 N•m (0.81 kg-m, **5.9 ft-lb, 71 in-lb**)

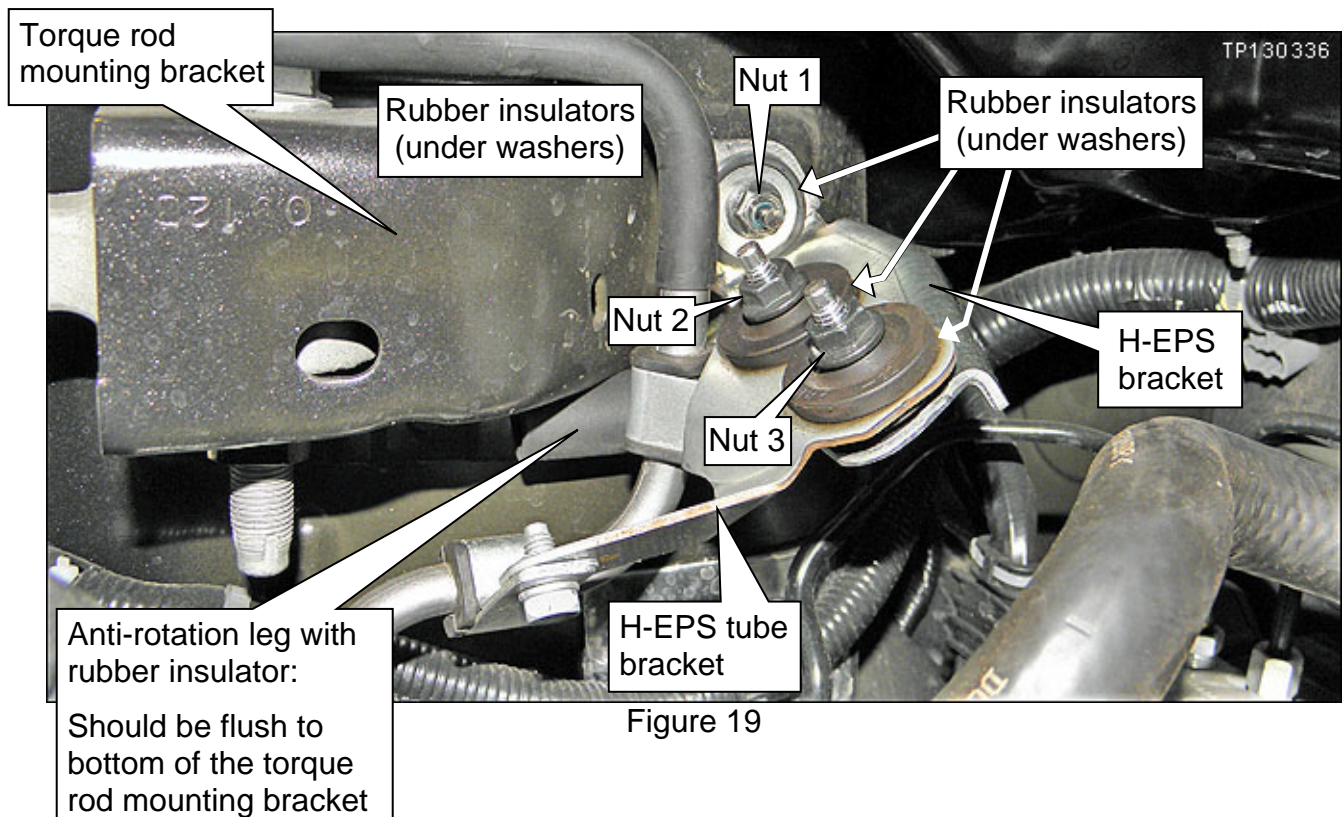
Nuts 2 & 3 torque: 4.9 N•m (0.49 kg-m, **3.6 ft-lb, 43 in-lb**)

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

- a. Make sure there is a gap between the brackets all the way around.
- b. Make sure the rubber insulators are seated properly.
- c. If needed, reposition the brackets so they are not touching.

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).

- a. Check the position the H-EPS bracket, make sure its anti-rotation leg is flush to the bottom of the torque rod mounting bracket.



## 6 Cylinder Models: H-EPS Bracket

**NOTE:** All 2014-2017 Altima vehicles have a H-EPS bracket. There is no need for replacement.

Check torque of all three (3) H-EPS bracket nuts:

Nut 1 torque: 8 N•m (0.81 kg-m, **5.9 ft-lb, 71 in-lb**)

Nuts 2 & 3 torque: 4.9 N•m (0.49 kg-m, **3.6 ft-lb, 43 in-lb**)

Make sure the H-EPS bracket and the H-EPS tube bracket are not touching (see Figure 20).

- Make sure there is a gap between the brackets, all the way around.
- Make sure the rubber insulators are seated properly.
- If needed, reposition the brackets so they are not touching.

Make sure the H-EPS bracket's anti-rotation leg is flush to the bottom of the torque rod mounting bracket (see Figure 20).

- Check the position the H-EPS bracket, make sure its anti-rotation leg is flush to bottom of the torque rod mounting bracket.

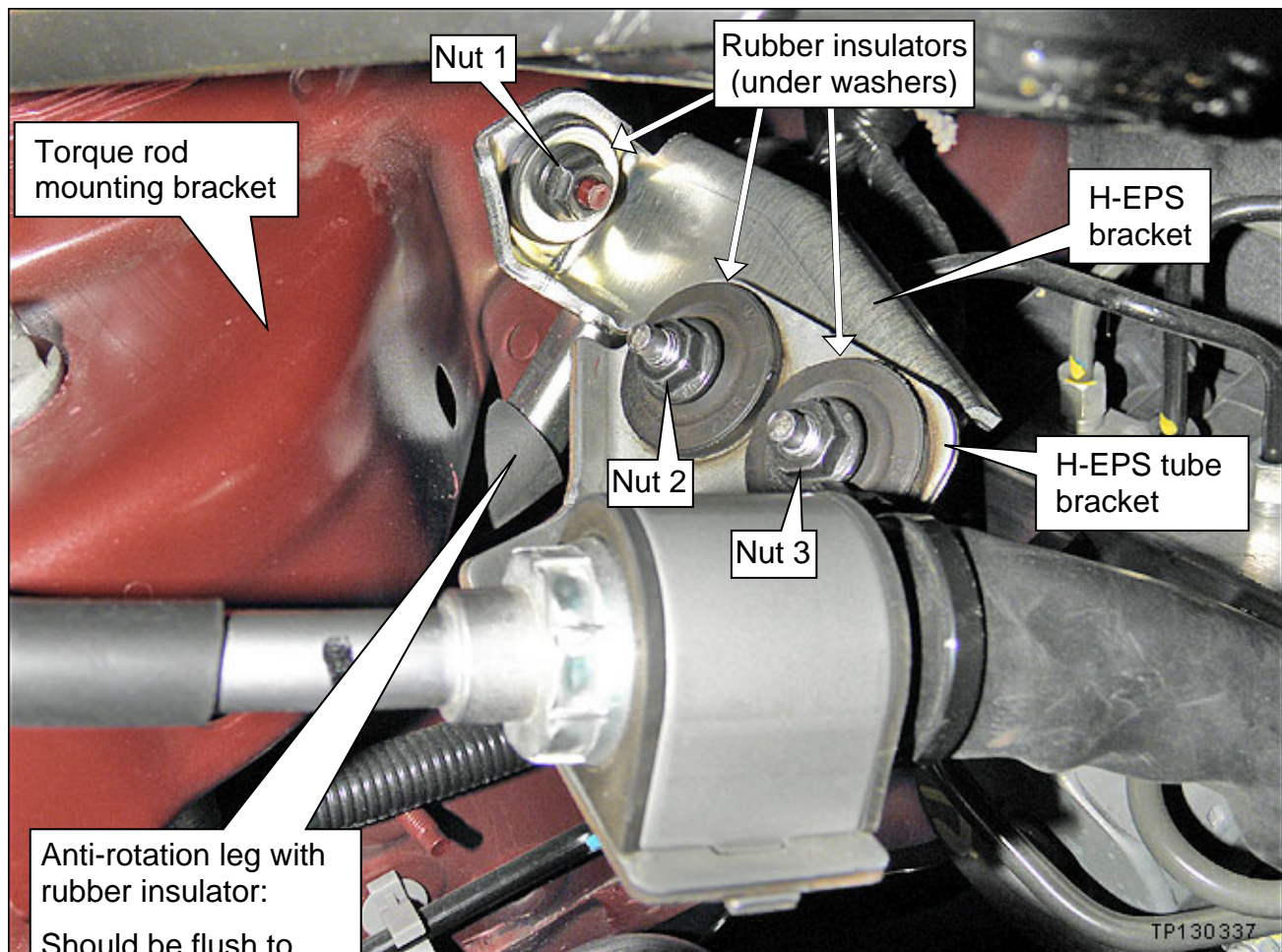


Figure 20

Anti-rotation leg with rubber insulator:  
Should be flush to bottom of the torque rod mounting bracket

## Power Steering Pump Motor Housing Insulator

1. Remove the power steering pump cover (if equipped) to access the power steering pump motor housing.
  - Two hose attachment points and two clips.

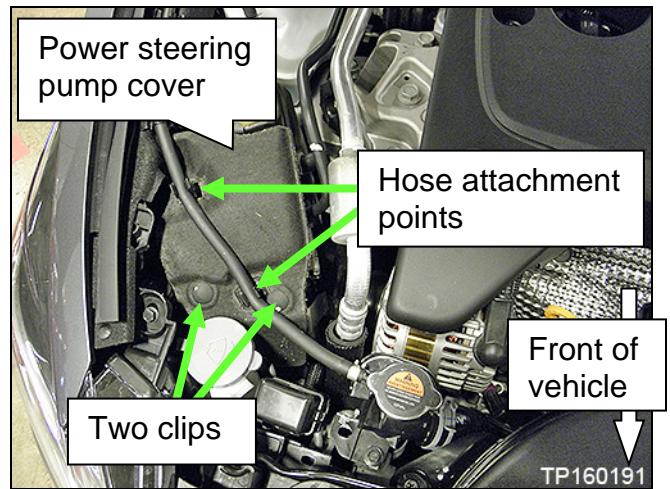


Figure 21

2. Locate the power steering pump motor housing and confirm an insulator is installed.

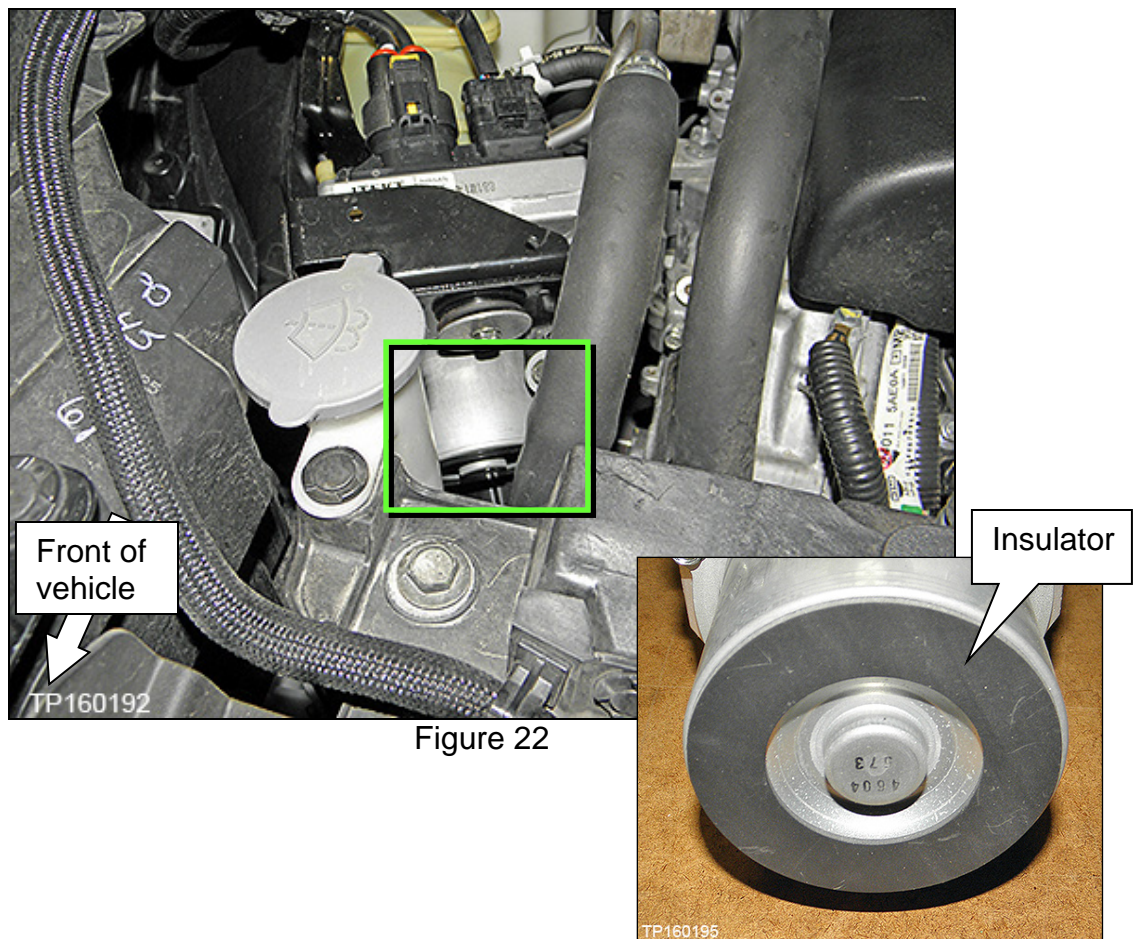


Figure 22

3. If missing, install an insulator.