



---

# SERVICE BULLETIN

---

<b>Classification:</b> ST12-007a	<b>Reference:</b> NTB12-078a	<b>Date:</b> February 6, 2015
-------------------------------------	---------------------------------	----------------------------------

## NISSAN; POWER STEERING SYSTEM SERVICE INFORMATION

This bulletin has been amended under APPLIED VEHICLES, SERVICE INFORMATION, and Power Steering Gear Inspection. Discard all previous versions of this bulletin.

**APPLIED VEHICLES:** 2007-2012 Altima (L32)      2005-2015 Frontier (D40)  
2009-2014 Maxima (A35)      2005-2015 Xterra (N50)  
2004-2015 Titan (A60)      2005-2012 Pathfinder (R51)  
2004-2015 Armada (TA60)

### SERVICE INFORMATION

When diagnosing possible power steering gear (rack and pinion steering rack, or steering rack) leak issues, it may appear the steering rack is leaking when actually, it's not. Use this service bulletin to help make a more accurate diagnosis of the steering rack.

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.

## Power Steering Gear Inspection

**CAUTION:** Never hold the steering wheel in a locked position with the engine running for more than 10 seconds. Damage may occur to the power steering pump.



Figure 1: Steering rack

1. Verify the fluid level in the reservoir is within OK (normal) cold or hot range, as it applies.

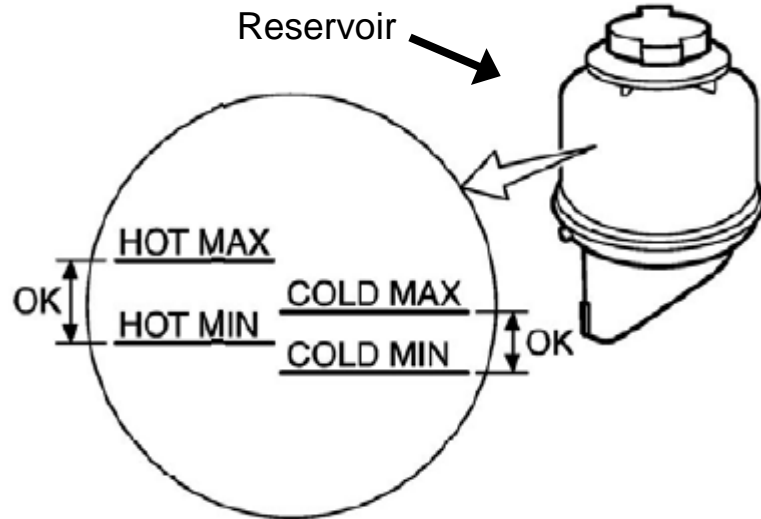


Figure 2: Make sure the fluid level is in OK (normal) range.

2. If the fluid level is lower than specification, check for leaks at all hose fittings for the power steering system.

- For sample locations of inspection, see Figure 3, 4, and 5 below.

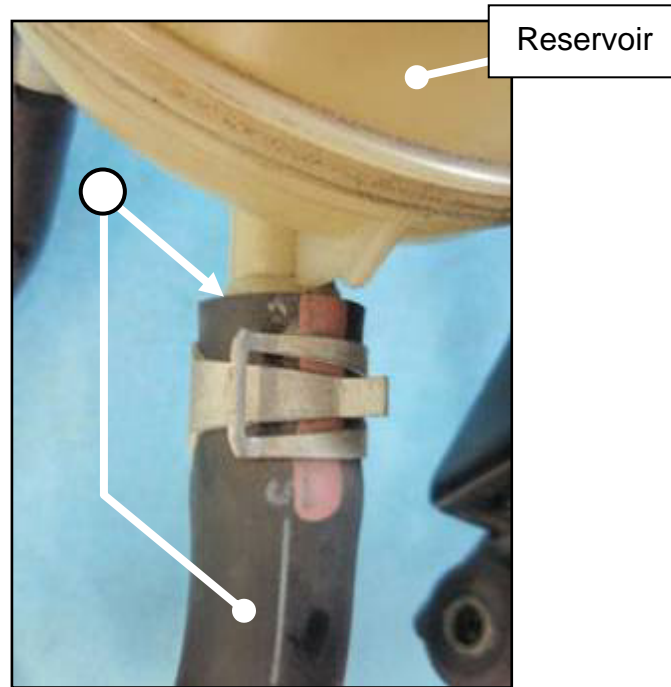


Figure 3

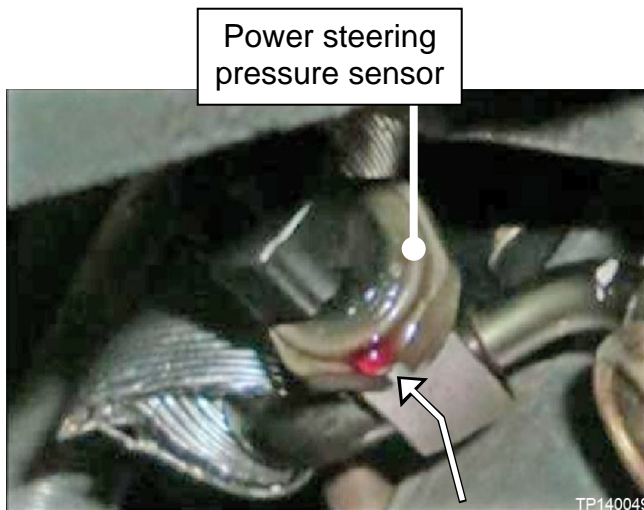


Figure 4: Presence of **RED** fluid indicates a power steering fluid leak.

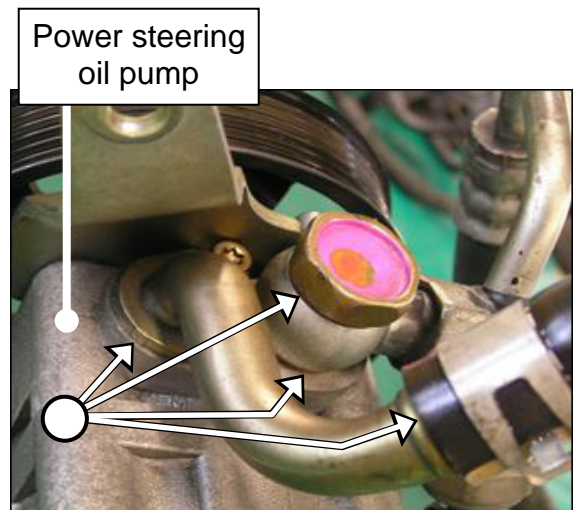


Figure 5

3. If no leakage is found at any hose fittings, inspect the steering rack dust covers (boots).
4. If the boots appear similar to the example in Figure 6 below, the steering rack is not leaking.
  - a. Do **NOT** replace the steering rack.
  - b. Clean off any oil/grease residue on the steering rack (see page 5-6).
  - c. Inspection is complete.
  - d. Return the vehicle to the customer and check for leakage at the next dealer visit.



Figure 6: Example of no leaks inside the boot. Boot is dry, dusty, feels firm to the touch.

5. If a boot appears similar to the example in Figure 7 below, the steering rack may be leaking.

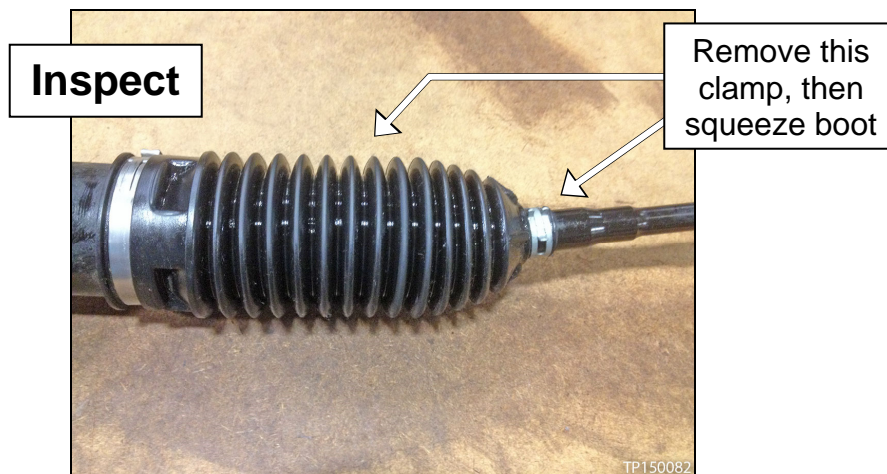


Figure 7: Example of a possible leak inside a boot. Fluid permeates the boot, giving it a dark, shiny black appearance. Feels soft to the touch.

6. Remove the small clamp, and then squeeze the boot (see Figure 7).
7. If fluid comes out the small end of the boot, replace the steering rack.
8. If no fluid comes out, do **NOT** replace the steering rack.
  - a. Verify there are no other vehicle fluid leaks getting on the boot.
  - b. Clean off any oil/grease residue on the steering rack and boot (see page 5-6).
  - c. Inspection is complete.
  - d. Return the vehicle to the customer and check for leakage at the next dealer visit.

The following pictures show steering racks that are **NOT** leaking:



Figure 12

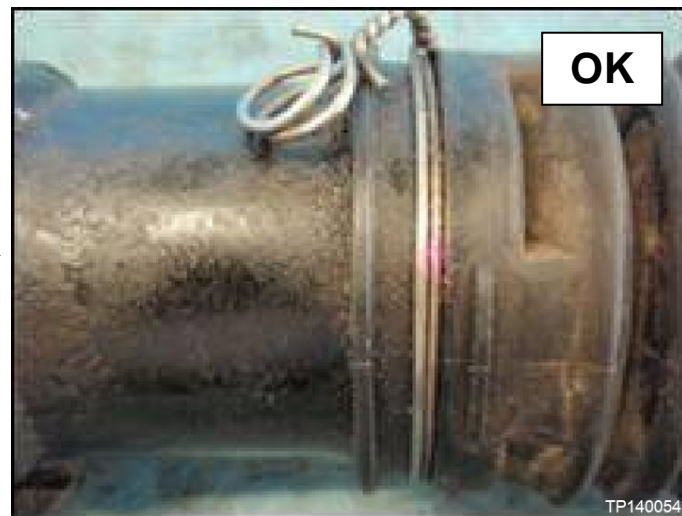


Figure 13

Boot-to-gear housing area:  
Clean off all residue



Figure 14: Yes, the steering rack above is OK (not leaking power steering fluid). The extra greasy appearance was caused by an excessive amount of assembly lube.

The following pictures show steering racks that are **NOT** leaking:



Figure 15



Figure 16

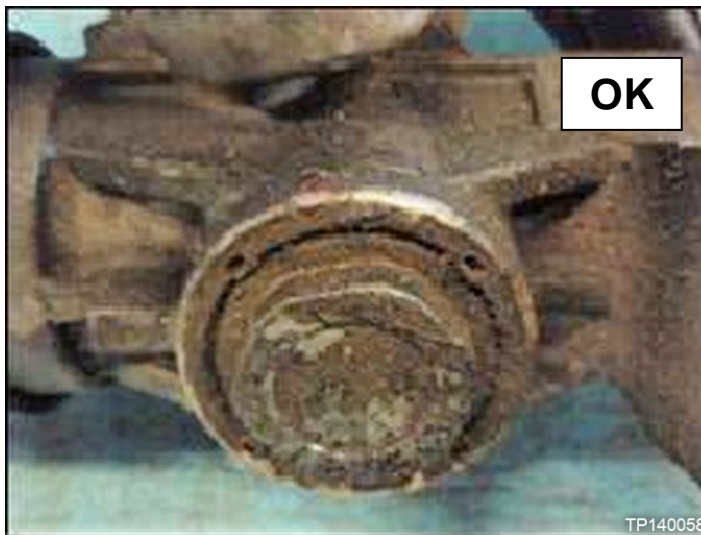


Figure 17

Adjusting  
screw area:  
Clean off  
all residue