

Classification:

ST14-006

Reference:

ITB14-014

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Date:

April 7, 2014

INFINITI; HITACHI BRAND POWER STEERING GEAR SERVICE INFORMATION

APPLIED VEHICLES: 2008-2013 EX (J50) 2008-2013 G37 Sedan (V36)
2014 QX50 (J50) 2009-2013 G37 Convertible (V36)
2009-2013 FX (S51) 2014 Q60 Coupe and Convertible (V36)
2014 QX70 (S51) 2011-2013 M and Hybrid (Y51)
2014 Q70 and Hybrid (Y51)
2014 Q50 (V37) **without** Direct Active STeering (DAST)

APPLIED COMPONENT: Vehicles with Hitachi brand power steering gear only

SERVICE INFORMATION

When diagnosing an applied vehicle for possible power steering gear (rack and pinion steering rack, or steering rack) leak issues, in some cases 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.

- Go to **Power Steering Gear Inspection** starting on page 2.

Infiniti 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 Infiniti 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.

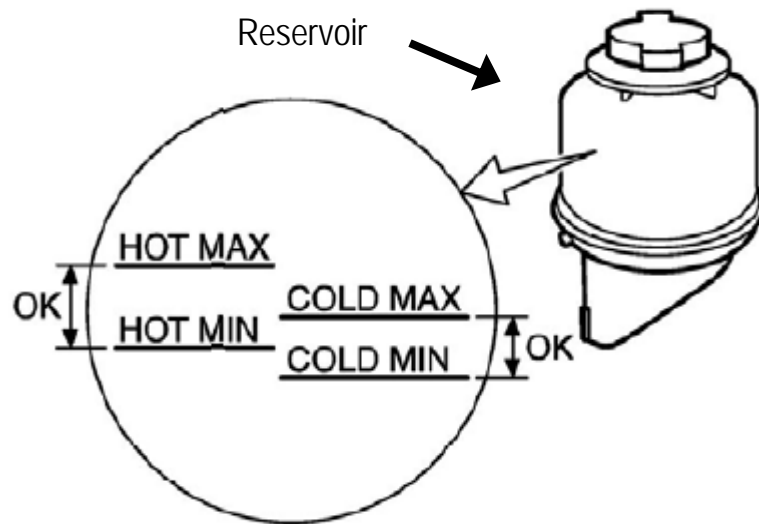


Figure 2: Make sure the fluid level is in OK (normal) range.

2. If 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.

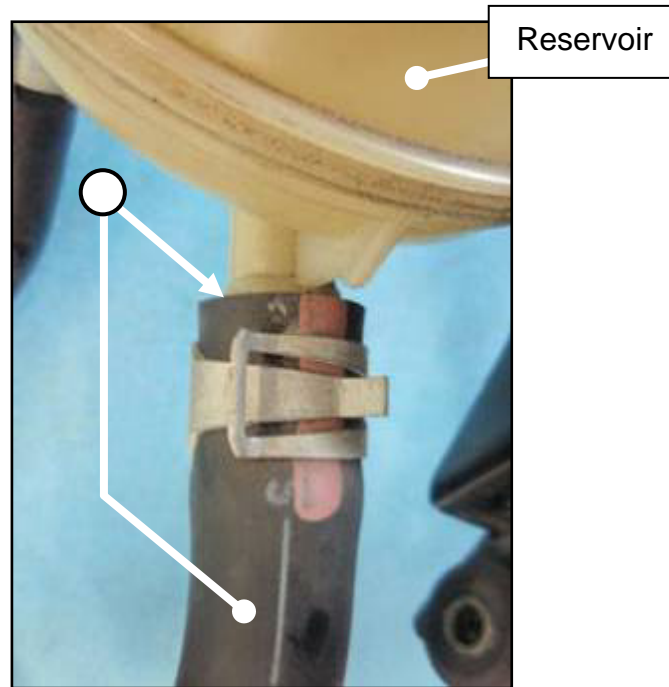


Figure 3: Inspect where noted.

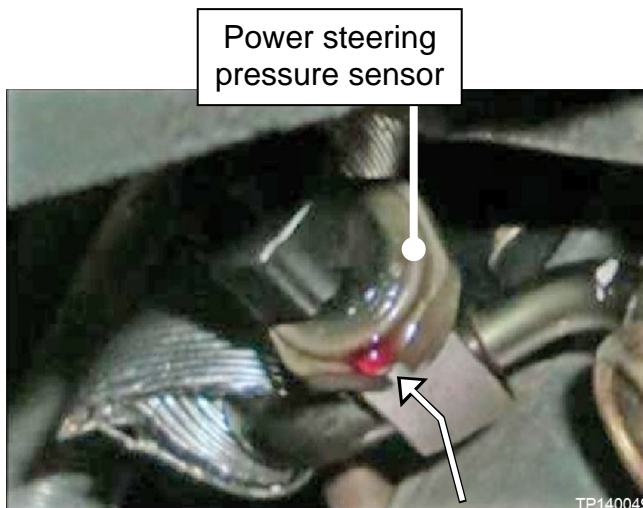


Figure 4: Presence of **RED** fluid indicates a power steering fluid leak.

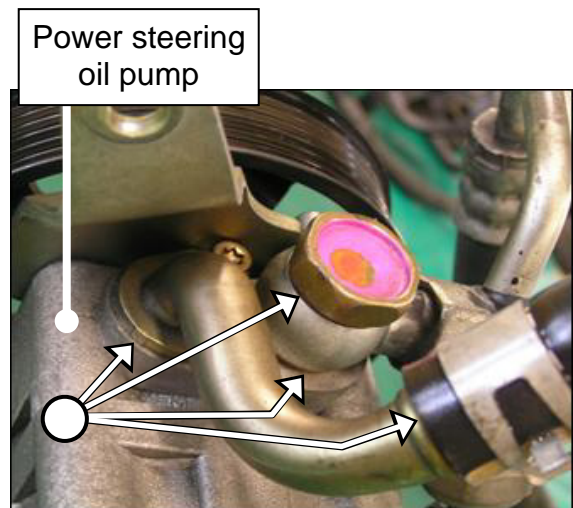


Figure 5: Inspect where noted.

3. If no leakage 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 7-8).
 - c. Inspection and repairs are complete.

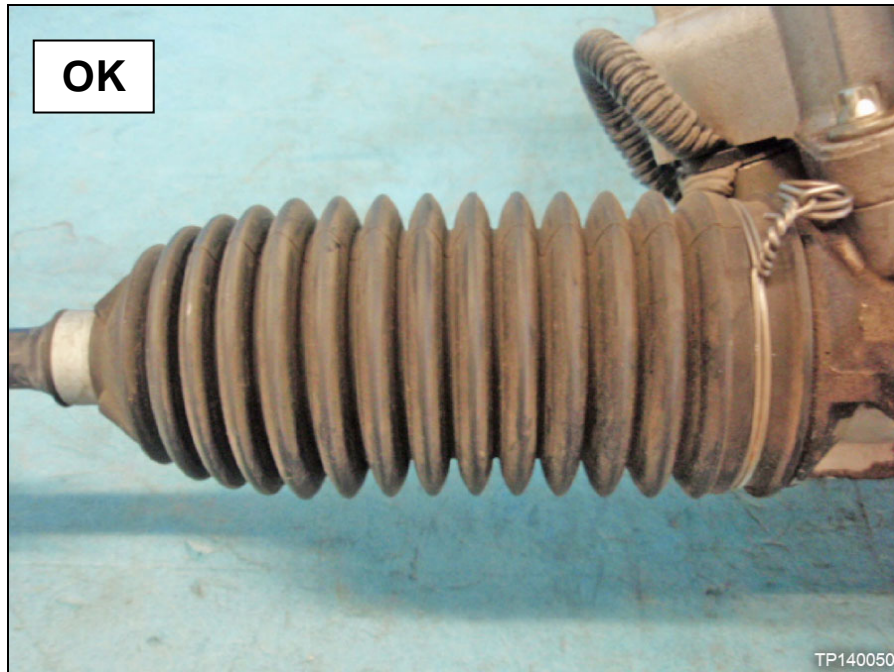


Figure 6: Example of no leaks inside the boot. Boot is dry, dusty.

5. If a boot appears similar to the example in Figure 7 below, the steering rack may be leaking. Go to step 6.

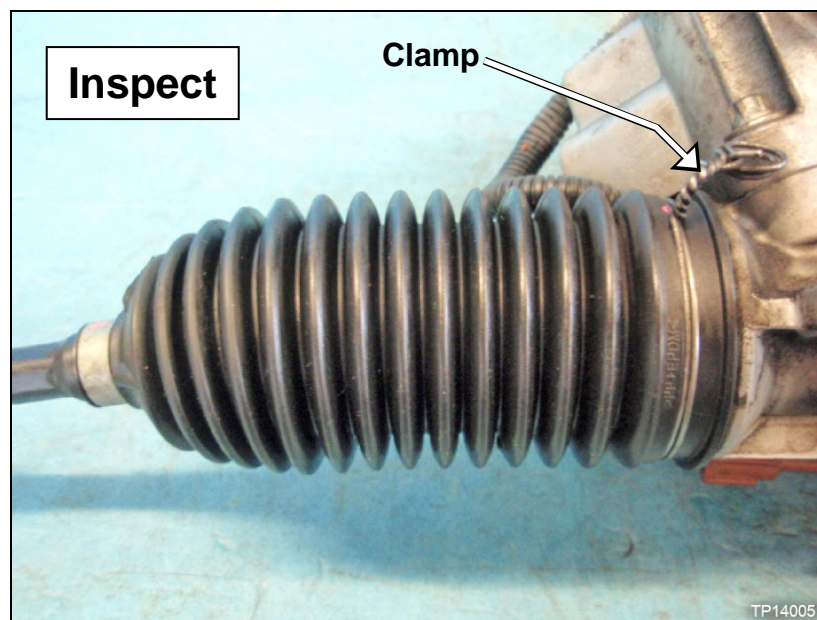


Figure 7: Example of a possible leak inside a boot. Fluid permeates the boot, giving it a dark, shiny black appearance.

6. Remove the dust cover clamps (clamp), pull the boots back, and then inspect for fluid and fluid color inside (see Figure 8).
 - See page 4, Figure 7 for example of boot clamp location.
 - Determine color easily by dabbing the fluid with a cotton swab or similar white item.



Figure 8

7. If a thick greasy substance is found in either boot and is **YELLOW** in color, the steering rack is not leaking (see Figure 9 and 10 below).
 - a. Do **NOT** replace the steering rack. It is NOT leaking.
 - A **YELLOW** colored substance is an indication of assembly lube. This is OK.
 - See example photos of non-leaking steering racks on the page 7 and 8.
 - b. Clean off all oil/grease residue on the steering rack and on the inside of the boots.



Figure 9



Figure 10

- c. Reinstall both boots and replace the clamps with new ones (see **PARTS INFORMATION**).
Stop here: Inspection is complete.
 - Refer to the Electronic Service Manual (ESM), section ST-Steering System, for installation/replacement information.

8. If fluid is found in the boot and is **RED** in color, the steering rack is leaking (see Figure 11).

- a. Replace the steering rack.
- b. Refer to the Electronic Service Manual (ESM), section ST-Steering System, for installation/replacement information.

NOTE: The inner and outer sockets (tie rods) with boots in Figure 11 were removed for easier viewing. The tie rods do not need to be removed for inspection.



Figure 11: If fluid is **red** in color, the steering rack is leaking.

NOTE: See the next two pages for example photos of steering racks that are NOT leaking.

The following pictures show steering racks that are NOT leaking:



Figure 12

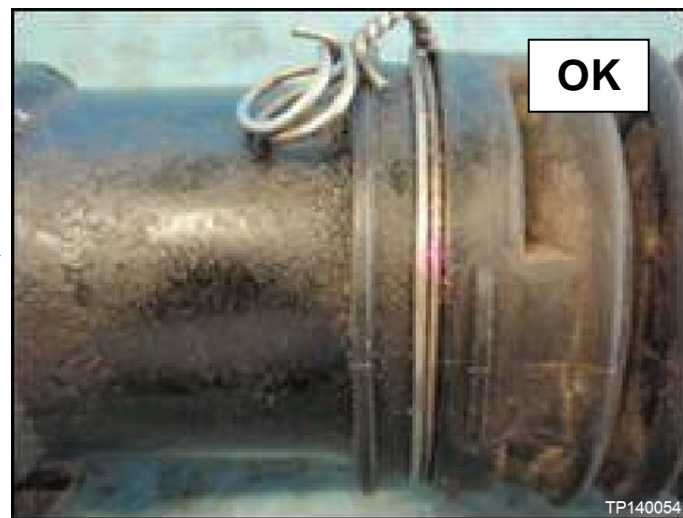


Figure 13



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.

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

The following pictures show steering racks that are NOT leaking:

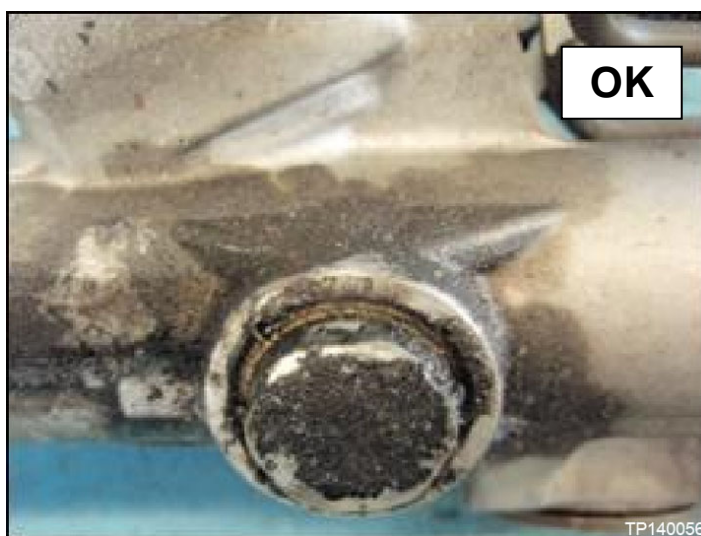


Figure 15



Figure 16



Figure 17

Adjusting
screw area:
Clean off
all residue

PARTS INFORMATION

Description	PART NUMBER	Qty
CLAMP-DUST COVER	48055-17B00	*
CLAMP-DUST COVER	48055-10V00	*
GEAR & LINKAGE (steering rack)	**	1
Nissan Power Steering Fluid	999MP-AG000P ***	****

* Check with WIN FAST or your electronic parts catalog to determine if the vehicle's steering rack needs one of each or two of either part number.

** Use WIN FAST or your electronic parts catalog to determine the part number to be ordered.

*** Order Nissan Power Steering Fluid through the Infiniti Maintenance Advantage program:
Phone: 877-INF-IMA1 (877-463-4621). Website order via link on dealer portal www.NNAnet.com
and click on "Maintenance Advantage" link.

**** As needed.

CLAIMS INFORMATION

(All Models)

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

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
CHECK POWER STEERING OIL LEAK & STEERING GEAR BOOT	(1)	QX28AA	ZR	53	0.5

(1) Refer to the electronic parts catalog (FAST) and use the Rack and Pinion assembly part number (49001-*****) as the Primary Failed Part (PFP).

OR If leak found

2WD models

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT	Model
POWER STEERING OIL LEAK CHECK & REPLACE STEERING GEAR HOUSING ASSY (2WD)	(1)	QX29BA	ZR	53	2.7	G37 (V36) Q50 (V37)
					2.4	EX (J50) QX50(J50)
					2.6	M (Y51) Q70 (Y51) FX (S51) QX70 (S51)
					2.9	M HYBRID (Y51) Q70 HYBRID (Y51)

(1) Refer to the electronic parts catalog (FAST) and use the Rack and Pinion assembly part number (49001-*****) as the Primary Failed Part (PFP).

AWD models

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT	Model
POWER STEERING OIL LEAK CHECK & REPLACE STEERING GEAR HOUSING ASSY (AWD)	(1)	QX29DA	ZR	53	2.6	M (Y51) Q70 (Y51)
					2.7	FX (S51) QX70 (S51)
					2.8	FX (S51) - VK QX70 (S51) - VK
					2.9	M HYBRID (Y51) Q70 HYBRID (Y51)
					3.4	EX (J50) QX50(J50)
					3.7	G37 (V36) Q50 (V37)

(1) Refer to the electronic parts catalog (FAST) and use the Rack and Pinion assembly part number (49001-*****) as the Primary Failed Part (PFP).