



TECHNICAL SERVICE BULLETIN

Classification: RA24-001	Reference: NTB24-036	Date: July 11, 2024
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VIBRATION AND/OR NOISE FROM THE REAR OF THE VEHICLE

APPLIED VEHICLES: 2022-2024 Pathfinder (R53)
APPLIED DATES: Built on or before February 28, 2024
APPLIED DRIVETRAINS: AWD

IF YOU CONFIRM

A binding feeling, vibration, and/or noise coming from the rear end when turning at low speed or accelerating from a stop,

AND

The issue is resolved by unplugging the Actuator Assembly (AWD Actuator) on the rear Final Drive Unit.

ACTION

Refer to the **SERVICE PROCEDURE** below to:

1. Remove the Electro-hydraulic Coupling Assembly (AWD Coupler).
2. Clean the Coupling Oil Tank.
3. Inspect the Breather Tube and Bolt.
4. Replace the Electro-hydraulic Coupling Assembly (AWD Coupler).

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.

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

Remove the AWD Coupler

1. Remove the AWD Coupler.
 - Refer to the ESM: **TRANSMISSION & DRIVELINE > DRIVELINE > REAR FINAL DRIVE: R145 > REMOVAL AND INSTALLATION > ELECTRO-HYDRAULIC COUPLING > Removal and Installation > REMOVAL**

Clean the Coupling Oil Tank

2. Remove the fill plug from the side of the coupling oil tank cover.

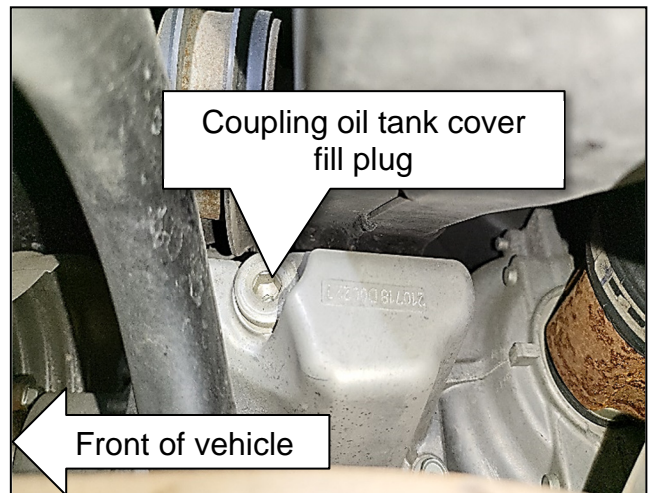


Figure 1

3. Spray brake cleaner into the coupling oil tank until clean solvent is running out of the AWD Coupler fluid hole.

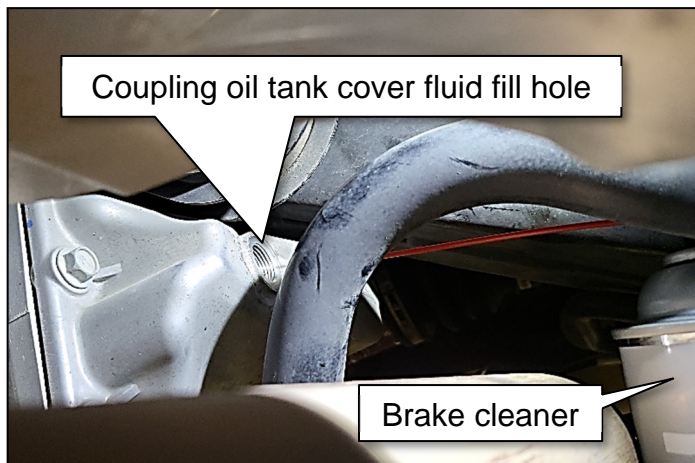


Figure 2

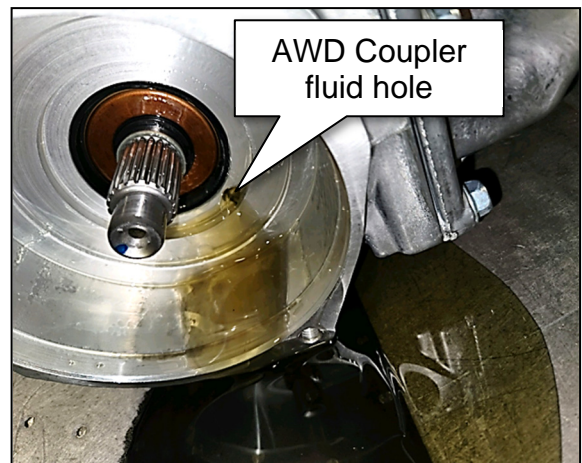


Figure 3

Breather Tube and Bolt Inspection

4. Remove the two (2) front mounting bolts of the Final Drive (differential) to access the top of the Final Drive.

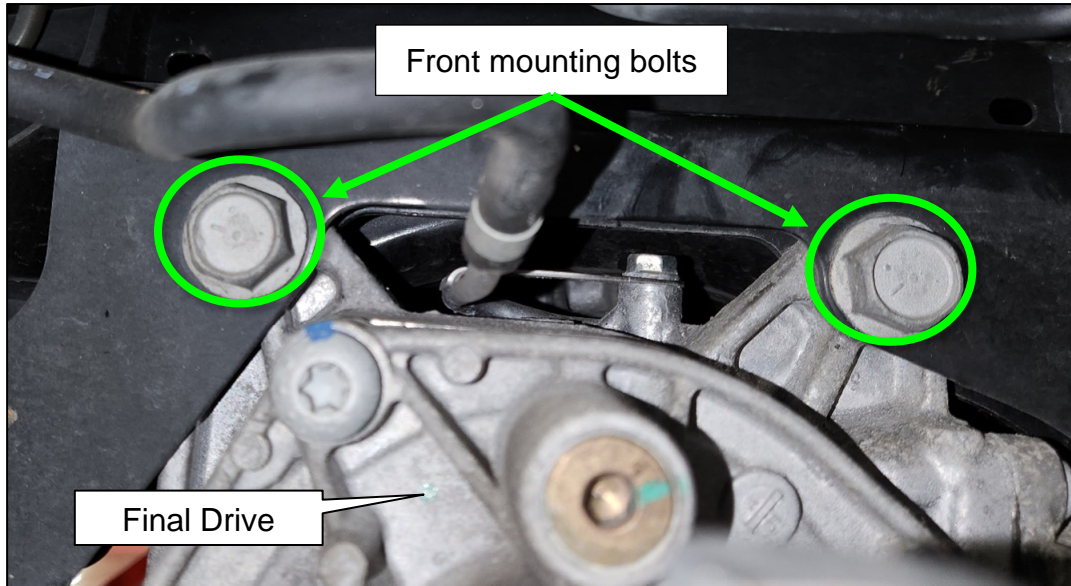


Figure 4

5. Confirm the following:
 - The Breather is seated correctly into the Final Drive (Figure 5).
 - The Breather's bolt is seated correctly and is not cross threaded (Figure 6).

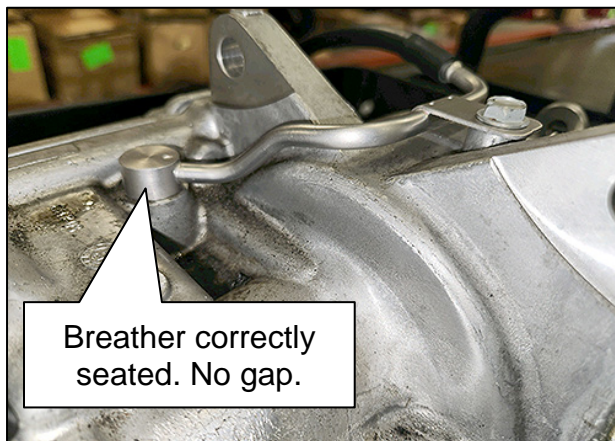


Figure 5

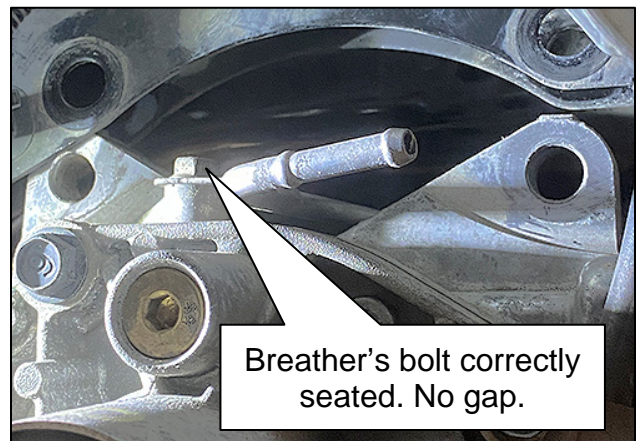


Figure 6

6. Are both the Breather's bolt and the Breather correctly seated?

YES:

- a. Remove the Breather's bolt and the Breather from the Final Drive.
- b. Replace the Breather's O-ring (lubricate with LSSC oil).
- c. Reinstall the Breather and the Breather's bolt.
 - Breather bolt torque: 8 N•m (0.82 kg-m, **71 in-lb**)
- d. Skip to step 10 on page 5.

NO:

- If either the Breather's bolt or the Breather are not correctly seated, proceed to step 7.

7. Is the Breather's bolt correctly seated, but the Breather not correctly seated?

YES:

- a. Remove the Breather's bolt and the Breather from the Final Drive.
- b. Clean the surface around the Breather, and then confirm if the Breather will seat correctly.
- c. Replace the Breather's O-ring (lubricate with LSSC oil).
- d. Reinstall the Breather and Breather's bolt and confirm that it now seats correctly.
 - Breather bolt torque: 8 N•m (0.82 kg-m, **71 in-lb**)
 - If the Breather still will not seat correctly, replace the Breather tube assembly.

HINT: Do not replace the attached rubber hose.

- e. Proceed to step 10 on page 5.

NO:

- If the Breather's bolt, or the Breather and its bolt, are not correctly seated, proceed to step 8 on page 5.

8. Confirm if the Breather's bolt is loose.
 - If only loose:
 - a. Remove the Breather's bolt and the Breather from the Final Drive.
 - b. Replace the Breather's O-ring (lubricate with LSSC oil).
 - c. Reinstall the Breather and Breather's bolt.
 - Breather bolt torque: 8 N•m (0.82 kg-m, **71 in-lb**)
 - If the Breather's bolt is not loose, refer to the ESM for further diagnostic information, and then proceed to step 9.

9. Reinstall the front bolts of the Final Drive (differential).
 - Final Drive mounting bolt torque: 100 N•m (10.0 kg-m, **74 ft-lb**)

Install the New AWD Coupler

10. Install the new AWD Coupler.

IMPORTANT: Verify that the brake cleaner is fully evaporated from step 3 before proceeding.

- Refer to the ESM: **TRANSMISSION & DRIVELINE > DRIVELINE > REAR FINAL DRIVE: R145 > REMOVAL AND INSTALLATION > ELECTRO-HYDRAULIC COUPLING > Removal and Installation > INSTALLATION**

IMPORTANT: Only use the fluid listed in the **PARTS INFORMATION**. The fluid has a tendency to have clutch additive separate during long storage, therefore it is critical to shake the fluid for 30-60 seconds before using.

11. Perform **Adjustment** of the AWD Coupler.

- Refer to the ESM: **TRANSMISSION & DRIVELINE > DRIVELINE > REAR FINAL DRIVE: R145 > REMOVAL AND INSTALLATION > ELECTRO-HYDRAULIC COUPLING > Adjustment**

IMPORTANT: The **AIR BLEEDING AND INITIALIZE OIL DETERIORATION LEVEL** process will need to be performed several times until there is no noise from the Final Drive Unit.

PARTS INFORMATION

DESCRIPTION	PART NUMBER	QUANTITY
COUPLING ASSY-ELECTRICAL	38760-6TA2A	1
LIMITED SLIP COUPLER TRANSMISSION FLUID 12-301 (1) (2)	999MP-LSCTRF	As needed
SEAL – O RING (Breather O-ring)	31084-6RE0A	1
BOLT (Breather Bolt)	38798-6RE0B	1
BOLT (Coupler Bolt)	38321-6SB0A	4
BOLT (Propeller Shaft Bolt)	37120-JD00B	6

- (1) Order this item through the Nissan Maintenance Advantage program: Phone 877-NIS-NMA1 (877-647-6621). Website order via link on the dealer portal; www.NNAnet.com and click on the “Maintenance Advantage-Tire/Battery/Chemical” link.
- (2) This fluid has a tendency to have clutch additive separate during long storage, therefore it is critical to shake the fluid for 30-60 seconds before using.

CLAIMS INFORMATION

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

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Replace AWD Electronic Coupling Assembly & Clean Oil Tank	(1)	LX13AA	ZE	32	2.1

- (1) Reference the electronic parts catalog and use the Electric Coupling (38760-*****) as the Primary Failed Part (**PFP**).

AMENDMENT HISTORY

PUBLISHED DATE	REFERENCE	DESCRIPTION
July 11, 2024	NTB24-036	Original bulletin published