

 **HYUNDAI**
Technical Service Bulletin

GROUP BRAKES	NUMBER 23-BR-004H
DATE NOVEMBER 2023	MODEL(S) TUCSON (NX4A) SANTA CRUZ (NXT) SANTA FE (TMA) SANTA FE HYBRID (TMA HEV)

SUBJECT: BRAKE INSPECTION AND SERVICE PROCEDURE

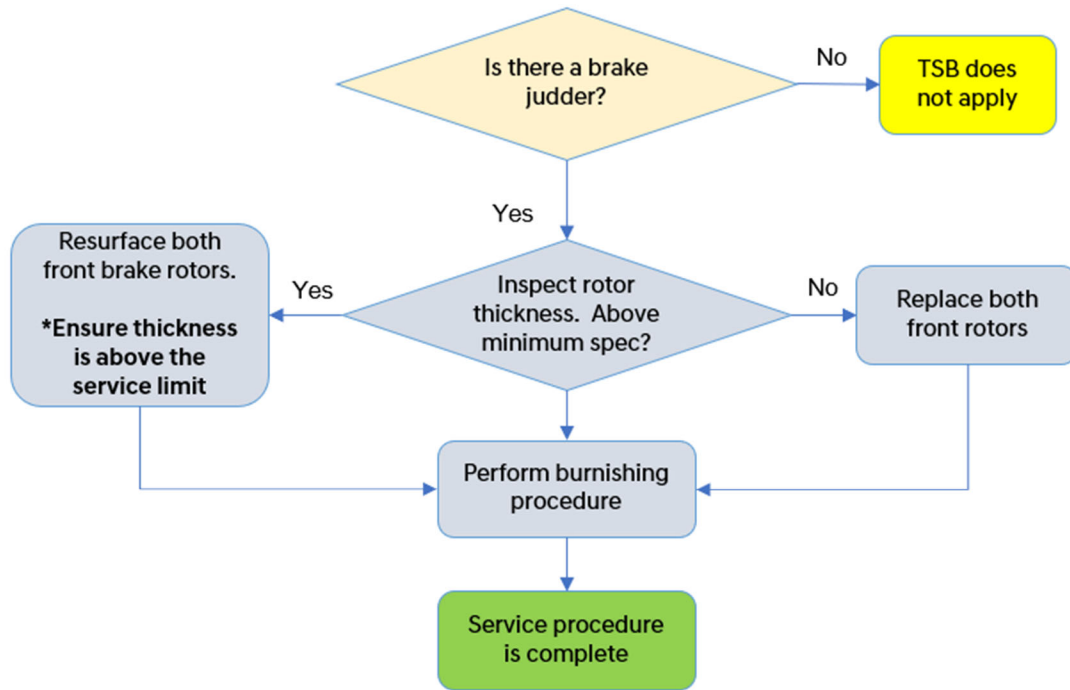
Description: Certain Tucson (NX4A), Santa Cruz (NXT), Santa Fe (TMA), and Santa Fe Hybrid (TMA HEV) vehicles may exhibit a brake judder condition. This bulletin describes the procedure to inspect the brakes, resurface or replace and perform a brake burnishing procedure.



Applicable Vehicles:

- 2022-2023MY Tucson (NX4A) produced from 07/12/2021 ~ 05/17/2023.
- 2022-2023MY Santa Cruz (NXT) produced from 07/12/2021 ~ 05/28/2023.
- 2022-2023MY Santa Fe (TMA) produced from 07/12/2021 ~ 05/03/2023.
- 2022-2023MY Santa Fe Hybrid (TMA HEV) produced from 10/10/2022 ~ 05/16/2023.

Service Flowchart:



Parts Information:

Model	Part Name	Original P/N	New P/N	QTY.
Tucson (NX4A)	DISC-FRONT BRAKE	51712-L0100	51712-L0100QQH	2
Santa Cruz (NXT)	DISC-FRONT BRAKE	51712-R5000	51712-R5000QQH	2
Santa Fe (TMA)	DISC-FRONT BRAKE	51712-R5000	51712-R5000QQH	2
Santa Fe Hybrid (TMA HEV)	DISC-FRONT BRAKE	51712-R5000	51712-R5000QQH	2

Service Inspection Guidance:

Model	Part Number	Part Name	Thickness
Tucson (NX4A)	51712-L0100	DISC-FRONT WHEEL BRAKE	Standard: 30mm (1.18 in) Service limit: 28mm (1.10 in)
Santa Cruz (NX4AT)	51712-R5000	DISC-FRONT WHEEL BRAKE	Standard: 30mm (1.18 in) Service limit: 28mm (1.10 in)
Santa Fe (TMA)	51712-R5000	DISC-FRONT WHEEL BRAKE	Standard: 30mm (1.18 in) Service limit: 28mm (1.10 in)
Santa Fe Hybrid (TMA HEV)	51712-R5000	DISC-FRONT WHEEL BRAKE	Standard: 30mm (1.18 in) Service limit: 28mm (1.10 in)

Warranty Information:

Model	Op. Code	Operation	Op. Time	Causal Part	Nature Code	Cause Code
All	30DA09R0	FRONT BRAKE DISC MACHINING (BOTH) & BURNISHING	1.2 M/H	51712-R5000 (NX4A)	V64	ZZ5
	30DA09R1	FRONT BRAKE DISC REPLACEMENT (BOTH) & BURNISHING	0.7 M/H	51712-L0100 (NXT, TMA, TMA HEV)		

NOTE 1: Submit claim on Claim Entry Screen as “Campaign” type.


NOTE 2: If a part is found in need of replacement while performing this campaign and the affected part is still under warranty, submit a separate claim using the same repair order.

NOTE 3: This TSB includes Repair validation photos. Op times include VIN, Mileage and Repair validation photos as outlined in the Digital Documentation Policy.

NOTE 4: The incident parts are subject to callback through the normal Warranty Technical Center (WTC) parts return process. **Claim is subject to debit if the part is not returned.**

NOTE 5: If the rotors are machined and burnished and the judder is still present, the rotors may be replaced under warranty. Dealer must also submit a campaign claim ending in “R0” for the disc machining and burnishing.

Recommended Tool Information:

Tool Name	Part Number	Figure	Remark
On-car Brake Lathe PFM 9.0 or higher version by PRO-CUT	Contact Bosch		Tool is available through Bosch: 1-866-539-4248

Service Procedure:

STUI



This TSB includes Repair validation photos. Refer to the latest Warranty Digital Documentation Policy for requirements.

Refer to the applicable vehicle shop manual or TSBs for service details.

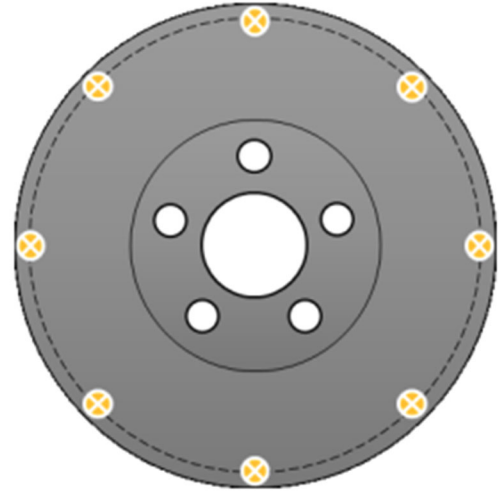
Front Brake Rotors – Machining or Replacement

NOTICE

- Always follow the brake lathe manufacturer’s recommendations for proper machining.
- **It is recommended to use an “on-car” brake lathe.**
- **If either rotor’s thickness is under the service limit (before or after machining), replace both front rotors.**
- For more information on brake rotor service, refer to the applicable vehicle shop manual.

1. Measure rotor thickness and determine if rotors should be machined or replaced. If machined, measure both **BEFORE** and **AFTER** machining to ensure the brake rotor is within specification.

- Refer to the applicable vehicle shop manual for minimum thickness.
- When measuring the brake rotor for minimum service thickness and runout, remove all surface contamination and corrosion to ensure an accurate measurement.
- Measure the thickness at 8 points (every 45 degrees) around the rotor, 5-10mm or 0.2-0.4" inboard of the outer edge. Record these measurements on the repair order sheet.



Measurement locations around rotor

2.

STUI



Using STUI, take clear photos of freshly resurfaced or new brake rotors (both left and right) with the last 6 digits of the VIN and the date of repair on a piece of paper. Photo(s) can be rotors off the vehicle, or on the vehicle. If on the vehicle, submit both left and right photos individually. See example shown below.

Upload photo(s) to STUI.



3. With the brake rotors and calipers fully assembled, inspect the rotor runout.
 - Refer to the applicable vehicle shop manual for recommended runout tolerance.
 - Mount a dial indicator on the brake rotor 5-10mm or 0.2-0.4" inboard of the outer edge. Record this measurement on the repair order sheet.
4. Verify that the rotors are free of grease or other contamination. Clean with brake cleaner if necessary.
5. Tighten all bolts to the torque specification recommended in the appropriate vehicle shop manual.
6. When re-installing the wheels, tighten the lug nuts in a star pattern to the torque specification in the appropriate vehicle shop manual. This reduces runout from occurring.
7. After installing the machined rotors or installing new rotors, **perform a brake burnishing procedure** as described below.

Brake Burnishing Procedure

1. Drive the vehicle and accelerate to 50 mph. Apply the brakes using moderate force (about 0.3g deceleration rate), and slow the vehicle to 10 mph. This action will take approximately 6 seconds.
2. With as little cooling time as possible, repeat this braking event 10 times.

