



Technical Service Bulletin

GROUP FUEL SYSTEM	NUMBER 23-FL-002H
DATE MARCH 2023	MODEL(S) SONATA (DN8(A)) SANTA FE (TM) SANTA CRUZ (NXT) TUCSON (NX4(A))

SUBJECT: MISFIRE DTC (P030X) – INTERNAL GDI INJECTOR LEAK REPAIR

This TSB supersedes 22-FL-002H to add Sonata(DN8) and Tucson(NX4) and to update op time on existing op codes ending in R1-R4.

Description: This bulletin provides the diagnostic procedure for the GDI injector(s) in certain 21-23MY Sonata, 21-22MY Santa Fe, certain 22MY Santa Cruz, and certain MY21-23 Tucson equipped with 2.5L GDI engines with one or more misfire DTC(s) due to internally leaking GDI injector(s).

STUI



This TSB includes STUI pictures as a requirement. The STUI pictures require the VIN and date of the repair to be clearly visible. Please include the last 6 digits of the VIN and date of the repair on a piece of paper next to injectors (1-4), high pressure fuel pipe replacement, new bolts, re-used injectors with combustion seal rings. Ensure the captured pictures are completed according to the steps in the TSB. **All submitted claims without associated STUI pictures that do not capture the VIN, repair date, or injectors (1-4), high pressure fuel pipe replacement, new bolts, re-used injectors with new combustion ring seal are subject to debit. In addition, any claims found to have an illegible, incomplete, missing, or incorrect pictures are subject to debit.**

Applicable Vehicles with 2.5L GDI non-Turbo engines:

- Certain 2021~23MY Sonata (DN8) (VINS starting with KMH)
Produced from Feb.08,2021 to Dec.06,2022
- Certain 2021~22MY Sonata (DN8a) (VINS starting with 5NP)
Produced from Mar.01,2021 to Jan.17,2022
- Certain 2021~22MY Santa Fe (TMa) (VINS starting with 5NM)
Produced from Mar.01,2021 to Jan.17,2022
- Certain 2021~23MY Tucson (NX4) (VINS starting with KM8)
Produced from Jan.21.2021 – Nov.05.2022
- Certain 2022MY Tucson (NX4a) (VINS starting with 5NM)
Produced from Mar.01,2021 to Jan.17,2022
- Certain 2022MY Santa Cruz (NXT) (VINS starting with 5NT)
Produced from Mar.01,2021 to Jan.17,2022

Parts Information:

MODEL	PART NAME	PART NUMBER	QTY
ALL MODELS	INJECTOR ASSY-FUEL	35310-2S000QQH	*Must replace for any affected injector(s)

Circulate To: Service Manager, Sales Manager, Warranty Manager, Service Advisors, Technicians, Fleet Repair

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	PIPE-HIGH PRESSURE	35305-2S000QQH	1 (Must replace with new for reassembly)
	COMBUSTION SEAL RING	35312-04AA0	*Must replace for any reused injector(s)
	BOLT	11403-08556K	1-4 Required only for replaced injector(s)

Warranty Information:**HMMA models (VINS start with '5NP', '5NM', or '5NT')**

MODEL	OP CODE	OPERATION	OP TIME	CAUSAL PART	NATURE CODE	CAUSAL CODE
Sonata (DN8a)	20DA14R1	Replace 1 GDI fuel injector	1.5 M/H	35310-2S000	W17	ZZ5
Santa Cruz (NXT)	20DA14R2	Replace 2 GDI fuel injectors	1.4 M/H	35310-2S000	W17	ZZ5
Santa Fe (TMa)	20DA14R3	Replace 3 GDI fuel injectors	1.4 M/H	35310-2S000	W17	ZZ5
Tucson (NX4a)	20DA14R4	Replace 4 GDI fuel injectors	1.3 M/H	35310-2S000	W17	ZZ5

HMC models(VINS start with 'KMH', 'KM8')

MODEL	OP CODE	OPERATION	OP TIME	CAUSAL PART	NATURE CODE	CAUSAL CODE
Sonata (DN8) Tucson (NX4)	20DA14R5	Replace 1 GDI fuel injector	1.5 M/H	35310-2S000	W17	ZZ5
	20DA14R6	Replace 2 GDI fuel injectors	1.4 M/H	35310-2S000	W17	ZZ5
	20DA14R7	Replace 3 GDI fuel injectors	1.4 M/H	35310-2S000	W17	ZZ5
	20DA14R8	Replace 4 GDI fuel injectors	1.3 M/H	35310-2S000	W17	ZZ5

NOTE 1: Submit Claim on Campaign Claim Entry Screen.

NOTE 2: If a part that is not covered by this TSB is in need of replacement while performing this TSB, and the affected part is still under warranty, please submit a separate claim using the same repair order. If the part is out of warranty, submit a prior approval request for goodwill consideration prior to performing the work.

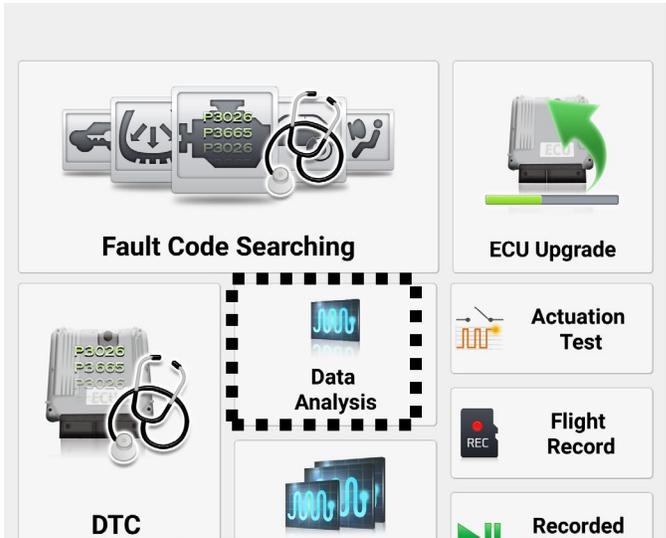
NOTE 3: A STUI video/picture(s) showing the replacement injector(s), high pressure fuel pump, and re-used injector(s) with the new combustion seal ring(s) along with a piece of paper displaying the last 6 digits of the VIN and the date of the repair must be included and uploaded to STUI. **If not included, claim will be subject to debit.**

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 requested and not returned.**

Service Procedure:

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1. If Check engine light (P030X) is stored, leaking GDI fuel injector may be the cause. Follow the troubleshooting steps to correctly identify if the misfire is caused by a leaking GDI fuel injector.
2. Using the GDS, select **DTC Analysis** and **ENGINE** menu. Record the DTC and Freeze Frame Data. Note which cylinder(s) are affected. Delete the DTC.
3. From the GDS home screen, select **Data Analysis** and menu. Then select **ENGINE**.



4. Start the engine and monitor the Fuel Pressure.

The screenshot shows the 'Data Analysis' screen for a TUCSON(NX4A)/2022/G 2.5 GDI.. Engine. The table below lists sensor data:

Sensor Name(232)	Value	Unit	Link Up
IN-Camshaft Position Deviation Integrator for Reference Check	0.0	°CRK*s	
Fuel Pressure	16	MPa	
Fuel Pressure Set Point Value	16	MPa	
Signal Voltage of Fuel Pressure Sensor	2.4	V	
Deviation of Fuel Pressure Set Point	0	MPa	

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5. Shut off the engine and monitor the fuel pressure. If the pressure does not drop, this bulletin does not apply and continue with normal diagnostic for misfires.

If the pressure drops, replace the GDI fuel injector(s) on the affected cylinder(s).

Sensor Name(232)	Value	Unit	Link Up
IN-Camshaft Position Deviation Integrator for Reference Check	0.0	°CRK*s	
Fuel Pressure	8	MPa	
Fuel Pressure Set Point Value	6	MPa	
Signal Voltage of Fuel Pressure Sensor	1.5	V	

6. Follow the repair procedure in the shop manual: **Engine Control / Fuel System → Engine Control System → Injector → Repair procedures → GDI Injector.**

7.

STUI



Using STUI, take photos of the injectors (1-4), high pressure fuel pipe replacement, new bolts, re-used injectors with new combustion ring seal with the last 6 digits of the VIN and the date of repair on a piece of paper. Upload the photos to STUI.



Install new combustion seals on all the reused injectors during reinstallation.

In addition, **replace the high pressure fuel pipe** with a new part after reinstallation of the fuel rail.

Refer to the shop manual section for complete service procedure:

Engine Control / Fuel System → Fuel Delivery System → Injector

8. Upload the freeze frame data for future claim verification.
9. Service procedure is now complete.