



# Technical Service Bulletin

GROUP	NUMBER
<b>ENGINE ELECTRICAL</b>	<b>23-EE-003H</b>
DATE	MODEL(S)
<b>FEBRUARY 2023</b>	<b>SANTA FE (TMa) PALISADE (LX2)</b>

**SUBJECT:** ECU UPDATE - ISG ACTIVE CONDITION IMPROVEMENT

**Description:** This bulletin provides information related to the ECU software update for improvement of:

- ISG operation in relation to the battery SOH (State Of Health) condition will be removed
- ISG engagement with satisfied battery SOC (State Of Charge) will remain

### Applicable Vehicles:

- 2019-2020MY Santa Fe (TMa) equipped with 2.0T-GDI, 2.4 GDI, and 8-speed Automatic Transmissions 2WD, AWD (VIN starts with "5NM")
- 2020-2022MY Palisade (LX2) equipped with 3.8 GDI engines and 8-Speed Automatic Transmissions

### GDS Information:

Event #	Description
<b>860</b>	<b>LX2 ECM UPGRADE – ISG ACTIVE CONDITION IMPROVEMENT (DELETE SOH CONDITION)</b>
<b>866</b>	<b>TMa ECM UPGRADE – ISG ACTIVE CONDITION IMPROVEMENT (DELETE SOH CONDITION)</b>

### NOTES:

- Refer to TSB 15-GI-001 for additional tablet-based Mobile GDS ECU update information.
- After the ECU Upgrade process shows 100% complete, **cycle the ignition key to OFF for at least 30 seconds to reset the control unit**. This step is important for establishing normal powertrain communication and to prevent system errors.
- Clear DTC(s) present after the ECU update.
- Start engine to confirm proper operation of the vehicle.

## WARNING



### GDS Vehicle Battery Voltage Warning:

If voltage is below 12 volts as per the GDS warning, then select **Back** and run the engine at least 15 minutes to reach an adequate battery state of charge to prevent ECU Update failure. Cycle the ignition **OFF/ON** before retrying ECU update again.

### Warranty Information:

VEHICLE	OP CODE	OP NAME	OP TIME	CAUSAL PART	NATURE	CAUSE
Palisade (LX2)	39122F01	ECU UPGRADE	0.3 M/H	39122-3LFN0	I3T	ZZ3
Santa Fe (TMa)	39122F01	ECU UPGRADE	0.3 M/H	39161-2GTD0 (2.0T) 39171-2GTC5 (2.4)	I3T	ZZ3

**NOTE:** Normal warranty applies

## NOTICE

**You must initially perform all GDS ECU Updates in Auto Mode.**

If the ECU Update starts but then fails in Auto Mode, perform the update in Manual Mode to recover.

**ROM ID Information Table:**

- Verify the ECM ROM ID before updating the software. Refer to the table below.
- **IMMO (O)** = Start Stop Button
- **NON IMMO (X)** = Key Start

**#860**

VEH	TM	IMMO	MY	ECU P/N	ROM ID	
					OLD	NEW
Palisade (LX2) 3.8 GDI	8AT	O	20MY	39122-3LFN0	LXLN8GMS_J0A	LXLN8GMS_K0P
					LXLN8GMS_K0A	
	8AT	X	20MY	39132-3LFN0	LXLN8GSS_J0A	LXLN8GSS_K0P
					LXLN8GSS_K0A	
	8AT	O	21MY	39122-3LFN1	LXMN8GMS_K0B	LXMN8GMS_N2P
					LXMN8GMS_K0C	
					LXMN8GMS_K0D	
					LXMN8GMS_K0E	
					LXMN8GMS_K0F	
					LXMN8GMS_N2A	
	8AT	X	21MY	39132-3LFN1	LXMN8GSS_K0B	LXMN8GSS_N2P
					LXMN8GSS_K0C	
					LXMN8GSS_K0D	
					LXMN8GSS_K0E	
LXMN8GSS_K0F						
LXMN8GSS_N2A						
8AT	O	22MY	39122-3LFN2	LXNN8GMS_S1A	LXNN8GMS_S1P	
				LXNN8GMS_S1B		
8AT	X	22MY	39132-3LFN2	LXNN8GSS_S1A	LXNN8GSS_S1P	
				LXNN8GSS_S1B		

**#866**

VEH/ENGINE		TM	OPT	ECU P/N	ROM ID	
					OLD	NEW
Santa Fe (TMa)	2.0 T-GDI	8AT	2WD (19MY)	39160-2GTC0	TMAJNC08RE5A TMAJNC08RE5B TMAJNC08RE5C TMAJNC08RG1A TMAJNC08RG1B TMAJNC08RG1C TMAJNC08RG1D	TMAJNC08RG1E
			AWD (19MY)	39160-2GTD0	TMAJNC08RE5A TMAJNC08RE5B TMAJNC08RE5C TMAJNC08RG1A TMAJNC08RG1B TMAJNC08RG1C TMAJNC08RG1D	TMAJNC08RG1E

			2WD (19MY)	39162-2GTC0	TMAJNC08ME5A TMAJNC08ME5B TMAJNC08ME5C TMAJNC08MG1A TMAJNC08MG1B TMAJNC08MG1C TMAJNC08MG1D	TMAJNC08MG1E
			AWD (19MY)	39162-2GTD0	TMAJNC08ME5A TMAJNC08ME5B TMAJNC08ME5C TMAJNC08MG1A TMAJNC08MG1B TMAJNC08MG1C TMAJNC08MG1D	TMAJNC08MG1E
			ULEV 2WD (19MY)	39170-2GTC0	TMAJNC48SE2A TMAJNC48SE2B TMAJNC48SEAC TMAJNC48SEAD TMAJNC48SEAE TMAJNC48SEAF TMAJNC48SG1A TMAJNC48SG1B TMAJNC48SG1C TMAJNC48SG1D TMAJNC48SG1E	TMAJNC48SG1F
			ULEV AWD (19MY)	39170-2GTD0	TMAJNC48SE2A TMAJNC48SE2B TMAJNC48SEAC TMAJNC48SEAD TMAJNC48SEAE TMAJNC48SEAF TMAJNC48SG1A TMAJNC48SG1B TMAJNC48SG1C TMAJNC48SG1D TMAJNC48SG1E	TMAJNC48SG1F
			SULEV 2WD (19MY)	39170-2GTC5	TMAJNS48SE2A TMAJNS48SE2B TMAJNS48SEAC TMAJNS48SEAD TMAJNS48SEAE TMAJNS48SEAF TMAJNS48SG1A TMAJNS48SG1B TMAJNS48SG1C TMAJNS48SG1D TMAJNS48SG1E	TMAJNS48SG1F
			SULEV AWD (19MY)	39170-2GTD5	TMAJNS48SE2A TMAJNS48SE2B TMAJNS48SEAC TMAJNS48SEAD TMAJNS48SEAE TMAJNS48SEAF TMAJNS48SG1A TMAJNS48SG1B TMAJNS48SG1C TMAJNS48SG1D TMAJNS48SG1E	TMAJNS48SG1F

			ULEV 2WD (19MY)	39172-2GTE0	TMAJNC48NE2A TMAJNC48NE2B TMAJNC48NEAC TMAJNC48NEAD TMAJNC48NEAE TMAJNC48NEAF TMAJNC48NG1A TMAJNC48NG1B TMAJNC48NG1C TMAJNC48NG1D TMAJNC48NG1E	TMAJNC48NG1F
			ULEV AWD (19MY)	39172-2GTF0	TMAJNC48NE2A TMAJNC48NE2B TMAJNC48NEAC TMAJNC48NEAD TMAJNC48NEAE TMAJNC48NEAF TMAJNC48NG1A TMAJNC48NG1B TMAJNC48NG1C TMAJNC48NG1D TMAJNC48NG1E	TMAJNC48NG1F
			SULEV 2WD (19MY)	39172-2GTG0	TMAJNS48NE2A TMAJNS48NE2B TMAJNS48NEAC TMAJNS48NEAD TMAJNS48NEAE TMAJNS48NEAF TMAJNS48NG1A TMAJNS48NG1B TMAJNS48NG1C TMAJNS48NG1D TMAJNS48NG1E	TMAJNS48NG1F
			SULEV AWD (19MY)	39172-2GTH0	TMAJNS48NE2A TMAJNS48NE2B TMAJNS48NEAC TMAJNS48NEAD TMAJNS48NEAE TMAJNS48NEAF TMAJNS48NG1A TMAJNS48NG1B TMAJNS48NG1C TMAJNS48NG1D TMAJNS48NG1E	TMAJNS48NG1F
			2WD (20MY)	39160-2GTC1	TMAKNC08RG1A TMAKNC08RG1B TMAKNC08RG3A TMAKNC08RG3B TMAKNC08RG3C TMAKNC08RG3D	TMAKNC08RG3E
			AWD (20MY)	39160-2GTD1	TMAKNC08RG1A TMAKNC08RG1B TMAKNC08RG3A TMAKNC08RG3B TMAKNC08RG3C TMAKNC08RG3D	TMAKNC08RG3E

		2WD (20MY)	39162-2GTC1	TMAKNC08MG1A TMAKNC08MG1B TMAKNC08MG3A TMAKNC08MG3B TMAKNC08MG3C TMAKNC08MG3D	TMAKNC08MG3E
		AWD (20MY)	39162-2GTD1	TMAKNC08MG1A TMAKNC08MG1B TMAKNC08MG3A TMAKNC08MG3B TMAKNC08MG3C TMAKNC08MG3D	TMAKNC08MG3E
		ULEV 2WD (20MY)	39170-2GTC1	TMAKNC48SG1A TMAKNC48SG1B TMAKNC48SG1C TMAKNC48SG3A TMAKNC48SG3B TMAKNC48SG3C TMAKNC48SG3D	TMAKNC48SG3E
		ULEV AWD (20MY)	39170-2GTD1	TMAKNC48SG1A TMAKNC48SG1B TMAKNC48SG1C TMAKNC48SG3A TMAKNC48SG3B TMAKNC48SG3C TMAKNC48SG3D	TMAKNC48SG3E
		SULEV 2WD (20MY)	39170-2GTC6	TMAKNS48SG1A TMAKNS48SG1B TMAKNS48SG1C TMAKNS48SG3A TMAKNS48SG3B TMAKNS48SG3C TMAKNS48SG3D	TMAKNS48SG3E
		SULEV AWD (20MY)	39170-2GTD6	TMAKNS48SG1A TMAKNS48SG1B TMAKNS48SG1C TMAKNS48SG3A TMAKNS48SG3B TMAKNS48SG3C TMAKNS48SG3D	TMAKNS48SG3E
		ULEV 2WD (20MY)	39172-2GTE1	TMAKNC48NG1A TMAKNC48NG1B TMAKNC48NG1C TMAKNC48NG3A TMAKNC48NG3B TMAKNC48NG3C TMAKNC48NG3D	TMAKNC48NG3E
		ULEV AWD (20MY)	39172-2GTF1	TMAKNC48NG1A TMAKNC48NG1B TMAKNC48NG1C TMAKNC48NG3A TMAKNC48NG3B TMAKNC48NG3C TMAKNC48NG3D	TMAKNC48NG3E

			SULEV 2WD (20MY)	39172-2GTG1	TMAKNS48NG1A TMAKNS48NG1B TMAKNS48NG1C TMAKNS48NG3A TMAKNS48NG3B TMAKNS48NG3C TMAKNS48NG3D	TMAKNS48NG3E
			SULEV AWD (20MY)	39172-2GTH1	TMAKNS48NG1A TMAKNS48NG1B TMAKNS48NG1C TMAKNS48NG3A TMAKNS48NG3B TMAKNS48NG3C TMAKNS48NG3D	TMAKNS48NG3E

If the Automatic ECU Upgrade process fails, **cycle the ignition key to OFF for at least 30 seconds to reset the control unit.** Then resume programming using the Manual ECU Upgrade processes.

After the ECU Upgrade process shows 100% complete, **cycle the ignition key again to OFF for at least 30 seconds to reset the control unit.** This step is important for establishing normal powertrain communication and to prevent system errors.

#### MANUAL MODE PASSWORD INFORMATION TABLE:

ECM MENU (#860)	PASSWORD
LX2 3.8 GDI 8AT 20MY 39122-3LFN0	2230
LX2 3.8 GDI 8AT 20MY 39132-3LFN0	3231
LX2 3.8 GDI 8AT 21MY 39122-3LFN1	1223
LX2 3.8 GDI 8AT 21MY 39132-3LFN1	1323
LX2 3.8 GDI 8AT 22MY 39122-3LFN2	2232
LX2 3.8 GDI 8AT 22MY 39132-3LFN2	3232

ECM MENU (#866)	PASSWORD
TMa 2.0 T-GDI 8AT 2WD (19MY) 39160-2GTC0/D0	6601
TMa 2.0 T-GDI 8AT 2WD (19MY) 39162-2GTC0/D0	6602
TMa 2.4 GDI 8AT ULEV 2WD (19MY) 39170-2GTC0/D0	6603
TMa 2.4 GDI 8AT SULEV 2WD (19MY) 39170-2GTC5/D5	6604
TMa 2.4 GDI 8AT ULEV 2WD (19MY) 39172-2GTE0/F0	6605
TMa 2.4 GDI 8AT SULEV 2WD (19MY) 39172-2GTG0/H0	6606
TMa 2.0 T-GDI 8AT 2WD (20MY) 39160-2GTC1/D1	6607
TMa 2.0 T-GDI 8AT 2WD (20MY) 39162-2GTC1/D1	6608
TMa 2.4 GDI 8AT ULEV 2WD (20MY) 39170-2GTC1/D1	6609
TMa 2.4 GDI 8AT SULEV 2WD (20MY) 39170-2GTC6/D6	6610
TMa 2.4 GDI 8AT ULEV 2WD (20MY) 39172-2GTE1/F1	6611
TMa 2.4 GDI 8AT SULEV 2WD (20MY) 39172-2GTG1/H1	6612

**NOTE:** After the ECU update has been completed:

- Clear any ECM DTC(s) after the ECU update.

Start the engine to confirm proper operation of the vehicle.