

ECU Security Key Writing

Service Category Power Source/Network

Section Networking

Market USA

Toyota Supports
 ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2022	86, Corolla Cross, Tundra HV	
2021 - 2022	Mirai, RAV4 Prime, Sienna HV, Tundra, Venza HV	
2023	bZ4X	

REVISION NOTICE

July 08, 2022 Rev1:

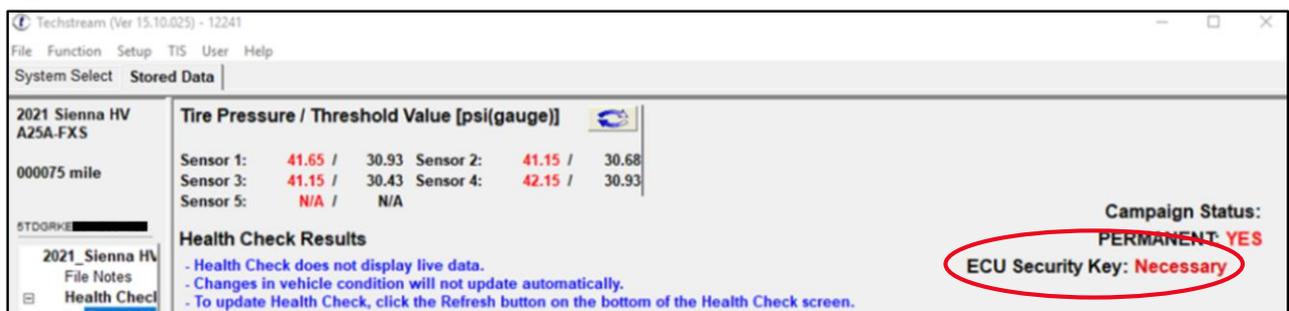
- **Applicability has been updated to include 2022 model year 86, Corolla Cross, Mirai, Tundra, and Tundra HV vehicles and 2023 model year bZ4X vehicles.**

Any previous printed versions of this bulletin should be discarded.

Introduction

When certain vehicle ECUs are replaced, the ECU security key must be written in order for that ECU to communicate on the vehicle network. The Techstream Software Health Check Results screen has been enhanced to help identify if a replacement ECU requires an ECU security key. Follow the procedures in this bulletin to write the ECU security key to the replacement ECU.

Figure 1.



ECU Security Key Writing

Warranty Information

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
N/A	Not Applicable to Warranty	-	-	-	-

Required Tools & Equipment

REQUIRED EQUIPMENT	SUPPLIER	PART NUMBER	QTY
Techstream ADVi*	ADE	TSADVUNIT	1
Techstream 2.0		TS2UNIT	
Techstream Lite		TSLITEPDLR01	
Techstream Lite (Green Cable)		TSLP2DLR01	

*Essential SST.

NOTE

- Only ONE of the Techstream units listed above is required.
- Software version 17.10.012 or later is required.
- Additional Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787.
- Use Techstream or an approved J2534 interface to perform flash reprogramming updates. Visit techinfo.toyota.com for more information regarding J2534 reprogramming.

SPECIAL SERVICE TOOLS (SST)	PART NUMBER	QTY
Battery Diagnostic Tool*	DCA-8000P T	1

*Essential SST.

NOTE

Additional SSTs may be ordered by calling 1-800-933-8335.

Procedures

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ECU Security Key Writing

Confirm ECU Security Key Writing Requirement

After ECU replacement, it is important to confirm if ECU security key writing is necessary. There are two methods available to confirm if the ECU security key writing function is required within the Techstream software: performing a Health Check and using the ECU Security Key button.

Health Check

Performing a Health Check will confirm if ECU security key writing is needed. The Techstream Health Check Results screen has been enhanced to include an ECU security key indicator. The ECU security key indicator will display "Necessary" when an ECU security key needs to be written and "-" when ECU security key writing is NOT required.

Figure 2.

The screenshot shows the Techstream interface for a 2021 Sienna HV. The 'Health Check Results' section is active, displaying the following information:

- Tire Pressure / Threshold Value [psi(gauge)]:**
 - Sensor 1: 41.65 / 30.93
 - Sensor 2: 41.15 / 30.68
 - Sensor 3: 41.15 / 30.43
 - Sensor 4: 42.15 / 30.93
 - Sensor 5: N/A / N/A
- Health Check Results:**
 - Health Check does not display live data.
 - Changes in vehicle condition will not update automatically.
 - To update Health Check, click the Refresh button on the bottom of the Health Check screen.
- Campaign Status:** PERMANENT: YES
- ECU Security Key:** Necessary (highlighted in red)

Below the health check results is a table of DTC Related Information:

System	Monitor Status	DTC	Curr Conf	Pend	Hist	Test Failed	SB	RoB	Calibration	Update
Engine	Inc								896630857001	No
Radar Cruise2	-							●	897BF0101000	No
Tire Pressure Monitor	-							●	8821F3301400	No
Front Radar Sensor	-							●	-	-
Pre-Collision System	-							●	-	-
Smart Key	-							●	-	-
Main Body	-							●	8922F0801000	No
Power Source Control	-							●	-	-
Blind Spot Monitor "B"	-							●	8816F0802101	No
Blind Spot Monitor "A"	-							●	8816F0802102	No
Headlight Control	-							●	8994F4503002	No
Power Distribution Box	-							●	8273F0801000	No
Motor Generator	-							●	89884450201A	No
Hybrid Control	-							●	89884450100A	No
Radar Cruise1	-							●	899830801000	No
Rear Camera	-							●	899850801000	No
								●	867B03C269	No
								●	867B13C007	No

ECU Security Key Writing

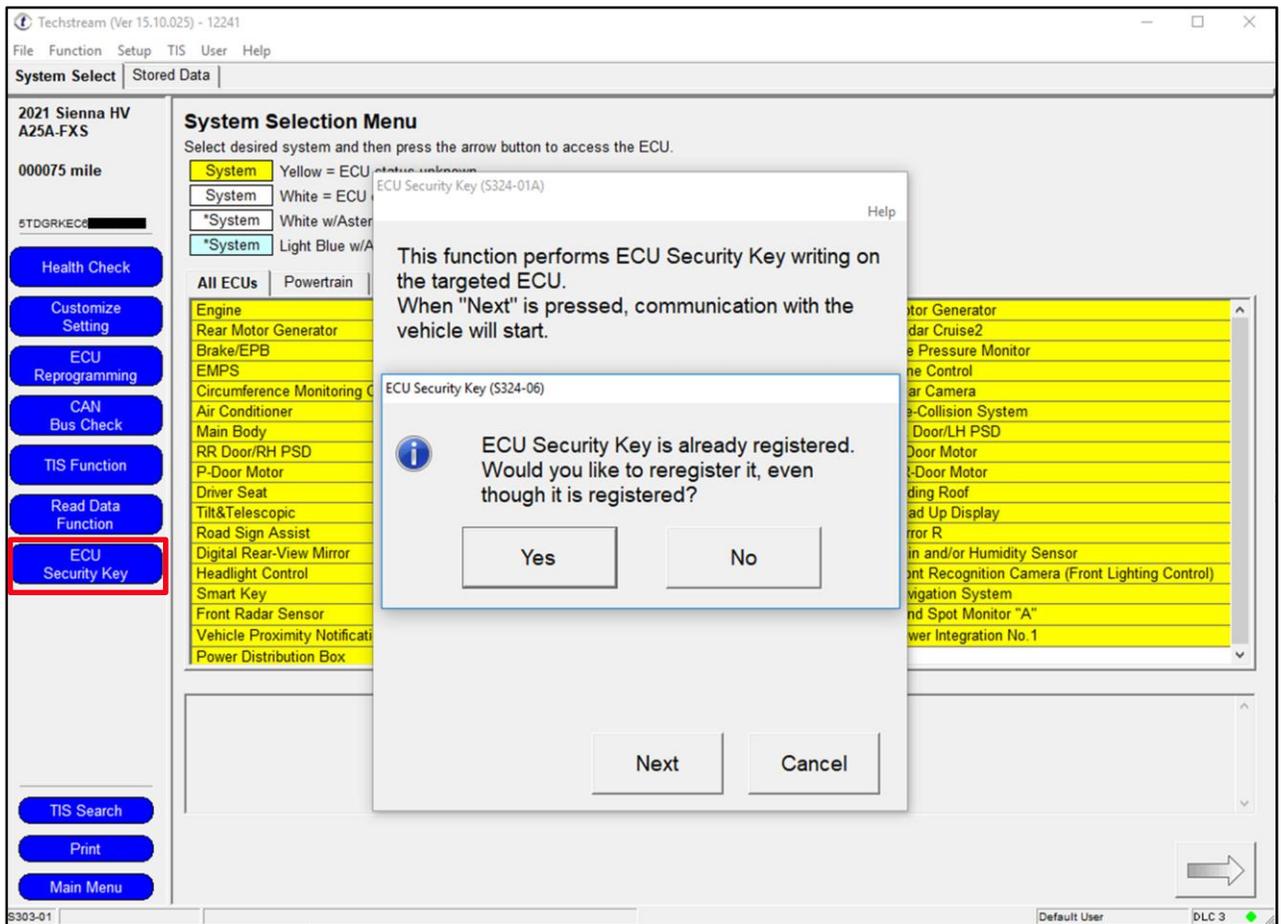
Confirm ECU Security Key Writing Requirement (continued)

ECU Security Key Button

Selecting the ECU Security Key Button is another method to confirm if ECU security key writing is required. From the System Select screen, the ECU Security Key button is located on the left-hand side of the function menu.

NOTE
Selecting this option can allow ECU security key writing even if it is not required. If the ECU security key does NOT need to be written, a message will appear stating "ECU Security Key is already registered."

Figure 3.



ECU Security Key Writing

ECU Security Key Writing Process

NOTE

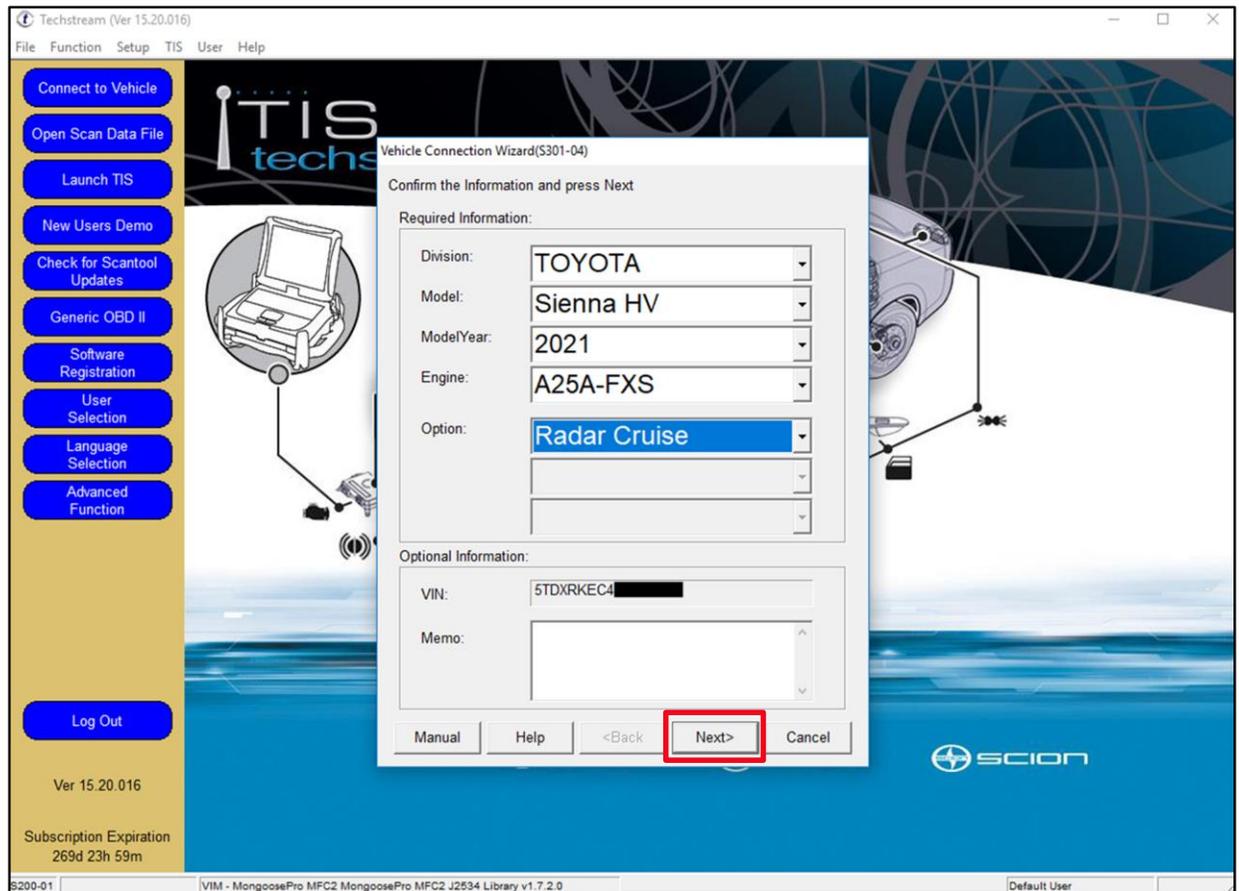
The process outlined in this section will use the Health Check Result screen to confirm if ECU security key writing is required.

1. Connect Techstream to the vehicle and press Next.

NOTE

In some instances, automatic vehicle detection may not be available due to specific ECU replacement. If the vehicle information does NOT automatically populate, manually select the appropriate vehicle information.

Figure 4.



ECU Security Key Writing

ECU Security Key Writing Process (continued)

2. Perform a Health Check.

If the ECU Security Key indicator in the upper right corner of the Health Check screen displays "Necessary," press the ECU key button located on the bottom of the screen.

Figure 5.

Techstream (Ver 15.10.025) - 12241

File Function Setup TIS User Help

System Select Stored Data

2021 Sienna HV
A25A-FXS

000075 mile

STDRKX

2021_Sienna HV
File Notes
Health Check
Data 1-4/4
Error Report

Sort
Expand>>
TIS Search
Print
Back

4/15/2020 12:31:53 PM

S309-06

Default User DLC 3

Tire Pressure / Threshold Value [psi(gauge)]

Sensor 1: 41.65 / 30.93 Sensor 2: 41.15 / 30.68
Sensor 3: 41.15 / 30.43 Sensor 4: 42.15 / 30.93
Sensor 5: N/A / N/A

Health Check Results

- Health Check does not display live data.
- Changes in vehicle condition will not update automatically.
- To update Health Check, click the Refresh button on the bottom of the Health Check screen.

Campaign Status:
PERMANENT: YES
ECU Security Key: Necessary

DTC Related Information

System	Monitor Status	DTC	Curr Conf	Pend	Hist	Test Failed	SB	RoB	Calibration	Update
Engine	Inc								896630857001	No
Radar Cruise2	-							●	-	-
Tire Pressure Monitor	-							●	897BF0101000	No
Front Radar Sensor	-							●	8821F3301400	No
Pre-Collision System	-							●	-	-
Smart Key	-							●	-	-
Main Body	-							●	8922F0801000	No
Power Source Control	-							●	-	-
Blind Spot Monitor "B"	-							●	8816F0802101	No
Blind Spot Monitor "A"	-							●	8816F0802102	No
Headlight Control	-							●	8994F4503002	No
Power Distribution Box	-							●	8273F0801000	No
Motor Generator	-							●	89884450201A	No
								●	89884450100A	No
Hybrid Control	-							●	899830801000	No
								●	899850801000	No
Radar Cruise1	-							●	-	-
Rear Camera	-							●	867B03C269	No
								●	867B13C007	No

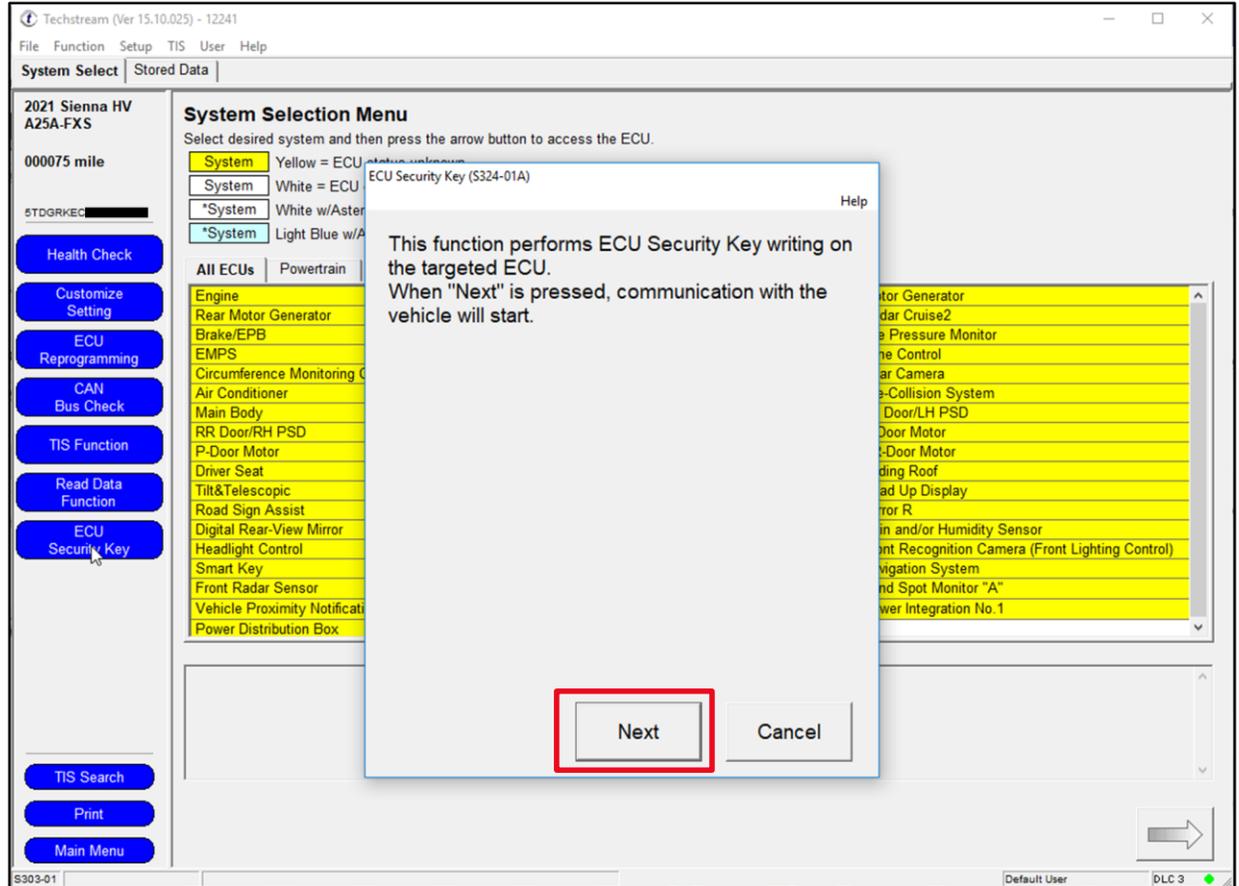
ECU DTC HMI

ECU Security Key Writing

ECU Security Key Writing Process (continued)

3. Select Next.

Figure 6.



4. Techstream will read the vehicle information and open TIS to download the ECU security key. Input your TIS login credentials and select Login.

Figure 7.

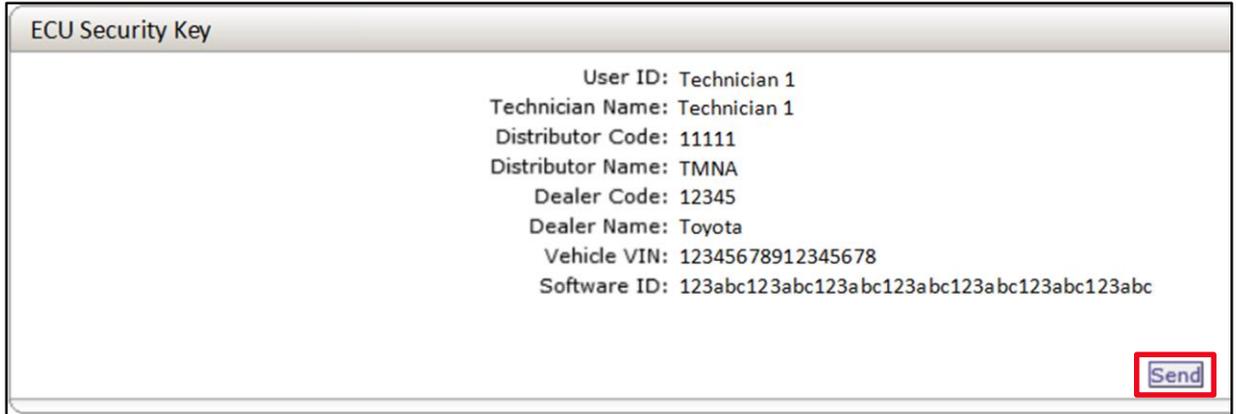


ECU Security Key Writing

ECU Security Key Writing Process (continued)

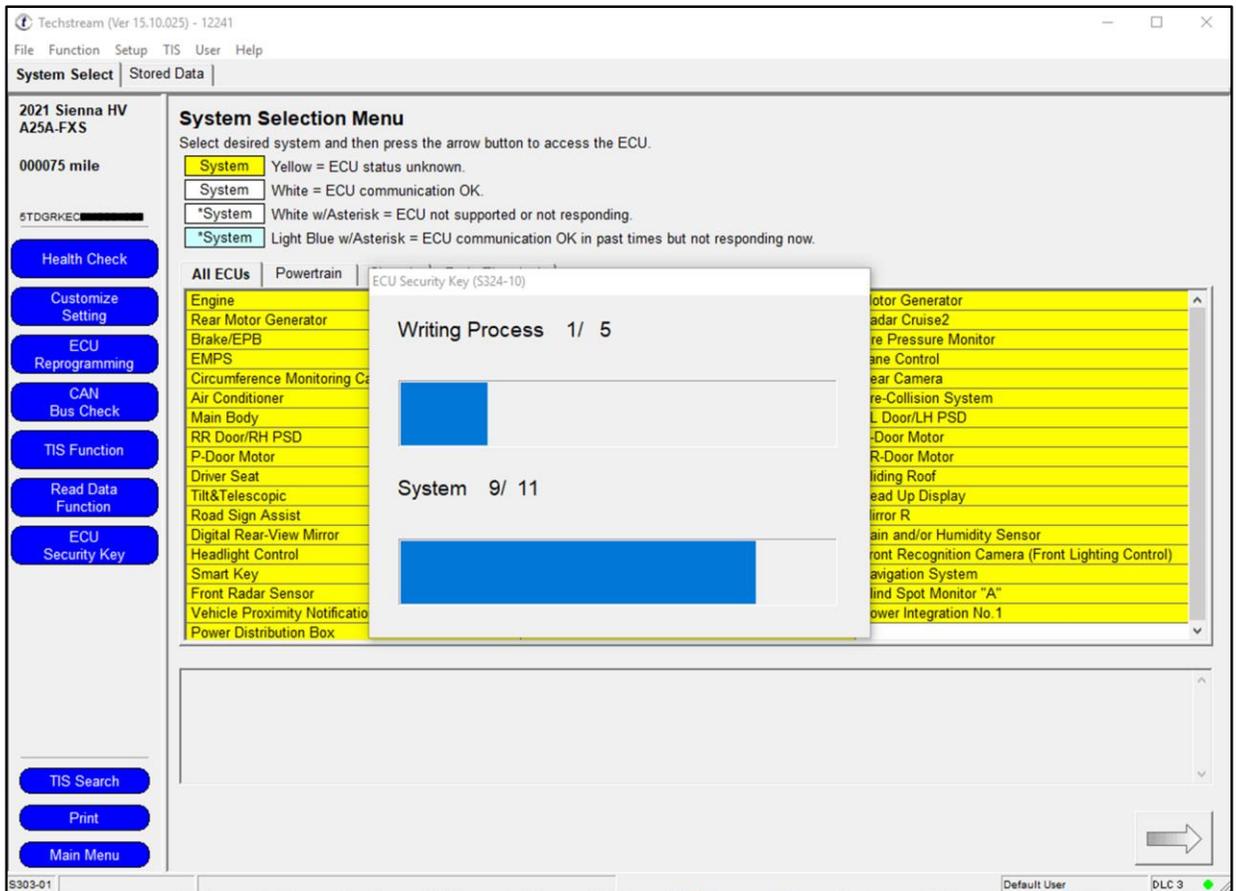
- 5. Select Send.

Figure 8.



- 6. After pressing Send, TIS will automatically send the ECU security key to Techstream. Return to Techstream and wait for the writing process to complete.

Figure 9.

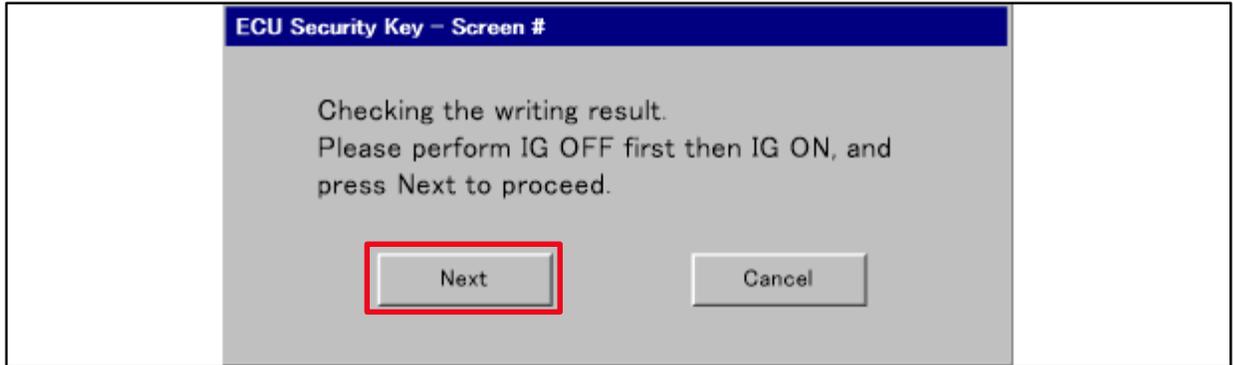


ECU Security Key Writing

ECU Security Key Writing Process (continued)

- Cycle the ignition to IG-OFF, and then IG-ON. Select Next.

Figure 10.



- Select OK.

Figure 11.



- Confirm the ECU security key has been properly written by performing a Health Check and confirming the ECU security key indicator shows "-", and then clear ALL DTCs.

Figure 12.



NOTE

The ECU security key indicator will show "Necessary" if the security key was NOT written properly. If NOT written properly, return to step 2.