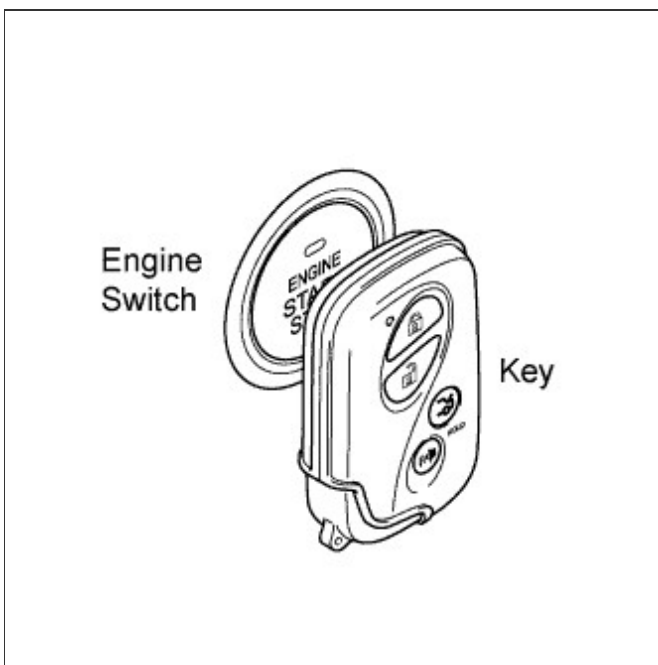


**ENGINE IMMOBILISER > ENGINE IMMOBILISER SYSTEM > REGISTRATION**

**1. DESCRIPTION OF CODE REGISTRATION**

**HINT:**

- The engine immobiliser function's ID code is the same as recognition codes for the smart access system with push-button start and the wireless transmitter. Registering an ID code enables the smart access with push-button start, the wireless door lock control function and the engine immobiliser function to be operated.
- Code registration is needed when the certification ECU, ID code box, steering lock ECU, ECM or key is replaced with a new one.
- This vehicle does not have a key slot. Therefore, touch the logo of the key to the engine switch to register the key, as shown in the illustration.



**2. KEY REGISTRATION PROCEDURES WHEN ADDING OR REPLACING KEY OR WHEN KEY IS LOST**

**HINT:**

- The following procedures require the use of the Techstream:
  - New key ID registration
  - Additional key ID registration
  - Key ID erasure
- A maximum of 7 keys can be registered.

Customer Request/Condition	Registration Procedure Condition	Procedure	Refer to
Registering an additional key	Customer must bring at least 1 key	1. Register additional keys as necessary (additional key ID registration)	PROCEDURE "C"
<ul style="list-style-type: none"> <li>• Replacing a key</li> <li>• Making a lost key unable</li> </ul>		1. Using remaining key, clear all registered keys except one (key ID	PROCEDURE "D"

**HINT:**

After key ID erasure, any remaining keys that are not registered at this time cannot be used. Therefore, after key ID erasure, register all remaining keys.	Customer must bring at least 1 key	erasure)	
		2. Register additional keys as necessary (additional key ID registration)	PROCEDURE "C"
All keys are lost	-	1. Reset all keys (all keys ID erasure (key code reset))	PROCEDURE "E"
		2. Register all keys (new key ID registration)	PROCEDURE "A"

**3. PART REPLACEMENT AND KEY REGISTRATION PROCEDURES**

a. If a malfunctioning ECU is discovered through troubleshooting of the smart key system, use the ECU replacement and key registration procedures in the table below.

**HINT:**

- The following procedures require the use of the Techstream:
  - New key ID registration
  - Additional key ID registration
  - Key ID erasure
  - ECU code registration
- A maximum of 7 keys can be registered.

Malfunctioning ECU	Condition		Procedure	Refer to
	Customer has brought all keys		1. Replace certification ECU	-
			2. Reregister all keys (new key ID registration)	PROCEDURE "B"
		Key ID codes can be registered and cleared	1. Clear key codes (key ID erasure)	PROCEDURE "D"
			2. Perform additional key registration procedure (additional key ID registration)  <b>HINT:</b> If some keys are not registered during above steps, they will be disabled because they	PROCEDURE "C"

Certification ECU	Some keys are lost	Key ID codes cannot be either registered or cleared	cannot be registered later.		
			3. Replace certification ECU	-	
			4. Reregister all keys (new key ID registration)	PROCEDURE "B"	
			1. Replace certification ECU	-	
	All keys are lost			2. Replace ID code box	-
				3. Reregister all keys (new key ID registration)	PROCEDURE "A"
				<b>HINT:</b> If key codes cannot be cleared or additional keys cannot be registered due to a malfunction in certification ECU, replace ID code box and certification ECU. If some keys are not registered during above steps, they will be disabled because they cannot be registered later.	
				4. ECU communication ID registration	
				1. Replace certification ECU	-
				2. Replace ID code box	-
3. Register all keys (new key ID registration)				PROCEDURE "A"	
4. ECU communication ID registration				PROCEDURE "G"	
			1. Replace ID code box	-	

ID code box	Customer has brought at least 1 key	2. Register recognition codes in ECUs (ECU code registration)	PROCEDURE "F"
		3. ECU communication ID registration	PROCEDURE "G"
	All keys are lost	1. Replace certification ECU)	-
		2. Replace ID code box	-
		3. Register all keys (new key ID registration)	PROCEDURE "A"
		4. ECU communication ID registration	PROCEDURE "G"
Steering lock ECU	Customer has brought at least 1 key	1. Replace steering lock ECU	-
		2. Register recognition codes in ECUs (ECU code registration)	PROCEDURE "F"
	All keys are lost	1. Replace certification ECU	-
		2. Replace ID code box	-
		3. Replace steering lock ECU	-
		4. Register all keys (new key ID registration)	PROCEDURE "A"
5. ECU communication ID registration	PROCEDURE "G"		
Main body ECU	No condition required	-	-
ECM	No condition required	1. Replace ECM	-
		2. ECU communication ID registration  <b>HINT:</b> Only perform procedure above when replacing with used ECM.	PROCEDURE "H"

**4. KEY REGISTRATION PROCEDURES**

**a. PROCEDURE "A"**

New key ID registration (when replacing certification ECU and ID code box, or certification ECU, ID code box and steering lock ECU), or when performing all keys ID erasure (key code reset)

Process	Procedure
1. Start of registration	1. Connect Techstream to DLC3 2. Turn engine switch on (IG) 3. Select "Smart Access/Utility/Key Code Registration" from Techstream menu  <b>HINT:</b> Engine switch cannot be turned on (IG) more than 10 times. After connecting Techstream, turn Techstream on while turning driver side door courtesy light switch on and off repeatedly at 1.5 second intervals or less to continue key registration procedure.
2. Confirmation of ECU code	Perform operation according to prompts on Techstream screen  <b>HINT:</b> Mode is automatically selected by Techstream (new registration mode or add mode)
3. Verification of unregistered key*	1. Touch logo of unregistered key to engine switch 2. Confirm that wireless door lock buzzer sounds once (short beep) 3. Place unregistered key on front passenger side seat 4. Confirm that wireless door lock buzzer sounds once (short beep)
4. Registration of ID code	Perform operation according to prompts on Techstream screen
5. End of registration	Finish new key ID code registration

**HINT:**

\*: Repeat this process for each key which is to be registered for the vehicle. Finish the procedure for each key within 30 seconds. If the procedure for any of the keys has not been finished within the specified time, perform registration procedures from process 1 again. Make sure that only 1 key is in the cabin during registration procedures. If 2 or more keys are in the cabin simultaneously, electric waves will interfere with each other, preventing normal registration.

**b. PROCEDURE "B"**

New key ID registration (when replacing certification ECU)

Process	Procedure
	1. Connect Techstream to DLC3 2. Turn engine switch on (IG) 3. Select "Smart Access/Utility/Key Code Registration" from Techstream menu

1. Start of registration	<p><b>HINT:</b> Engine switch cannot be turned on (IG) more than 10 times. After connecting Techstream, turn Techstream on while turning driver side door courtesy light switch on and off repeatedly at 1.5 second intervals or less to continue key registration procedure.</p>
2. Confirmation of ECU code	<p>Perform operation according to prompts on Techstream screen</p> <p><b>HINT:</b> Mode is automatically selected by Techstream (new registration mode or add mode)</p>
3. Confirmation of all registered keys*1	<ol style="list-style-type: none"> <li>1. Touch logo of registered key to engine switch</li> <li>2. Confirm that wireless door lock buzzer sounds once (short beep)</li> </ol>
4. Confirmation of ECU code	<p>Perform operation according to prompts on Techstream screen</p>
5. Verification of unregistered key*2	<ol style="list-style-type: none"> <li>1. Touch log of unregistered key to engine switch</li> <li>2. Confirm that wireless door lock buzzer sounds</li> <li>3. Place unregistered key on front passenger side seat</li> <li>4. Confirm that wireless door lock buzzer sounds once (short beep)</li> </ol>
6. Registration of ID code	<p>Perform operation according to prompts on Techstream screen</p>
7. End of registration	<p>Finish new key ID code registration</p>

**HINT:**

- \*1: Repeat this process for each key registered for the vehicle. Finish the procedure for each key within 30 seconds. If the procedure for any of the keys has not been finished within the specified time, perform registration procedures from process 1 again. If performing the key confirmation procedure for a key, the security indicator comes on and remains on until all the keys are confirmed.
- \*2: Repeat this process for each key which is to be registered for the vehicle. Finish the procedure for each key within 30 seconds. If the procedure for any of the keys has not been finished within the specified time, perform registration procedures from 1 again. Make sure that only 1 key is in the cabin during registration procedures. If 2 or more keys are in the cabin simultaneously, electric waves will interfere with each other, preventing normal registration.

**C. PROCEDURE "C"**

Additional key ID registration

Process	Procedure
1. Start of registration	<ol style="list-style-type: none"> <li>1. Connect Techstream to DLC3</li> <li>2. Turn engine switch on (IG)</li> <li>3. Select "Smart Access/Utility/Key Code Registration" from Techstream menu</li> </ol>
	<ol style="list-style-type: none"> <li>1. Perform operation according to</li> </ol>

2. Confirmation of registered key*1	<p>prompts on Techstream screen</p> <ol style="list-style-type: none"> <li>2. Touch logo of registered key to engine switch</li> <li>3. Confirm that wireless door lock buzzer sounds once (short beep)</li> </ol>
3. Confirmation of ECU code	Perform operation according to prompts on Techstream screen
4. Verification of unregistered key*2	<ol style="list-style-type: none"> <li>1. Touch logo of unregistered key to engine switch</li> <li>2. Confirm that wireless door lock buzzer sounds</li> <li>3. Place unregistered key on front passenger side seat</li> <li>4. Confirm that wireless door lock buzzer sounds (short beep)</li> </ol>
5. Registration of ID code	Perform operation according to prompts on Techstream screen
6. End of registration	Finish key ID code registration

**HINT:**

- \*1: Perform this process for one of the keys registered for the vehicle. Finish the procedure within 30 seconds. If the procedure has not been finished within the specified time, perform registration procedures from process 1 again.
- \*2: Repeat this process for each key which is to be registered for the vehicle. Finish the procedure for each key within 30 seconds. If the procedure for any of the keys has not been finished within the specified time, perform registration procedures from 1 again. Make sure that only 1 key is in the cabin during registration procedures. If 2 or more keys are in the cabin simultaneously, electric waves will interfere with each other, preventing normal registration.

**d. PROCEDURE "D"**

Key ID erasure (Erase all registered key codes except one)

Process	Procedure
1. Start of erasure	<ol style="list-style-type: none"> <li>1. Connect Techstream to DLC3</li> <li>2. Turn engine switch on (IG)</li> <li>3. Select "Smart Access/Utility/Key Code Erasure" from Techstream menu</li> </ol>
2. Confirmation of registered key*	<ol style="list-style-type: none"> <li>1. Perform operation according to prompts on Techstream screen</li> <li>2. Touch logo of registered key to engine switch</li> <li>3. Confirm that wireless door lock buzzer sounds once (short beep)</li> </ol>
3. Erasure of ID code	Perform operation according to prompts on Techstream screen
4. End of erasure	Finish key ID code erasure

**HINT:**

\*: Perform this process for one of the keys registered for the vehicle. Finish the procedure within 30 seconds. If the procedure has not been finished within the specified time, perform erasure procedures from process 1 again.

**e. PROCEDURE "E"**

All keys ID erasure

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Process	Procedure
1. Start of erasure	<ol style="list-style-type: none"> <li>1. Connect Techstream to DLC3</li> <li>2. Turn engine switch on (IG)</li> <li>3. Turn Techstream on while turning driver side door courtesy light switch on and off repeatedly at 1.5 second intervals or less</li> <li>4. Select "Smart Access/Utility/Key Code Reset" from Techstream menu</li> <li>5. Read "Seed Number" sent from TIS according to Techstream screen</li> </ol>
2. Erasure of ID code	Perform operation according to prompts on Techstream screen
3. End of erasure	Finish key ID code erasure

**f. PROCEDURE "F"**  
ECU code registration

Process	Procedure
1. Start of registration	<ol style="list-style-type: none"> <li>1. Connect Techstream to DLC3</li> <li>2. Turn engine switch on (IG)</li> <li>3. Select "Smart Access/Utility/ECU Communication ID Registration/ID code box and Steering Lock" from Techstream menu</li> <li>4. Read "Seed Number" sent from TIS according to Techstream screen</li> </ol>
2. Confirmation of registered key*	<ol style="list-style-type: none"> <li>1. Touch logo of registered key close to engine switch</li> <li>2. Confirm that wireless door lock buzzer sounds once (short beep)</li> </ol>
3. Erasure of ECU code	Perform operation according to prompts on Techstream screen
4. End of registration	Finish ECU code registration

**HINT:**

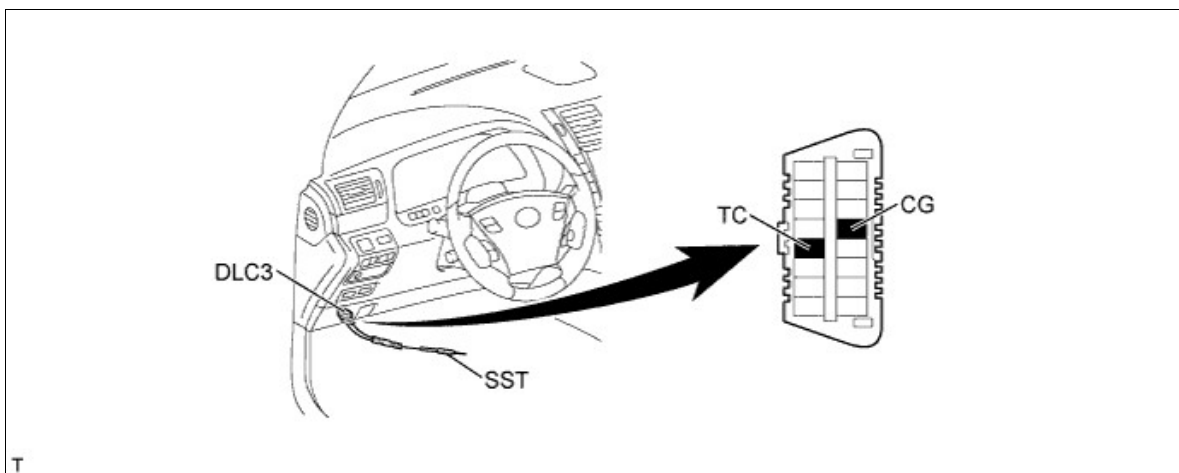
\*: Perform this process for one of the keys registered to the vehicle. Finish the procedure within 30 seconds. If the procedure has not been finished within the specified time, perform registration procedures from process 1 again.

**g. PROCEDURE "G"**  
ECU communication ID registration

**NOTICE:**

- The ECU communication ID should be registered when the ID code box is replaced in order to match the ECU communication ID.
- The engine cannot be started unless ECU communication ID is registered.
- After the registration, pressing the engine switch may not start the engine on the first try. If so, press the engine switch again.
- After the engine is started, erase DTC B2799 (code for ECM's immobiliser communication error) using either of the following methods:
  - Use the Techstream.
  - Disconnect the battery for 30 seconds.





- i. Using SST, connect terminal 13 (TC) and 4 (CG) of the DLC3.

**SST**  
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- ii. Turn the engine switch on (IG) (do not start the engine) and leave it as is for 30 minutes.
- iii. Turn the engine switch off and disconnect terminals 13 (TC) and 4 (CG).
- iv. Check that the engine starts for more than 3 seconds.

**h. PROCEDURE "H"**  
ECU communication ID reregistration

**NOTICE:**

The ECU communication ID should be registered when the ECM is replaced in order to match the ECU communication ID.

Procedure	Time	Security Indicator Light Condition
1. Start	-	OFF
2. While holding already registered key, turn the engine switch on (IG) with brake pedal depressed		
3. Check that engine starts and stays on for more than 3 seconds		
4. Next		
5. End		