

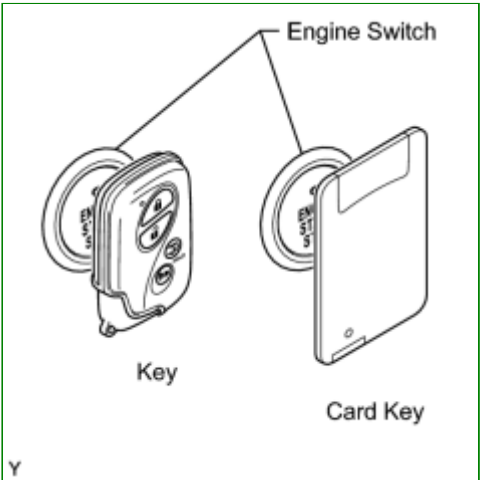
Last Modified: 11-27-2007		1.6 M
Service Category: Vehicle Interior	Section: Theft Deterrent/Keyless Entry	
Model Year: 2008	Model: LX570	Doc ID: RM000000QYF00YX
Title: THEFT DETERRENT / KEYLESS ENTRY: ENGINE IMMOBILISER SYSTEM: REGISTRATION (2008 LX570)		

REGISTRATION

1. DESCRIPTION OF CODE REGISTRATION

HINT:

- The engine immobiliser function ID code is the same as the recognition code for the smart access system with push-button start and wireless transmitter. Registering an ID code enables the smart access system with push-button start, wireless door lock control function and engine immobiliser function to be operated.
- Code registration is needed when the certification ECU (smart key ECU assembly), ID code box (immobiliser code ECU), 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. PART REPLACEMENT AND KEY REGISTRATION PROCEDURES

- (a) If a malfunctioning ECU is discovered through troubleshooting of the smart access system with push-button start, 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
- When simply adding a new key (without losing or replacing any existing keys), refer to "Additional key ID registration" under Key Registration Procedures.
- If all of the registered keys are not available, replacement of the ID code box (immobiliser code ECU), certification ECU (smart key ECU assembly) and steering lock ECU is also required.
- A maximum of 7 keys can be registered.

PART TO BE REPLACED	CONDITION	PROCEDURE
Certification ECU (smart key ECU assembly)	Customer has brought all keys	1. Replace certification ECU (smart key ECU assembly) 2. Reregister all keys (new key ID registration)

PART TO BE REPLACED	CONDITION		PROCEDURE
	Some keys are lost	Key ID codes can be registered and cleared	1. Clear key codes (key ID erasure) 2. Perform additional key registration procedure (additional key ID registration) 3. Replace certification ECU (smart key ECU assembly) 4. Reregister all keys (new key ID registration) HINT: If some keys are not registered during above steps, they will be disabled because they cannot be registered later.
		Key ID codes cannot be either registered or cleared	1. Replace certification ECU (smart key ECU assembly) 2. Replace ID code box (immobiliser code ECU) 3. Reregister all keys (new key ID registration) HINT: If key codes cannot be cleared or additional keys cannot be registered due to malfunction in certification ECU (smart key ECU assembly), replace ID code box (immobiliser code ECU) and certification ECU (smart key ECU assembly). If some keys are not registered during above steps, they will be disabled because they cannot be registered later.
	All keys are lost		1. Replace certification ECU (smart key ECU assembly) 2. Replace ID code box (immobiliser code ECU) 3. Replace steering lock ECU 4. Register all keys (new key ID registration) 5. ECU communication ID registration
ID code box (immobiliser code ECU)	At least 1 key is available		1. Replace ID code box (immobiliser code ECU) 2. ECU communication ID registration
	All keys are lost		1. Replace ID code box (immobiliser code ECU) 2. Replace certification ECU (smart key ECU assembly) 3. Replace steering lock ECU 4. Register all keys (new key ID registration) 5. ECU communication ID registration
Steering lock ECU	Customer has brought at least 1 key		1. Replace steering lock ECU 2. Register recognition codes in ECUs (ECU code registration)
	All keys are lost		1. Replace certification ECU (smart key ECU assembly) 2. Replace ID code box (immobiliser code ECU) 3. Replace steering lock ECU 4. Register all keys (new key ID registration) 5. ECU communication ID registration
Main body ECU	No condition required		Replace main body ECU

PART TO BE REPLACED	CONDITION	PROCEDURE
ECM	No condition required	1. Replace ECM 2. ECU communication ID registration HINT: Only perform procedure above when replacing with used ECM.
Key	Customer has brought at least 1 key 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.	1. Using remaining key, clear lost key (key ID erasure) 2. Register additional keys as necessary (additional key ID registration)
	All keys are lost	1. Replace certification ECU (smart key ECU assembly) 2. Replace ID code box (immobiliser code ECU) 3. Replace steering lock ECU 4. Register all keys (new key ID registration) 5. ECU communication ID registration

3. KEY REGISTRATION PROCEDURES

- (a) New key ID registration (when replacing certification ECU (smart key ECU assembly) and ID code box (immobiliser code ECU), or certification ECU (smart key ECU assembly), ID code box (immobiliser code ECU) and steering lock ECU):

PROCESS	PROCEDURE
1. Start of registration	1. Connect the Techstream to DLC3 2. Turn the engine switch on (IG) HINT: The engine switch cannot be turned on (IG) more than 10 times. To continue the key registration procedure with the engine switch off, after connecting the Techstream, turn the Techstream on while turning the driver side door courtesy light switch on and off repeatedly at intervals of 1.5 seconds. 3. Turn the Techstream on 4. Enter the following menus: Smart Access / Utility / Key Code Registration
2. Confirmation of ECU code	Perform operation according to prompts on the Techstream screen HINT: Mode is automatically selected by the 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

PROCESS	PROCEDURE
	4. Confirm that wireless door lock buzzer sounds once (short beep)
4. Registration of ID code	Perform operation according to prompts on the Techstream screen
5. End of registration	Finish new key ID code registration

HINT:

***: Repeat this process for each key which is to be registered to 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 the registration from process 1 again. Make sure that only 1 key is in the cabin during registration. If 2 or more keys are in the cabin simultaneously, the electric waves will interfere with each other, preventing normal registration.**

(b) New key ID registration (when replacing certification ECU (smart key ECU assembly)):

PROCESS	PROCEDURE
1. Start of registration	1. Connect the Techstream to DLC3 2. Turn the engine switch on (IG) <u>HINT:</u> The engine switch cannot be turned on (IG) more than 10 times. To continue the key registration procedure with the engine switch off, after connecting the Techstream, turn the Techstream on while turning the driver side door courtesy light switch on and off repeatedly at intervals of 1.5 seconds. 3. Turn the Techstream on 4. Enter the following menus: Smart Access / Utility / Key Code Registration
2. Confirmation of ECU code	Perform operation according to prompts on the Techstream screen <u>HINT:</u> Mode is automatically selected by the Techstream (new registration mode or add mode).
3. Confirmation of all registered keys*1	1. Touch logo of registered key to engine switch 2. Confirm that wireless door lock buzzer sounds once (short beep)
4. Confirmation of ECU code	Perform operation according to prompts on the Techstream screen
5. Verification of unregistered key*2	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)
6. Registration of ID code	Perform operation according to prompts on the Techstream screen
7. End of registration	Finish new key ID code registration

HINT:

- *1: Repeat this process for each key registered to 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 the registration from process 1 again. When performing the key confirmation procedure for a key, the security indicator light comes on and remains on until all the keys are confirmed.
- *2: Repeat this process for each key which is to be registered to 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 the registration from process 1 again. Make sure that only 1 key is in the cabin during registration. If 2 or more keys are in the cabin simultaneously, the electric waves will interfere with each other, preventing normal registration.

(c) Additional key ID registration:

PROCESS	PROCEDURE
1. Start of registration	1. Connect the Techstream to DLC3 2. Turn the engine switch on (IG) HINT: The engine switch cannot be turned on (IG) more than 10 times. To continue the key registration procedure with the engine switch off, after connecting the Techstream, turn the Techstream on while turning the driver side door courtesy light switch on and off repeatedly at intervals of 1.5 seconds. 3. Turn the Techstream on 4. Enter the following menus: Smart Access / Utility / Key Code Registration
2. Confirmation of registered key*1	1. Perform operation according to prompts on the Techstream screen 2. Touch logo of registered key to engine switch 3. Confirm that wireless door lock buzzer sounds once (short beep)
3. Confirmation of ECU code	Perform operation according to prompts on the Techstream screen
4. Verification of unregistered key*2	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)
5. Registration of ID code	Perform operation according to prompts on the Techstream screen
6. End of registration	Finish key ID code registration

HINT:

- *1: 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 the registration from process 1 again.
- *2: Repeat this process for each key which is to be registered to 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 the registration from process 1 again. Make sure that only 1 key is in the cabin during registration. If 2 or more keys are in the cabin simultaneously, the electric waves will interfere with each other, preventing normal registration.

(d) Key ID erasure (clear all registered key codes except one):

PROCESS	PROCEDURE
1. Start of erasure	1. Connect the Techstream to DLC3 2. Turn the engine switch on (IG) HINT: The engine switch cannot be turned on (IG) more than 10 times. To continue the key ID erasure procedure with the engine switch off, after connecting the Techstream, turn the Techstream on while turning the driver side door courtesy light switch on and off repeatedly at intervals of 1.5 seconds. 3. Turn the Techstream on 4. Enter the following menus: Smart Access / Utility / Key Code Erasure
2. Confirmation of registered key*	1. Perform operation according to prompts on the Techstream screen 2. Touch logo of registered key to engine switch 3. Confirm that wireless door lock buzzer sounds once (short beep)
3. Erasure of ID code	Perform operation according to prompts on the Techstream screen
4. End of erasure	Finish key ID code erasure

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 the erasure from process 1 again.**

(e) All keys ID erasure:

PROCESS	PROCEDURE
1. Start of erasure	1. Connect the Techstream to DLC3 2. Turn the engine switch on (IG) HINT: The engine switch cannot be turned on (IG) more than 10 times. To continue all keys ID erasure procedure with the engine switch off, after connecting the Techstream, turn the Techstream on while turning the driver side door courtesy light switch on and off repeatedly at intervals of 1.5 seconds. 3. Turn the Techstream on 4. Enter the following menus: Smart Access / Utility / Key Code Reset 5. Read "Seed Number" sent from TIS according to the Techstream screen
2. Confirmation of registered key*	Touch logo of registered key to engine switch
3. Erasure of ID code	Perform operation according to prompts on the Techstream screen
4. End of erasure	Finish key ID code erasure

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 the erasure from process 1 again.**

(f) ECU code registration:

PROCESS	PROCEDURE
1. Start of registration	1. Connect the Techstream to DLC3 2. Turn the engine switch on (IG) HINT: The engine switch cannot be turned on (IG) more than 10 times. To continue the ECU code registration procedure with the engine switch off, after connecting the Techstream, turn the Techstream on while turning the driver side door courtesy light switch on and off repeatedly at intervals of 1.5 seconds. 3. Turn the Techstream on 4. Enter the following menus: Smart Access / Utility / ECU Communication ID Registration / ID code box (immobiliser code ECU) and Steering Lock 5. Read "Seed Number" sent from TIS according to the Techstream screen
2. Confirmation of registered key*	1. Touch logo of registered key to engine switch 2. Confirm that wireless door lock buzzer sounds once (short beep)
3. Erasure of ECU code	Perform operation according to prompts on the Techstream screen
4. End of registration	Finish ECU code registration

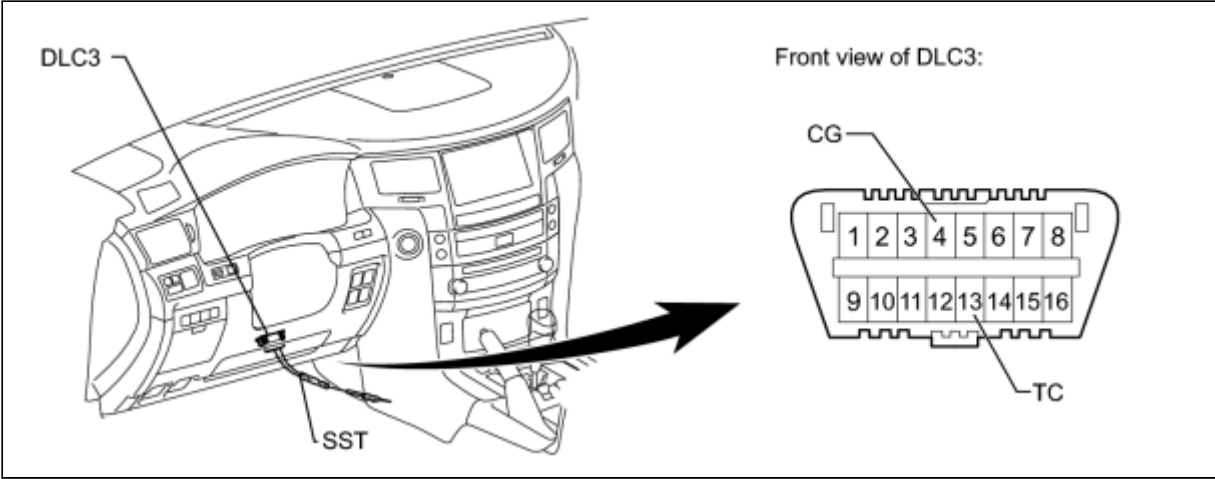
HINT:

***: 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 the registration from process 1 again.**

(g) ECU communication ID registration:

NOTICE:

- The ECU communication ID should be registered when the ID code box (immobiliser code ECU), steering lock ECU or ECM 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, clear DTC B2799 (code for ECM immobiliser communication error) using either of the following methods:
 - Use the Techstream.
 - Disconnect the cable from the negative (-) battery terminal for 30 seconds.



- (1) Using SST, connect terminals 13 (TC) and 4 (CG) of the DLC3.
- SST: 09843-18040**
- (2) Turn the engine switch on (IG) (do not start the engine) and leave it as is for 30 minutes.
- (3) Turn the engine switch off and disconnect terminals 13 (TC) and 4 (CG).
- (4) Check that the engine starts and stays on for more than 3 seconds.

(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 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. End		

