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Model Year Start: 2017	**Model:** 86	**Prod Date Range:** [06/2016 -]
Title: THEFT DETERRENT / KEYLESS ENTRY: ENGINE IMMOBILISER SYSTEM(w/o Smart Key System): REGISTRATION; 2017 - 2019 MY 86 [06/2016 -]		

REGISTRATION

PROCEDURE

1. DESCRIPTION OF CODE REGISTRATION

(a) The key has 2 codes: the key code (immobiliser code) and the wireless code. Both of these codes need to be registered. For the wireless code registration procedures, refer to Wireless Door Lock Control System (See page INFO).

Key code registration is necessary when the main body ECU (network gateway ECU), combination meter assembly*1 or transponder key ECU assembly*2 or key is replaced with a new one.

*1: w/o Transponder Key ECU Assembly
*2: w/ Transponder Key ECU Assembly

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 code registration
  - Key code re-registration
  - Additional key code registration
  - Key code erasure
- A maximum of 6 key codes can be registered.

CUSTOMER REQUEST/CONDITION	REGISTRATION PROCEDURE CONDITION	PROCEDURE	REFER TO
Registering additional key	Customer must bring at least 1 registered key.	1. Register additional keys as necessary (additional key code registration).	PROCEDURE "C"
• Replacing a key • Making a lost key unusable	Customer must bring at least 1 registered key.	1. Using the remaining key, clear the key codes of all registered keys except for the one remaining (key code erasure).	PROCEDURE "D"
		2. Register additional keys as necessary (additional key code registration).	PROCEDURE "C"
All keys are lost	-	1. Reset all keys (all keys code erasure (key code reset)).	PROCEDURE "E"
		2. Register all keys new key code registration.	PROCEDURE "A"

3. PART REPLACEMENT AND KEY REGISTRATION PROCEDURES

(a) The following table shows ECU replacement and key registration procedures for cases in which an ECU has been determined to be malfunctioning during troubleshooting of the engine immobiliser system.

HINT:

- The following procedures require the use of the Techstream:
    - New key code registration
    - Key code re-registration
    - Additional key code registration
    - Key code erasure
- A maximum of 6 key codes can be registered.

MALFUNCTIONING ECU	REGISTRATION PROCEDURE CONDITION	PROCEDURE	REFER TO
Main body ECU (network gateway ECU)	Customer must bring all registered keys.*3	1. Replace main body ECU (network gateway ECU).	*4
		2. Reregister all keys.	PROCEDURE "B"
		3. Register ECU communication ID.	PROCEDURE "G"
Combination meter assembly*1	Customer must bring at least 1 registered key.	1. Replace combination meter assembly.	*5
		2. Register recognition codes (ECU code registration).	PROCEDURE "F"
Transponder key ECU assembly*2	Customer must bring at least 1 registered key.	1. Replace transponder key ECU assembly.	*6
		2. Register recognition codes (ECU code registration).	PROCEDURE "F"
ECM	Customer must bring at least 1 registered key.	1. Replace ECM.	*7
		2. Register ECU communication ID.	PROCEDURE "G"
Main body ECU (network gateway ECU) and combination meter assembly*1	Customer must bring all registered keys.*3	1. Replace main body ECU (network gateway ECU).	*4
		2. Replace combination meter assembly.	*5
		3. Reregister all keys.	PROCEDURE "A"
		4. Register ECU communication ID.	PROCEDURE "G"
Main body ECU (network gateway ECU) and transponder key ECU assembly*2	Customer must bring all registered keys.*3	1. Replace main body ECU (network gateway ECU).	*4
		2. Replace transponder key ECU assembly.	*6
		3. Reregister all keys.	PROCEDURE "A"
		4. Register ECU communication ID.	PROCEDURE "G"

MALFUNCTIONING ECU	REGISTRATION PROCEDURE CONDITION	PROCEDURE	REFER TO
Main body ECU (network gateway ECU) and ECM	Customer must bring all registered keys.*3	1. Replace main body ECU (network gateway ECU).	*4
		2. Replace ECM.	*7
		3. Reregister all keys.	PROCEDURE "B"
		4. Register ECU communication ID.	PROCEDURE "G"
Combination meter assembly and ECM*1	Customer must bring at least 1 registered key.	1. Replace combination meter assembly.	*5
		2. Replace ECM.	*7
		3. Register recognition codes (ECU code registration).	PROCEDURE "F"
		4. Register ECU communication ID.	PROCEDURE "G"
Transponder key ECU assembly and ECM*2	Customer must bring at least 1 registered key.	1. Replace transponder key ECU assembly.	*6
		2. Replace ECM.	*7
		3. Register recognition codes (ECU code registration).	PROCEDURE "F"
		4. Register ECU communication ID.	PROCEDURE "G"
Main body ECU (network gateway ECU), combination meter assembly and ECM*1	Customer must bring all registered keys.*3	1. Replace main body ECU (network gateway ECU).	*4
		2. Replace combination meter assembly.	*5
		3. Replace ECM.	*7
		4. Reregister all keys.	PROCEDURE "A"
		5. Register ECU communication ID.	PROCEDURE "G"
Main body ECU (network gateway ECU), transponder key ECU assembly and ECM*2	Customer must bring all registered keys.*3	1. Replace main body ECU (network gateway ECU).	*4
		2. Replace transponder key ECU assembly.	*6
		3. Replace ECM.	*7
		4. Reregister all keys.	PROCEDURE "A"
		5. Register ECU communication ID.	PROCEDURE "G"

*1: w/o Transponder Key ECU Assembly

*2: w/ Transponder Key ECU Assembly

*3: If none of the registered keys are available, the main body ECU (network gateway ECU) cannot authenticate users, and it will be necessary to replace the combination meter assembly*1 or transponder key ECU assembly*2 with new ones. However, if there is at least one registered key available, erasing the key code before replacing the main body ECU (network gateway ECU) will make it unnecessary to replace the combination meter assembly*1 or transponder key ECU assembly*2. After replacing with a new combination meter assembly*1 or transponder key ECU assembly*2, register all keys as new key codes, and carry out ECU communication ID registration.

*4: (See page INFO)

*5: (See page INFO INFO)

*6: (See page INFO)

*7: (See page INFO)

4. KEY REGISTRATION (PROCEDURE "A")

(a) New key code registration:

NOTICE:

Make sure that no key codes are registered in the main body ECU (network gateway ECU), and combination meter assembly*1 or transponder key ECU assembly*2.

*1: w/o Transponder Key ECU Assembly

*2: w/ Transponder Key ECU Assembly

HINT:

- In this mode, a maximum of 6 key codes can be registered.
- New key codes must be registered with the battery connected. Register with the ignition switch ON.
- When the main body ECU (network gateway ECU), and combination meter assembly*1 or transponder key ECU assembly*2 are replaced with new ones, key codes must be registered in the main body ECU (network gateway ECU) and combination meter assembly*1 or transponder key ECU assembly*2.
- In the chart below, the numbers in the "Procedure" column (1, 2, 3, etc.) indicate the step numbers. Perform the steps in numerical order.

*1: w/o Transponder Key ECU Assembly

*2: w/ Transponder Key ECU Assembly

Automatic Key Code Registration (New Registration)

PROCESS	PROCEDURE
1. Start of registration	1. Turn the ignition switch off. 2. Connect Techstream to DLC3. 3. Turn the ignition switch to ON. 4. Turn Techstream on. 5. Enter the following menus: Body Electrical / Main Body / Utility / Key Registration **HINT:** After completing the above operation, proceed to the next step in accordance with the prompts on the Techstream screen.
2. Verification of unregistered key	1. Following the instructions on the Techstream, insert the key to be registered into the ignition key cylinder. 2. Perform operation according to prompts on Techstream screen.
3. End of registration	Finish new key code registration.

HINT:

- A brief outline of a new key code registration procedure is shown above. For detailed information, refer to the Techstream screen.
- Follow the instruction on the Techstream screen to end new key code registration mode.

5. KEY REGISTRATION (PROCEDURE "B")

(a) Key code re-registration:

NOTICE:

If none of the registered keys are available, the main body ECU (network gateway ECU) cannot authenticate users, and it will be necessary to replace the combination meter assembly*1 or transponder key ECU assembly*2 with new ones. However, if there is at least one registered key available, erasing the key code before replacing the main body ECU (network gateway ECU) will make it unnecessary to replace the combination meter assembly*1 or transponder key ECU assembly*2. After replacing with a new combination meter assembly*1 or transponder key ECU assembly*2, register all keys as new key codes, and carry out ECU communication ID registration.

*1: w/o Transponder Key ECU Assembly
*2: w/ Transponder Key ECU Assembly

HINT:

- Carry out this work when replacing only the main body ECU (network gateway ECU) with a new one.
- Registration mode will end if any step is not completed within the specified time.
- In the chart below, the numbers in the "Procedure" column (1, 2, 3, etc.) indicate the step numbers. Perform the steps in numerical order.

Key Code Re-registration

PROCESS	PROCEDURE
1. Start of registration	1. Prepare all keys registered to the vehicle. 2. Turn the ignition switch off. 3. Connect Techstream to DLC3. 4. Turn the ignition switch to ON. 5. Turn Techstream on. 6. Enter the following menus: Body Electrical / Main Body / Utility / Key Registration **HINT:** After completing the above operation, proceed to the next step in accordance with the prompts on the Techstream screen.
2. Confirmation of registered key*1	Follow the instructions on the Techstream screen, insert in order each key registered to the vehicle into the ignition cylinder and then remove it.
3. Verification of unregistered key*2	Follow the instructions on the Techstream screen, insert in order each key to be registered into the ignition cylinder and then remove it.
4. End of registration	Finish key code re-registration.

*1: If none of the registered keys are available, the main body ECU (network gateway ECU) cannot authenticate users, and it will be necessary to replace the combination meter assembly*3 or transponder key ECU assembly*4 with new ones. However, if there is at least one registered key available, erasing the key code before replacing the main body ECU (network gateway ECU) will make it unnecessary to replace the combination meter assembly*3 or transponder key ECU assembly*4. After replacing with a new combination meter assembly*3 or transponder key ECU assembly*4, register all keys as new key codes, and carry out ECU communication ID registration.
*2: Insert and remove all keys including the keys used in "Confirmation of registered key" into and from the ignition key cylinder.
*3: w/o Transponder Key ECU Assembly

*4: w/ Transponder Key ECU Assembly

HINT:

A brief outline of key code re-registration procedure is shown above. For detailed information, refer to the Techstream screen.

6. KEY REGISTRATION (PROCEDURE "C")

(a) Additional registration:

HINT:

- In this mode, a maximum of 6 key codes can be registered.
- Registration mode will end if any step is not completed within the specified time.
- When the ignition cylinder or the key cylinder set is replaced, remove the transmitter module from the original key. Then install this transmitter module to a new key and use the new key. If necessary, use this key to register other keys.
- In the chart below, the numbers in the "Procedure" column (1, 2, 3, etc.) indicate the step numbers. Perform the steps in numerical order.

Additional Registration

PROCESS	PROCEDURE
1. Start of registration	1. Turn the ignition switch off. 2. Connect Techstream to DLC3. 3. Turn the ignition switch to ON. 4. Turn Techstream on. 5. Enter the following menus: Body Electrical / Main Body / Utility / Key Registration **HINT:** After completing the above operation, proceed to the next step in accordance with the prompts on the Techstream screen.
2. Confirmation of registered key	1. Following the instructions on the Techstream, insert the key registered into the ignition key cylinder. 2. Turn the ignition switch to ON. 3. Perform operation according to prompts on Techstream screen
3. Verification of unregistered key	1. Following the instructions on the Techstream, insert the key to be registered into the ignition key cylinder. 2. Perform operation according to prompts on Techstream screen.
4. End of registration	Finish key code registration.

HINT:

A brief outline of additional key code registration procedure is shown above. For detailed information, refer to the Techstream screen.

7. KEY REGISTRATION (PROCEDURE "D")

(a) Key code erasure:

HINT:

- Performing this procedure will erase all key codes except for the key, which is used for erasing the key codes. In order to use a key whose code has been erased, a new key code must be registered.
- This procedure will be canceled if each step is not completed within the specified time.
- In the chart below, the numbers in the "Procedure" column (1, 2, 3, etc.) indicate the step numbers. Perform the steps in numerical order.

Key Code Erasure

PROCESS	PROCEDURE
1. Start of erasure	1. Turn the ignition switch off. 2. Connect Techstream to DLC3. 3. Turn the ignition switch to ON. 4. Turn Techstream on. 5. Enter the following menus: Body Electrical / Main Body / Utility / Key Code Erasure **HINT:** After completing the above operation, proceed to the next step in accordance with the prompts on the Techstream screen.
2. Confirmation of registered key	1. Following the instructions on the Techstream, insert the key registered into the ignition key cylinder. 2. Perform operation according to prompts on Techstream screen.
3. End of erasure	Finish key code erasure.

HINT:

A brief outline of key code erasure procedure is shown above. For detailed information, refer to the Techstream screen.

8. KEY REGISTRATION (PROCEDURE "E")

(a) All key code erasure:

HINT:

- To perform this procedure, at least 1 key should be registered to the main body ECU (network gateway ECU).
- This procedure can be performed using either a registered or unregistered key.
- In the chart below, the numbers in the "Procedure" column (1, 2, 3, etc.) indicate the step numbers. Perform the steps in numerical order.

All Key Code Erasure

PROCESS	PROCEDURE
1. Start of erasure	1. Turn the ignition switch off. 2. Connect Techstream to DLC3. 3. Insert the previous registered key or unregistered key into ignition key cylinder. 4. Turn the ignition switch to ON. 5. Using TIS, confirm that user and vehicle match. 6. Turn Techstream on. 7. Enter the following menus: Body Electrical / Main Body / Utility / Key Reset **HINT:** After completing the above operation, proceed to the next step in accordance with the prompts on the Techstream screen.
2. Erasure of ID code	1. Perform operation according to prompts on Techstream screen. 2. Wait for 15 minutes.
3. End of erasure	Finish all key code erasure.

HINT:

A brief outline of all key code erasure procedure is shown above. For detailed information, refer to the Techstream screen.

9. KEY REGISTRATION (PROCEDURE "F")

(a) ECU code registration (Procedure "F"):

NOTICE:

The ECU code should be registered when the combination meter assembly*1 or transponder key ECU assembly*2 is replaced with a new one in order to match the ECU code.

*1: w/o Transponder Key ECU Assembly
*2: w/ Transponder Key ECU Assembly

HINT:

- This procedure will be canceled if each step is not completed within the specified time.
- In the chart below, the numbers in the "Procedure" column (1, 2, 3, etc.) indicate the step numbers. Perform the steps in numerical order.

ECU code registration

PROCESS	PROCEDURE
1. Start of registration	1. Turn the ignition switch off. 2. Connect Techstream to DLC3. 3. Turn the ignition switch to ON. 4. Turn Techstream on. 5. Enter the following menus: Body Electrical / Main Body / Utility / ECU Communication ID Registration **HINT:** After completing the above operation, proceed to the next step in accordance with the prompts on the Techstream screen.
2. Confirmation of registered key	1. Following the instructions on the Techstream, insert the key registered into the ignition key cylinder. 2. Turn the ignition switch to ON.
3. Registration of ECU code	Perform operation according to prompts on Techstream screen.
4. End of registration	Finish ECU code registration.

HINT:

A brief outline of ECU code registration procedure is shown above. For detailed information, refer to the Techstream screen.

10. KEY REGISTRATION (PROCEDURE "G")

(a) ECU communication ID registration (When the main body ECU (network gateway ECU) is replaced with a new one, or when the ECM is replaced with other than a new one.):

NOTICE:

- The ECU communication ID should be registered when the main body ECU (network gateway ECU) is replaced with a new one, or when the ECM is replaced with other than a new one, in order to match the ECU communication IDs.
- If registration of the main body ECU (network gateway ECU), combination meter assembly*1 or transponder key ECU assembly*2 is not completed, then this work will not be possible. Therefore, prior to carrying out ECU

communications code registration, carry out main body ECU (network gateway ECU), combination meter assembly*1 or transponder key ECU assembly*2 registration.

- The engine cannot be started unless the ECU communication IDs match.
- After registration, turning the ignition switch to START may not start the engine on the first try. If so, turn the ignition switch to START again.
- Using the Techstream, clear DTC B1572 (code for ECM immobiliser communication error) after the engine is started.

*1: w/o Transponder Key ECU Assembly

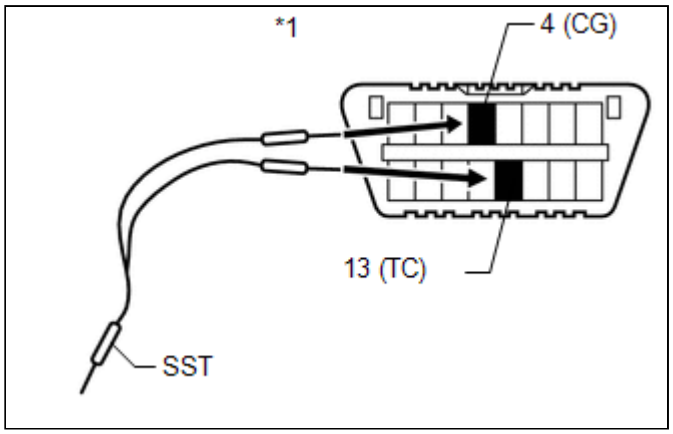
*2: w/ Transponder Key ECU Assembly

HINT:

If both the main body ECU (network gateway ECU) and ECM have been replaced with new items at the same time, then proceed as in "(b) When the ECM is replaced with a new one".

(1) Using SST, connect terminals 13 (TC) and 4 (CG) of the DLC3.

SST: 09843-18040



Text in Illustration

*1	DLC3

(2) Turn the ignition switch to ON and leave the vehicle as is for 30 minutes.

HINT:

Do not start the engine.

(3) After leaving the vehicle as-is for at least 30 minutes, turn the ignition switch off and disconnect terminals 13 (TC) and 4 (CG) of DLC3.

(4) Start the engine.

(5) Check that the engine starts and stays on for more than 5 sec.

(b) ECU communication ID registration (When the ECM is replaced with a new one):

NOTICE:

The ECU communication ID should be registered when the ECM is replaced with a new one in order to match the ECU communication IDs.

ECU Communication ID Registration

PROCEDURE
1. Start
2. Insert an already registered key into the ignition key cylinder.
3. Start the engine.
4. Check that the engine starts and stays on for more than 5 sec.
5. End