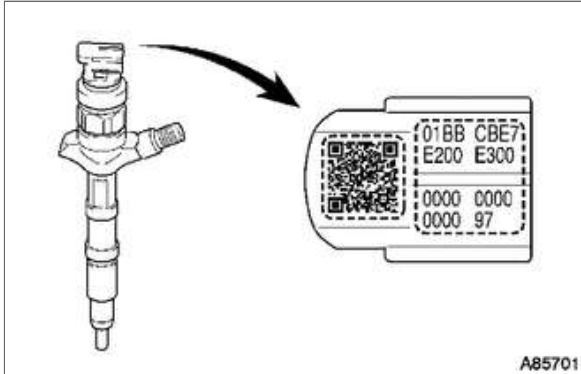


## PROCEDURE

## 1. REGISTRATION



- a. AFTER REPLACING INJECTOR(S) WITH NEW ONE(S), INPUT COMPENSATION CODE(S) OF INJECTOR(S) INTO ECM AS FOLLOWS

**NOTICE:**

- When an injector is replaced, the new injector's compensation code must be input into the ECM. When the ECM is replaced, all of the existing injector compensation codes must be input into the new ECM.
- Injector compensation codes are unique, 30 digit, alphanumeric values printed on the head portion of each injector. If an incorrect injector compensation code is input into the ECM, the engine assembly may rattle or engine idling may become rough. In addition, engine failure may occur and the life of the engine may be shortened.

- i. Connect the GTS to the DLC3.
- ii. Turn the ignition switch ON.
- iii. Turn the GTS ON.

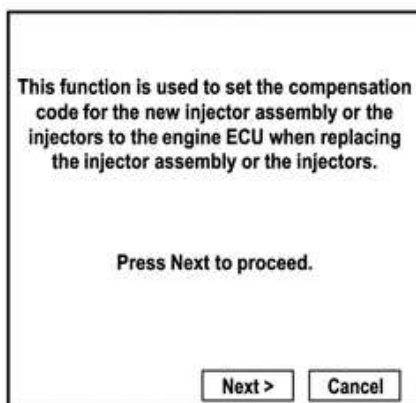
**NOTICE:**

Do not start the engine.

**HINT:**

The injector compensation code is printed on the head portion of each injector.

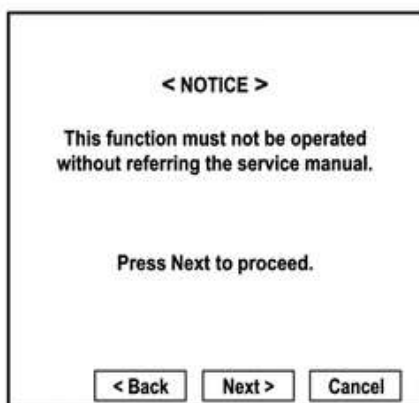
- iv.



Enter the menu options in this order: Powertrain / Engine and ECT / Utility / Injector Compensation.

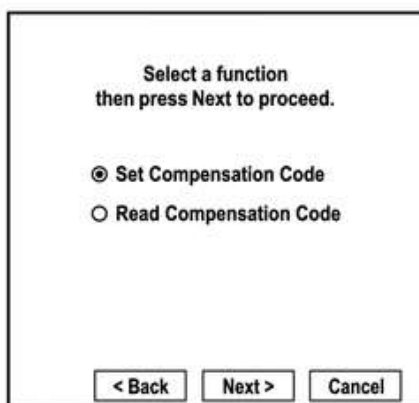
v. Press Next.

vi.



Press Next again to proceed.

vii.



Select "Set Compensation Code".

viii. Press Next.

ix.

[ Selected function ]

Select a cylinder then press Next to proceed.

☒ Cylinder No.1  
☐ Cylinder No.2  
☐ Cylinder No.3  
☐ Cylinder No.4  
☐ Cylinder No.5  
☐ Cylinder No.6  
☐ Cylinder No.7  
☐ Cylinder No.8

< Back    Next >    Cancel

Select the number of the cylinder corresponding to the injector compensation code that you want to read.

x. Press Next.

xi.

[ Selected cylinder ]

Input the code of 30 characters printed on the injector.  
Refer to the service manual for details.

Input    Open

If the inputted characters are correct,  
press Next to proceed.

< Back    Next >    Cancel

Register compensation code.

1. Press Input.
- 2.

Input Value

OK    Cancel    BS    AC

1	2	3	4	5	+/-
6	7	8	9	0	.
A	B	C	D	E	F

Manually input the cylinder's compensation code using the keyboard on the GTS screen. The code is a 30 digit, alphanumeric value printed on the injector's head portion.

**HINT:**

Each injector compensation code is unique. The compensation code for each selected cylinder must be input into the GTS correctly.

3. Confirm that the compensation code for the selected cylinder is correct, and then press OK.

xii.

The screenshot shows a GTS screen with a title bar [ Selected cylinder ]. Below the title bar, the text reads: "Input the code of 30 characters printed on the injector. Refer to the service manual for details." A text box contains the alphanumeric code "10D702047DFFCA38090000014BE965". Below the text box are two buttons: "Input" and "Open". Further down, the text reads: "If the inputted characters are correct, press Next to proceed." At the bottom are three buttons: "< Back", "Next >", and "Cancel".

Check that the compensation code displayed on the screen is correct by comparing it with the 30 digit alphanumeric value on the head portion of the injector.

**NOTICE:**

If an incorrect injector compensation code was input into the ECM, the engine may rattle or engine idling may become rough. In addition, engine failure may occur and the life of the engine may be shortened.

**HINT:**

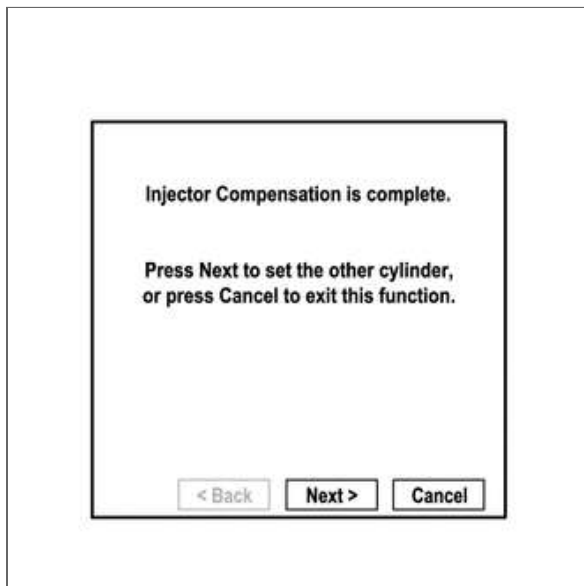
- If a wrong compensation code was input or read, return to the Input Value screen by pressing Input.
- The saving process may fail due to a problem with the wire harness or a bad connection with the DLC3. Check the wire harness and DLC3 connection. If no problem is found with either, the ECM may be malfunctioning. Check the ECM and repeat this operation.

- xiii. Press Next to set the compensation code to the ECM.

**HINT:**

- If the setting process fails, the compensation code may be incorrect. Check the compensation code again.
- If the input compensation code fails to set even though it is input correctly, there may be a problem with the wire harness or a bad connection with the DLC3. Check the wire harness and DLC3 connection. If no problem is found with either, the ECM may be malfunctioning. Check the ECM and restart this operation.

xiv.



If you want to continue with other compensation code registrations, press Next. To finish the registration, press Cancel.

**xv.** Turn the ignition switch OFF and then turn the GTS OFF.

**xvi.** Wait for at least 30 seconds.

**xvii.** Turn the ignition switch ON and then turn the GTS ON.

**xviii.**

**xix.** Clear DTC P1601 stored in the ECM using the GTS.

Click here [Engine / Hybrid System>1VD-FTV \(ENGINE CONTROL\)>ECD SYSTEM>DTC CHECK / CLEAR](#)

**b.** WHEN REPLACING ECM WITH NEW ONE, INPUT ALL INJECTOR'S COMPENSATION CODES INTO NEW ECM AS FOLLOWS:

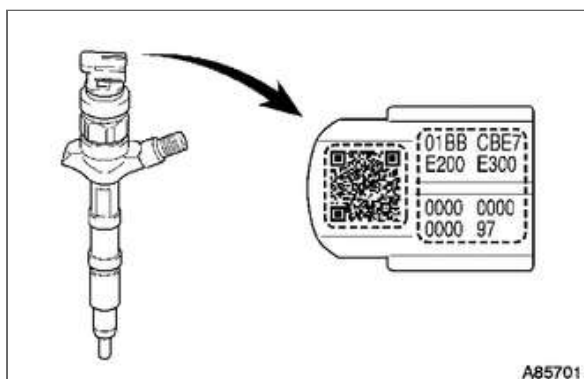
**NOTICE:**

- When an injector is replaced, the injector's compensation code must be input into the ECM. When the ECM is changed, all of the existing injector compensation codes must be input into the new ECM.
- Injector compensation codes are unique, 30-digit, alphanumeric values printed on the head portion of each injector. If an incorrect injector compensation code is input into the ECM, the engine may rattle or engine idling may become rough. In addition, engine failure may occur and the life of the engine may be shortened.

**HINT:**

The following operation is available with ECMs that can transmit the registered injector compensation codes to the GTS.

i.



Connect the GTS to the DLC3.

**ii.** Turn the ignition switch ON.

**iii.** Turn the GTS ON.

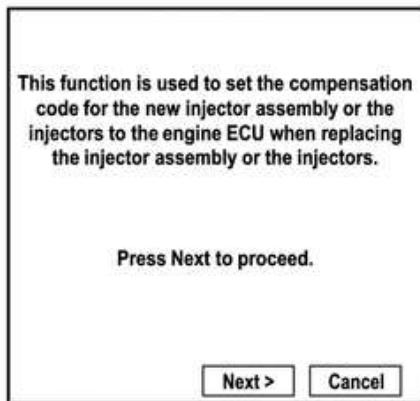
**NOTICE:**

Do not start the engine.

**HINT:**

The injector compensation code is imprinted on the head portion of each injector.

iv.



Enter the menu options in this order: Power train / Engine and ECT / Utility / Injector Compensation.

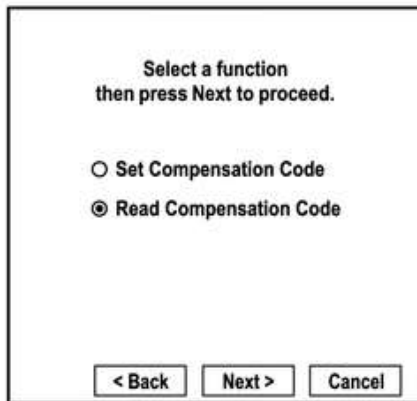
v. Press Next.

vi.



Press Next again to proceed.

vii.



Select a function  
then press Next to proceed.

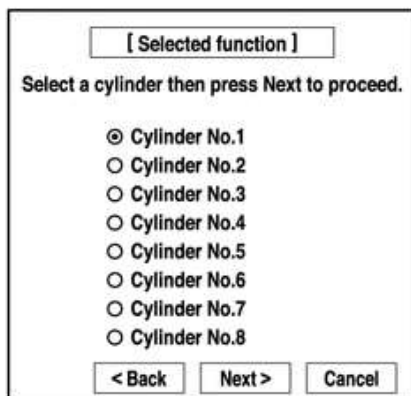
☐ Set Compensation Code  
☒ Read Compensation Code

< Back   Next >   Cancel

Select Read Compensation Code.

viii. Press Next.

ix.



[ Selected function ]

Select a cylinder then press Next to proceed.

☒ Cylinder No.1  
☐ Cylinder No.2  
☐ Cylinder No.3  
☐ Cylinder No.4  
☐ Cylinder No.5  
☐ Cylinder No.6  
☐ Cylinder No.7  
☐ Cylinder No.8

< Back   Next >   Cancel

Select the number of the cylinder corresponding to the injector compensation code that you want to read.

x. Press Next.

**HINT:**

The reading process may fail due to a problem with the wire harness or a bad connection with the DLC3. Check the wire harness and the DLC3 connection. If no problem is found, the ECM may be malfunctioning. Check the ECM and restart this operation.

xi.

[ Selected cylinder ]

102DD04722A6CA38090101014BE000

Save

Press Next to read the compensation code of another cylinder, or press Cancel to exit this function.

Next > Cancel

Check the injector compensation code (30-digit alphanumeric value) is displayed on the GTS screen.

xii. Press Save.

xiii. Check that the compensation code displayed on the GTS screen is correct.

\*a

Save

Cylinder Number	Date
[selected cylinder]	2:19 PM, 01/09/02

102DD04722A6CA38090101014BE000

Do you want to save this code?

Save Cancel

\*b

Save

Cylinder Number	Date
[selected cylinder]	2:19 PM, 01/09/02

102DD04722A6CA38090101014BE000

The code of selected cylinder already exists. Do you want to replace it?

Replace Cancel

\*a

When no injection compensation code for the cylinder exists in the GTS:

\*b

When another injector compensation code for the cylinder exists in the GTS:

xiv. Press Save or Replace, save the injector compensation code.

**HINT:**

- The existing compensation code is overwritten with the new compensation code and is deleted from the GTS.
- The saving process may fail due to a problem with the wire harness or a bad connection with the DLC3. Check the wire harness and the DLC3 connection. If no problem is found with either, the ECM may be malfunctioning. Check the ECM and restart this operation.



xv.

[ Selected cylinder ]

102DD04722A6CA38090101014BE000

Save

Press Next to read the compensation code of another cylinder, or press Cancel to exit this function.

Next > Cancel

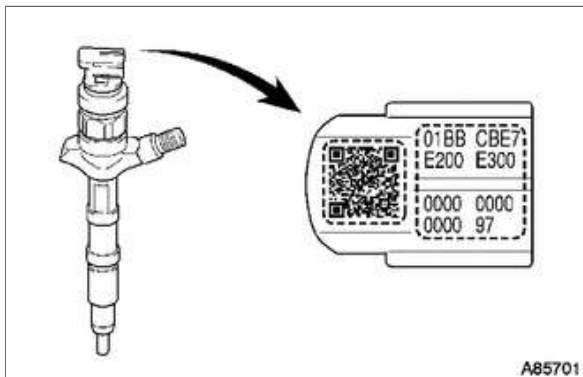
If you want to read and save other injector compensation codes for other cylinders, press Next to continue. To finish this operation, press Cancel.

xvi. Turn the ignition switch OFF.

xvii. Turn the GTS OFF.

xviii. Replace the ECM.

xix.



Connect the GTS to the DLC3.

xx. Turn the ignition switch ON.

xxi. Turn the GTS ON.

**NOTICE:**

Do not start the engine.

**HINT:**

The injector compensation code is imprinted on the head portion of each injector.

**xxii.**



Enter the menu options in this order: Power train / Engine and ECT / Utility / Injector Compensation.

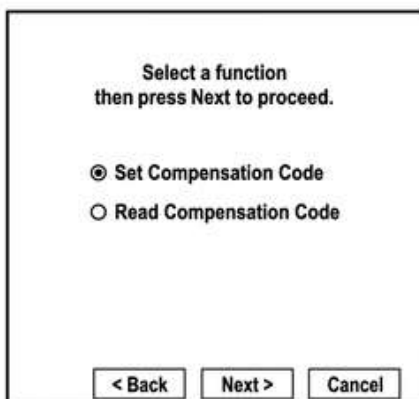
**xxiii.** Press Next.

**xxiv.**



Press Next again to proceed.

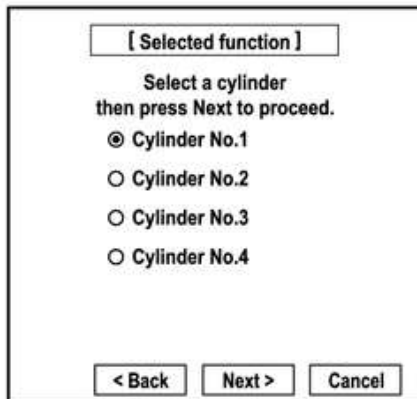
**xxv.**



Select Set Compensation Code.

**xxvi.** Press Next.

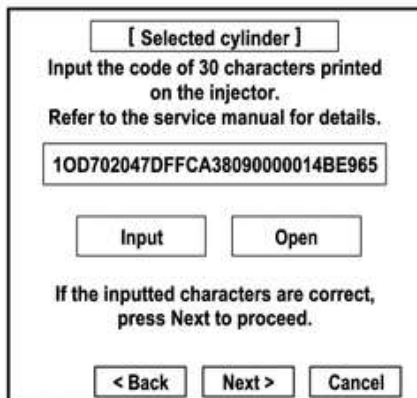
**xxvii.**



Select the number of the cylinder corresponding to the injector compensation code that you want to read.

**xxviii.** Press Next.

**xxix.**



Check that the compensation code displayed on the screen is correct, by comparing it with the 30-digitalphanumeric value on the head portion of the injector.

**NOTICE:**

If an incorrect injector compensation code was input into the ECM, the engine may rattle or engine idling may become rough. In addition, engine failure may occur and the life of the engine may be shortened.

**HINT:**

If a wrong compensation code was input or read, return to the input Value screen by pressing input. The saving process may fail due to a problem with the wire harness or a bad connection with the DLC3. Check the wire harness and the DLC3 connection. If no problem is found with either, the ECM may be malfunctioning. Check the ECM and repeat this operation.

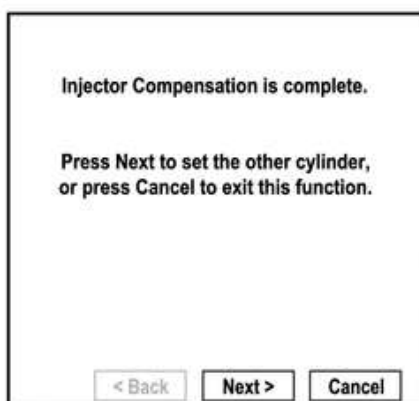
**xxx.** Press Next to set the compensation code to the ECM.

**HINT:**

- If the setting fails, the compensation code may be incorrect. Check the compensation code again.
- If a wrong compensation code was input or read, return to the input Value screen by pressing input. If the attempted compensation code is correct, a problem with the wire harness or a bad connection with the DLC3 may cause the failure.

Check the wire harness and the DLC3 connection. If no problem is found with either, the ECM may be malfunctioning. Check the ECM and restart this operation.

xxxii.



If you want to continue with other compensation code registrations, press Next. To finish the registration, press Cancel.

xxxiii. Turn the GTS OFF and then turn the ignition switch OFF.

xxxiv. Wait for at least 30 seconds.

xxxv. Turn the ignition switch ON and then turn the GTS ON.

xxxvi. Clear DTC P1601 stored in the ECM using the GTS.

Click here [Engine / Hybrid System>1VD-FTV \(ENGINE CONTROL\)>ECD SYSTEM>DTC CHECK / CLEAR](#)



## 2. DESCRIPTION OF VIN

### HINT:

This registration section consists of 2 parts: Read VIN and Write VIN.

- a. Read VIN: This process allows the VIN stored in the ECM to be read in order to confirm that the 2 VINs, the one provided with the vehicle and stored in the vehicle ECM, are the same.
- b. Write VIN: This process allows the VIN to be input into the ECM. If the ECM is changed, or the ECM VIN and vehicle VIN do not match, the VIN can be registered, or overwritten in the ECM by following this procedure.



## 3. READ VIN

- a. Confirm the vehicle VIN.
- b. Connect the GTS to the DLC3.
- c. Turn the ignition switch to ON.
- d. Turn the GTS on.
- e. Enter the following menus: Powertrain / Engine and ECT / Utility / VIN / VIN Read.

**Powertrain > Engine and ECT > Utility**

Tester Display
VIN

**Execute**



#### 4. WRITE VIN

- a. Confirm the vehicle VIN.
- b. Connect the GTS to the DLC3.
- c. Turn the ignition switch to ON.
- d. Turn the GTS on.
- e. Enter the following menus: Powertrain / Engine and ECT / Utility / VIN / VIN Write.

**Powertrain > Engine and ECT > Utility**

Tester Display
VIN

**Execute**