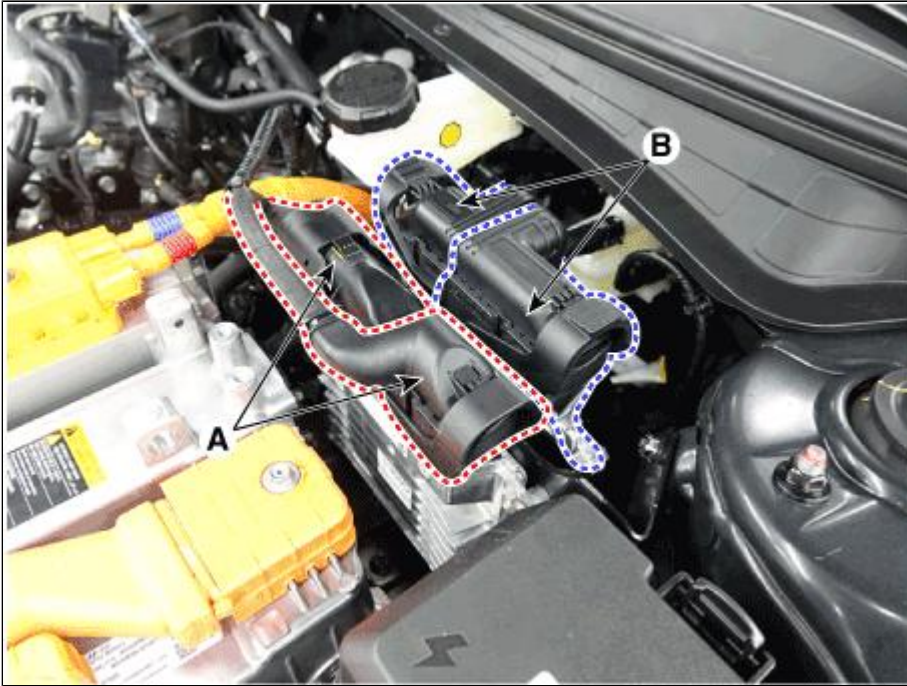


Removal

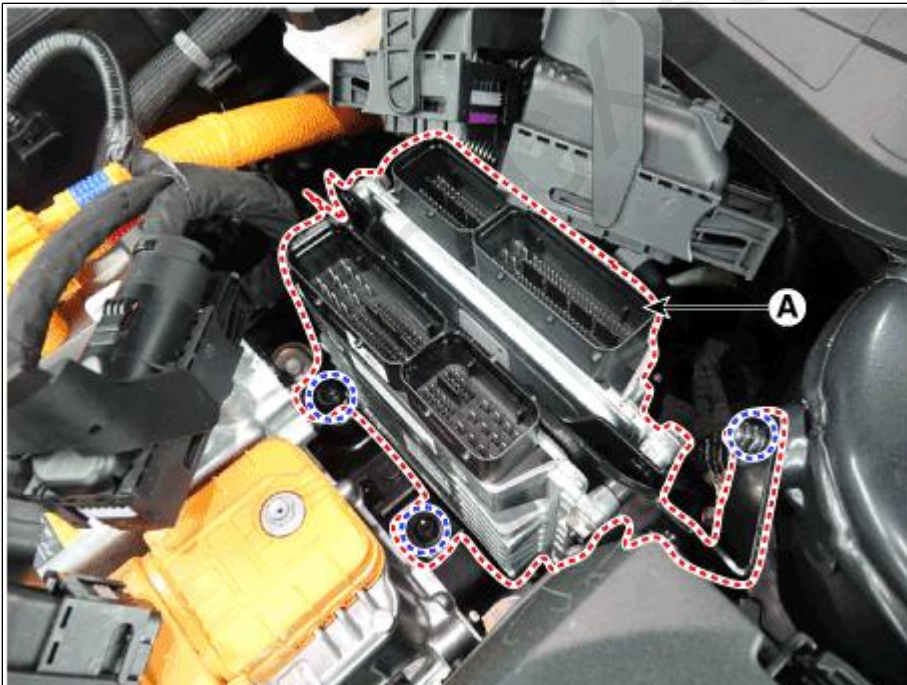
1. Turn ignition switch OFF and disconnect the positive (+) battery cable.
2. Disconnect the TCM Connector (A).
3. Disconnect the ECM Connector (B).



4. Remove the ECM (A) from the bracket after removing the bolts and nut.

Tightening torque :

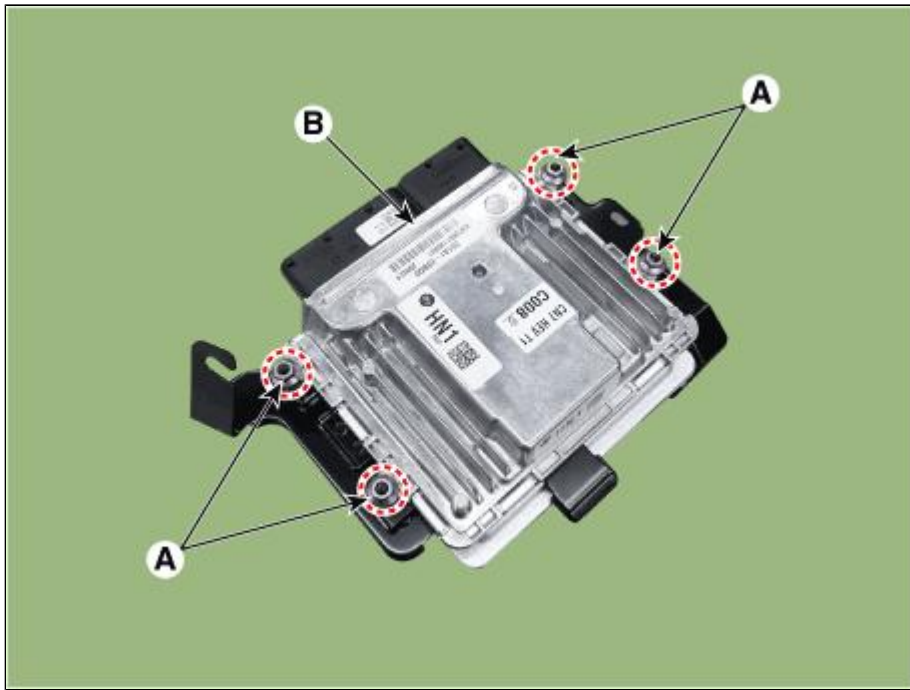
9.8 - 11.7 N.m (1.0 - 1.2 kgf.m, 7.2 - 8.6 lb-ft)



5. Remove ECM (B) from the ECM and TCM bracket after loosening the bolt and nut (A).

Tighting torque :

9.8 - 11.7 N.m (1.0 - 1.2 kgf.m, 7.2 - 8.6 lb-ft)



Installation

⚠ CAUTION

When replacing the ECM, the vehicle equipped with the immobilizer must be performed procedure as below.

[In the case of installing used ECM]

- 1) Perform "ECM Neutral mode" procedure with Diagnostic tool .
(Refer to Body Electrical System - "Immobilizer System")
- 2) After finishing "ECM Neutral mode", perform "Key teaching" procedure with Diagnostic tool .
(Refer to Body Electrical System - "Immobilizer System")

[In the case of installing new ECM]

Perform "Key teaching" procedure with Diagnostic tool .
(Refer to Body Electrical System - "Immobilizer System")

⚠ CAUTION

When replacing the ECM, the vehicle equipped with the smart key system (Button start) must be performed procedure as below.

[In the case of installing used ECM]

- 1) Perform "ECM Neutral mode" procedure with Diagnostic tool .
(Refer to Body Electrical System - "Smart Key")
- 2) After finishing "ECM Neutral mode", insert the key (or press the start button) and turn it to the IGN ON and OFF position. Then the ECM learns the smart key information automatically.

[In the case of installing new ECM]

Insert the key (or press the start button) and turn it to the IGN ON and OFF position. Then the ECM learns the smart key information automatically.

1. Install in the reverse order of removal.

ECM Problem Inspection Procedure

1. TEST ECM GROUND CIRCUIT : Measure resistance between ECM and chassis ground using the backside of ECM harness connector as ECM side check point. If the problem is found, repair it.

Specification : Below 1Ω

2. TEST ECM CONNECTOR : Disconnect the ECM connector and visually check the ground terminals on ECM side and harness side for bent pins or poor contact pressure. If the problem is found, repair it.
3. If problem is not found in Step 1 and 2, the ECM could be faulty. If so, make sure there were no DTC's before swapping the ECM with a new one, and then check the vehicle again. If DTC's were found, examine this first before swapping ECM.
4. RE-TEST THE ORIGINAL ECM : Install the original ECM (may be broken) into a known-good vehicle and check the vehicle. If the problem occurs again, replace the original ECM with a new one. If problem does not occur, this is intermittent problem.
(Refer to "Intermittent Problem Inspection Procedure" in Basic Inspection Procedure)

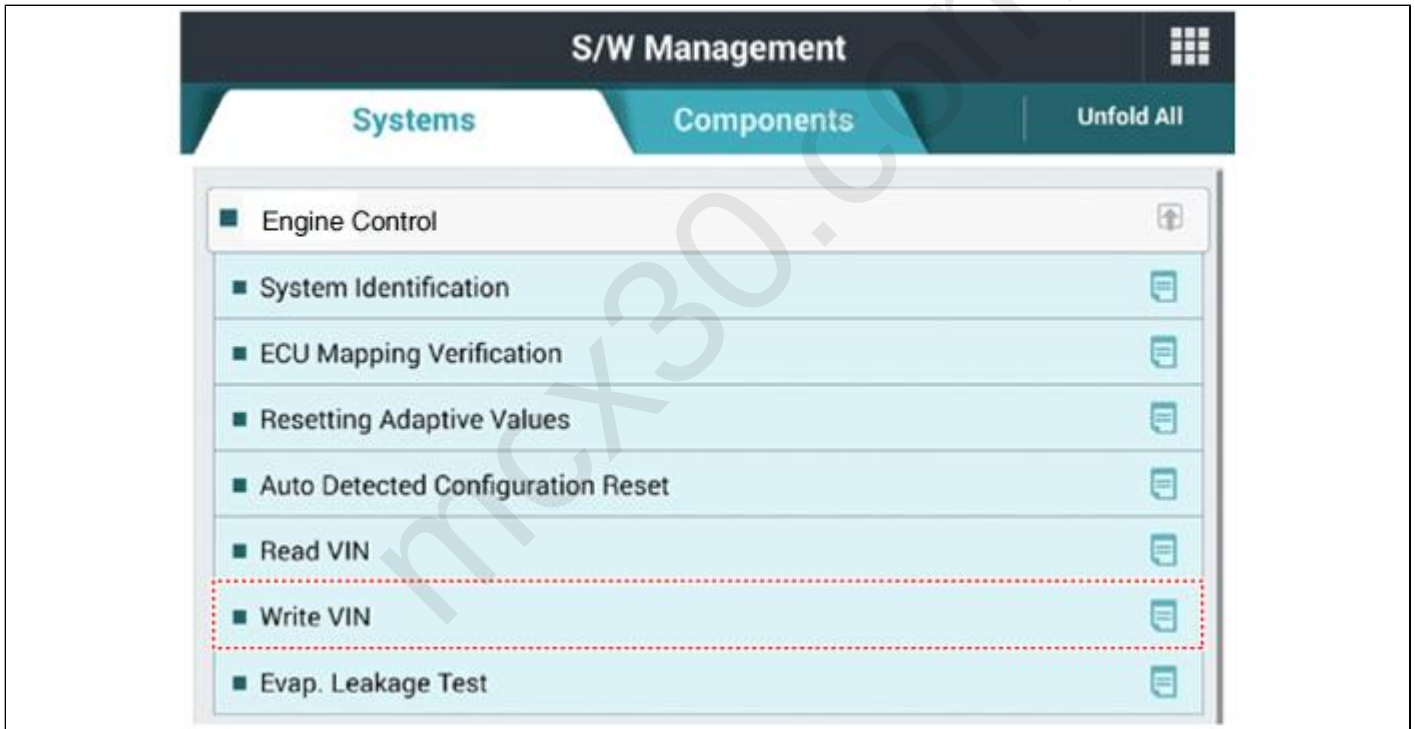
VIN Programming Procedure

VIN (Vehicle Identification Number) is a number that has the vehicle's information (Maker, Vehicle Type, Vehicle Line/Series, Body Type, Engine Type, Transmission Type, Model Year, Plant Location and so forth. For more information, please refer to the group "GI" in this SERVICE MANUAL). When replacing an ECM, the VIN must be programmed in the ECM. If there is no VIN in ECM memory, the fault code (DTC P0630) is set.

CAUTION

The programmed VIN cannot be changed. When writing the VIN, confirm the VIN carefully

1. Select "VIN Writing" function in "Vehicle S/W Management".
2. Select "Write VIN" in "ID Register".



3. Input the VIN.

WARNING

Before inputting the VIN, confirm the VIN again because the programmed VIN cannot be changed.

S/W Management

■ Write VIN

● [Write VIN]

This function is used to write the VIN into the ECM's memory.

A new ECM requires that this function be performed following installation. Failure to perform this function will result in MIL illumination with DTC P0630. After confirming the written VIN, ECU will erase the fault code and MIL.

Press **[OK]** button, if you are ready.

OK

Cancel



Do not touch any system buttons while performing this function.

4. Turn the ignition switch OFF, then back ON.

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