

N*m (kgf*cm, ft.*lbf): Specified torque

c


REMOVAL

1. PRECAUTION

HINT: .


2. REMOVE REAR NO. 2 FLOOR BOARD (for Separate Type) .

3. REMOVE REAR DECK FLOOR BOX .

4. REMOVE REAR NO. 3 FLOOR BOARD .

5. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected .

6. REMOVE SERVICE PLUG GRIP .

7. REMOVE FRONT SPOILER COVER (w/ Front Spoiler)

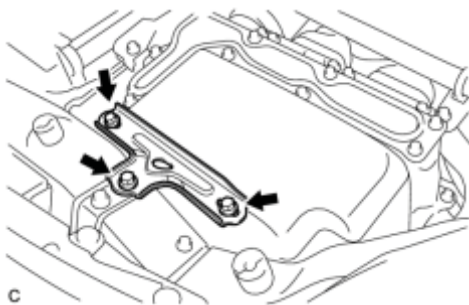
8. REMOVE ENGINE UNDER COVER (w/ Cover)

9. REMOVE NO. 1 ENGINE UNDER COVER

10. DRAIN COOLANT (for Inverter) .

11. REMOVE RADIATOR SUPPORT OPENING COVER .

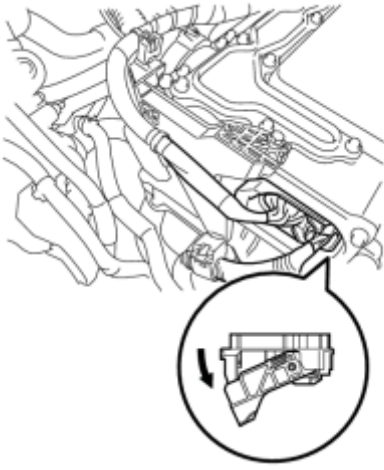
12. REMOVE NO. 1 INVERTER BRACKET



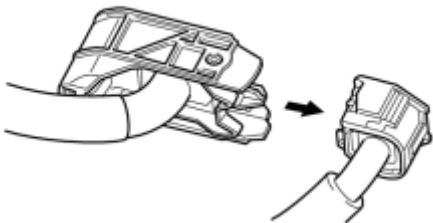
(a) Remove the 3 bolts and No. 1 inverter bracket.

13. DISCONNECT ENGINE ROOM MAIN WIRE

(a) Raise the lock lever and disconnect the inverter with converter connector.

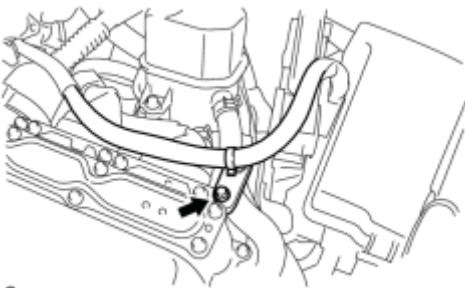


c



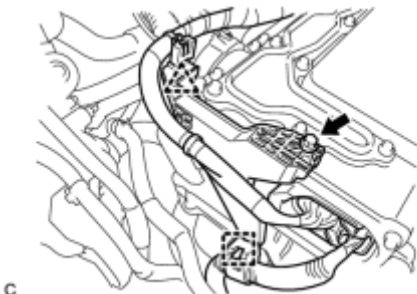
c

(b) Disconnect the engine wire from the engine room main wire.



c

(c) Remove the bolt.



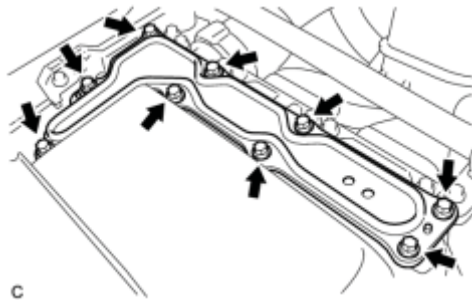
c

(d) Remove the bolt, clamp and clip, and disconnect the engine room main wire.

14. REMOVE INVERTER TERMINAL COVER

CAUTION:

Wear insulating gloves.



(a) Remove the 9 bolts and inverter terminal cover.

NOTICE:

Make sure to pull the inverter terminal cover straight up, as a connector is connected to the bottom of the cover.

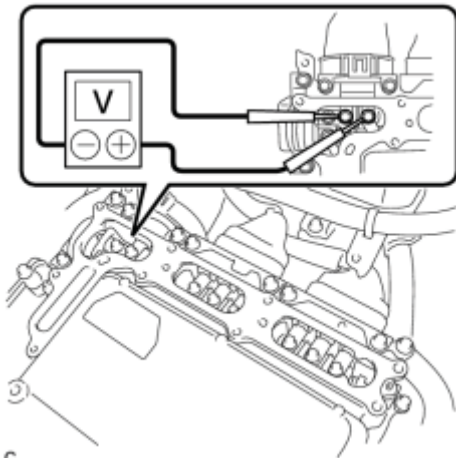
15. CHECK TERMINAL VOLTAGE

CAUTION:

Wear insulating gloves.

NOTICE:

Do not allow any foreign objects or water to enter the inverter with converter assembly.



(a) Using a voltmeter, measure the voltage between the terminals of the 2 phase connectors.

Standard voltage:

0 V

HINT:

Use measuring range of DC 750 V or more on the voltmeter.

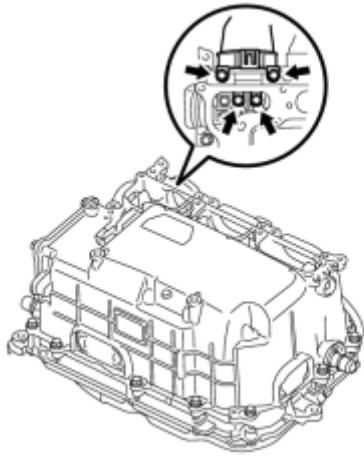
16. DISCONNECT FRAME WIRE

CAUTION:

Wear insulating gloves.

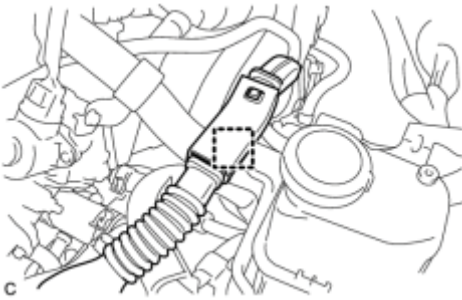
NOTICE:

- Insulate the removed terminals with insulating tape.
- Cover the hole where the cable was connected with tape or equivalent (non-residue type) to prevent entry of foreign matter.



(a) Remove the 4 bolts, and disconnect the frame wire (high voltage cables of the hybrid battery) from the inverter with converter assembly.

c



(b) Disconnect the harness clamp.

c

17. DISCONNECT HIGH VOLTAGE CABLE OF FRONT TRANSAXLE

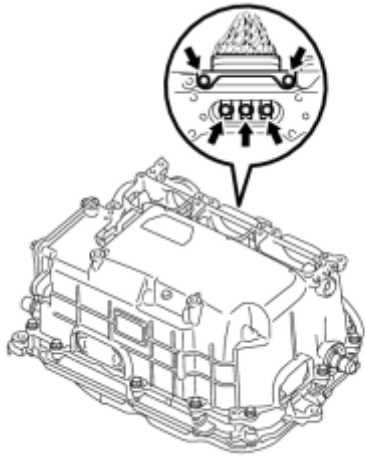
CAUTION:

Wear insulating gloves.

NOTICE:

- Insulate the removed terminals with insulating tape.
- Cover the hole where the cable was connected with tape or equivalent (non-residue type) to prevent entry of foreign matter.

(a) Remove the 5 bolts, and disconnect the high voltage cables of the generator (MG1) from the inverter with converter assembly.

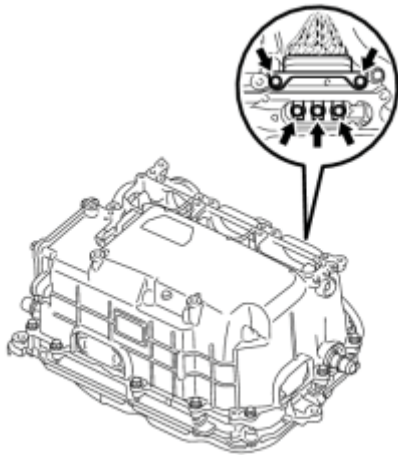


c



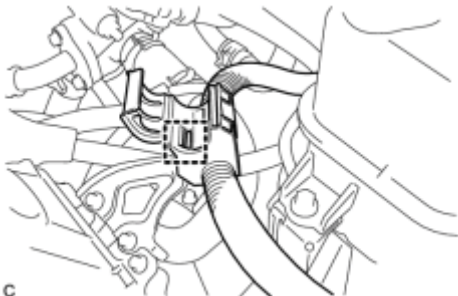
c

(b) Turn back the wire harness cover and release the cable.



c

(c) Remove the 5 bolts, and disconnect the high voltage cables of the motor (MG2) from the inverter with converter assembly.



c

(d) Disconnect the harness clamp.

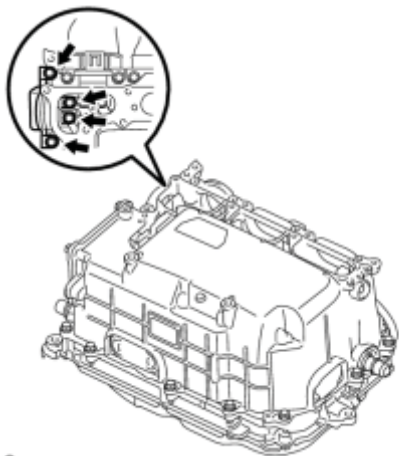
18. DISCONNECT NO. 2 ENGINE WIRE

CAUTION:

Wear insulating gloves.

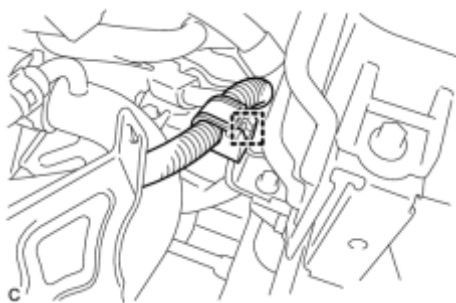
NOTICE:

- Insulate the removed terminals with insulating tape.
- Cover the hole where the cable was connected with tape or equivalent (non-residue type) to prevent entry of foreign matter.



(a) Remove the 4 bolts, and disconnect the No. 2 engine wire (high voltage cables for the air conditioning compressor) from the inverter with converter assembly.

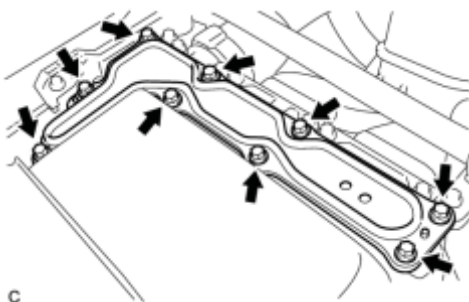
c



(b) Disconnect the harness clamp.

c

19. INSTALL INVERTER TERMINAL COVER

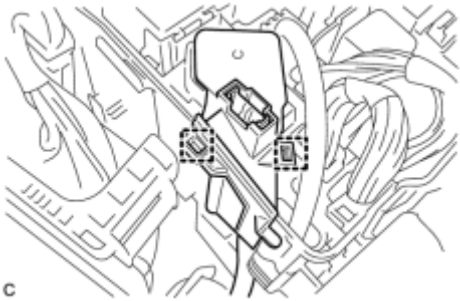


(a) Temporarily install the inverter terminal cover with the 9 bolts to prevent any foreign objects or water from entering the inverter with converter assembly.

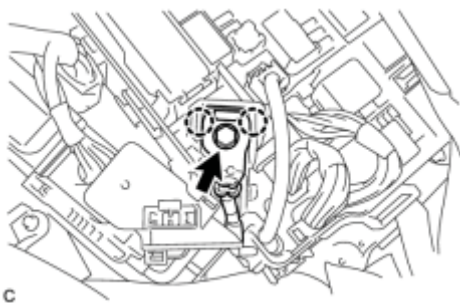
c

20. DISCONNECT NO. 2 ENGINE ROOM WIRE

(a) Remove the relay block cover.

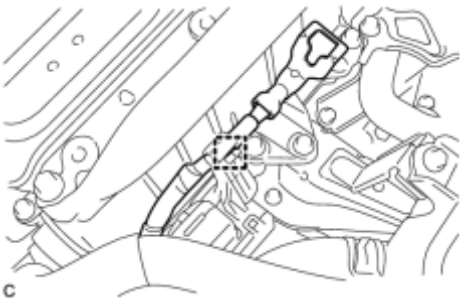


(b) Release the 2 clamps, and remove the No. 1 relay block cover.



(c) Remove the bolt from the No. 2 engine room wire.

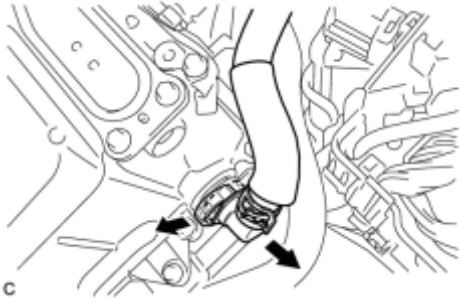
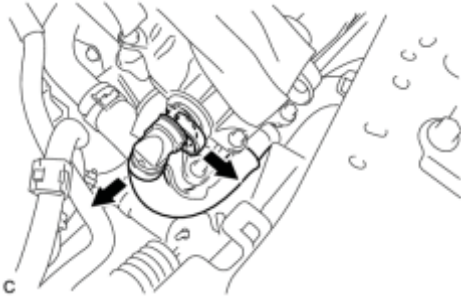
(d) Release the 2 claws, and disconnect the No. 2 engine room wire.



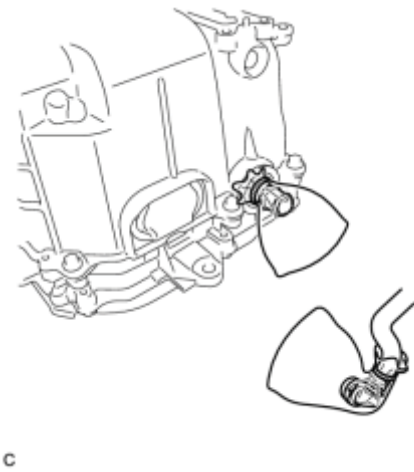
(e) Connect the No. 2 engine room wire to the protector.

21. DISCONNECT WATER HOSE

(a) Release the retainer and disconnect the water hose from the inverter with converter assembly.



(b) Release the retainer and disconnect the water hose from the inverter with converter assembly.



(c) Disconnect the coolant hose from the inverter with converter assembly. Put a piece of cloth in the pipe and in the disconnected hose or cover the pipe and hose with plastic bags as shown in the illustration, so that foreign matter doesn't stick to the union or the inside of the connector and to prevent coolant from spilling near the inverter with converter assembly.

22. REMOVE INVERTER WITH CONVERTER ASSEMBLY

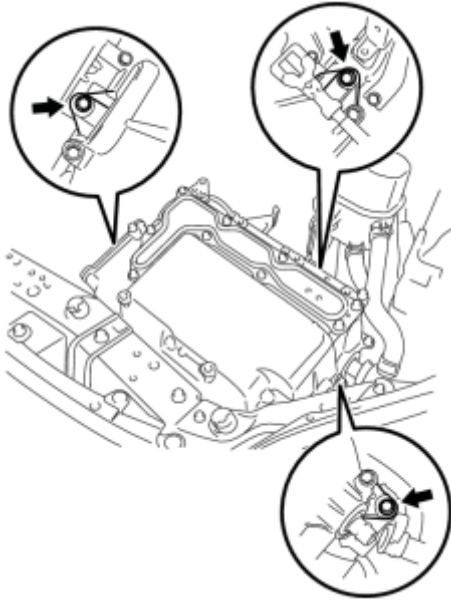
CAUTION:

Wear insulating gloves.

(a) Remove the 3 bolts and inverter with converter assembly.

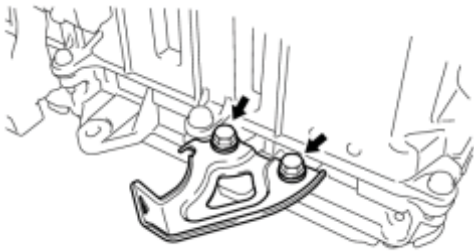
- Since the inverter with converter assembly is very heavy, 2 people are needed to remove the inverter with converter assembly. When removing the inverter with converter assembly, do not damage the parts around it.
- To prevent damage, do not hold the inverter with converter assembly by the connectors.
- To prevent damage due to static electricity, do not touch the terminals

of the disconnected connectors.



c

23. REMOVE MOTOR CABLE BRACKET



(a) Remove the 2 bolts and motor cable bracket.

c

24. REMOVE HIGH VOLTAGE FUSE

CAUTION:

Wear insulating gloves.

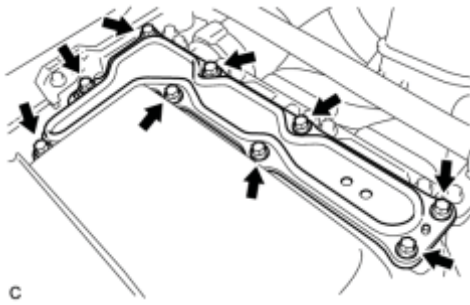
HINT:

Perform this procedure only when replacement of the high voltage fuse is necessary.

(a) Remove the 9 bolts and inverter terminal cover.

NOTICE:

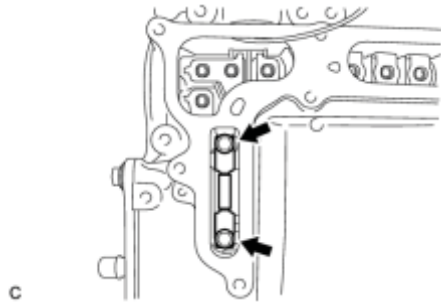
Make sure to pull the inverter terminal cover straight up, as a connector is connected to the bottom of the cover.



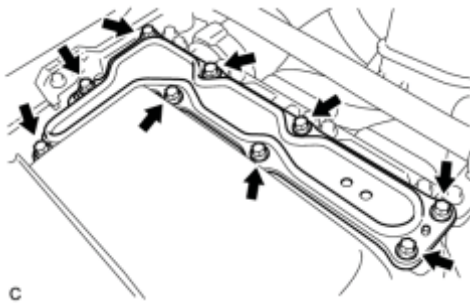
(b) Remove the 2 bolts and high voltage fuse from the inverter with converter assembly.

NOTICE:

Do not allow any foreign objects or water to enter the inverter with converter assembly.



(c) Temporarily install the inverter terminal cover with the 9 bolts to prevent any foreign objects or water from entering the inverter with converter assembly.



INSTALLATION

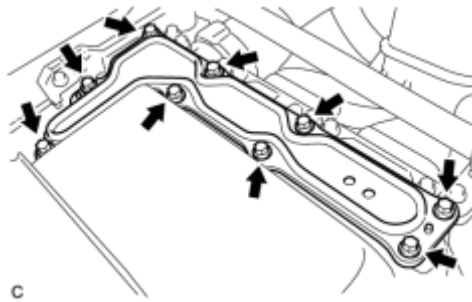
1. INSTALL HIGH VOLTAGE FUSE

CAUTION:

Wear insulating gloves.

HINT:

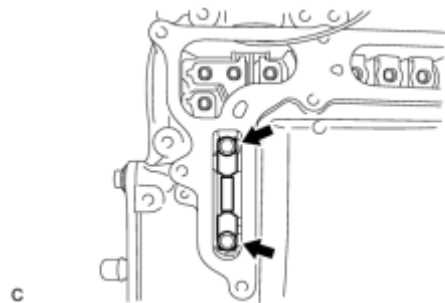
Perform this procedure only when replacement of the high voltage fuse is necessary.



(a) Remove the 9 bolts and inverter terminal cover.

NOTICE:

Make sure to pull the inverter terminal cover straight up, as a connector is connected to the bottom of the cover.

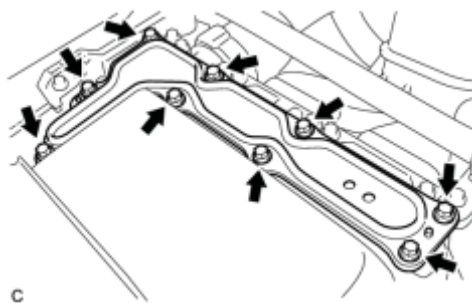


(b) Install the high voltage fuse with the 2 bolts.

Torque: **4.0 N·m (41 kgf·cm, 35in·lbf)**

NOTICE:

Be sure to use a torque wrench to tighten the bolts.



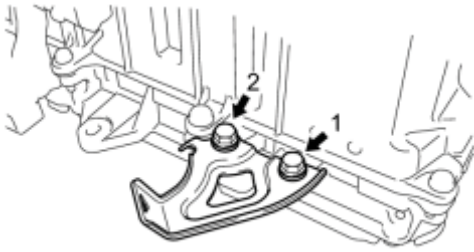
(c) Temporarily install the inverter terminal cover with the 9 bolts to prevent any foreign objects or water from entering the inverter with converter assembly.

2. INSTALL MOTOR CABLE BRACKET

(a) Temporarily install the motor cable bracket with the 2 bolts.

(b) Tighten the 2 bolts in the order shown in the illustration.

Torque: **8.0 N·m (82 kgf·cm, 71in·lbf)**

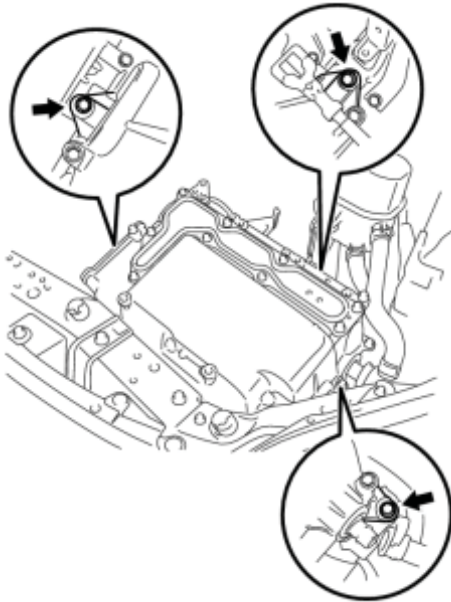


c

3. INSTALL INVERTER WITH CONVERTER ASSEMBLY

CAUTION:

Wear insulating gloves.



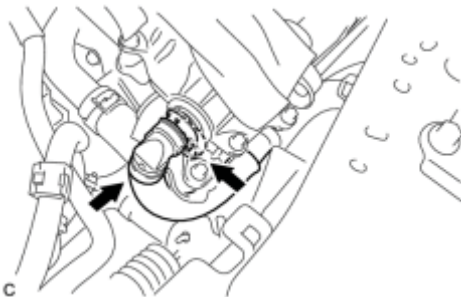
c

(a) Install the inverter with converter assembly with the 3 bolts.

Torque: 12 N·m (122 kgf·cm, 8ft·lbf)

- Since the inverter with converter assembly is very heavy, 2 people are needed to install the inverter with converter assembly. When installing the inverter with converter assembly, do not damage the parts around it.
- To prevent damage, do not hold the inverter with converter assembly by the connectors.
- To prevent damage due to static electricity, do not touch the terminals of the disconnected connectors.

4. CONNECT WATER HOSE



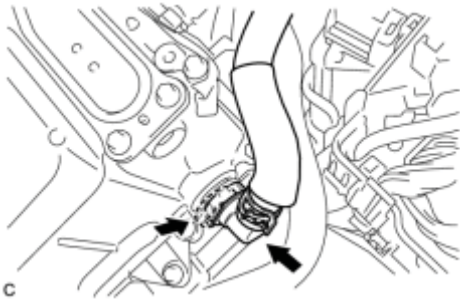
c

(a) Connect the water hose to the inverter with converter assembly and lock the hose with the retainer.

- Insert the retainer until a click sound is heard.
- Pull on the hose to confirm that the hose is securely connected.
- If there is foreign matter on the union or the O-ring, clean it with water and finger scouring.

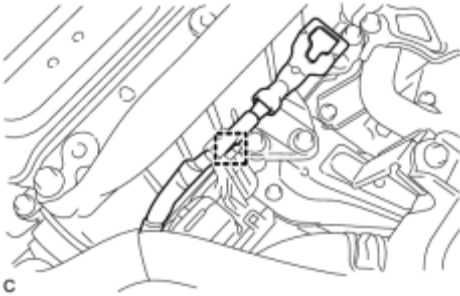
(b) Connect the water hose to the inverter with converter assembly and lock the hose with the retainer.

- Insert the retainer until a click sound is heard.

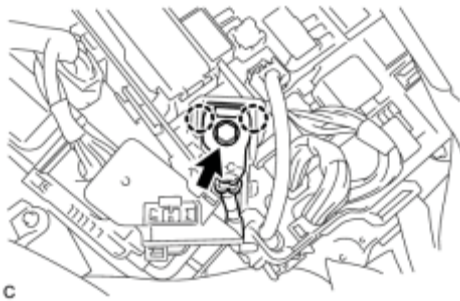


- Pull on the hose to confirm that the hose is securely connected.
- If there is foreign matter on the union or the O-ring, clean it with water and finger scouring.

5. CONNECT NO. 2 ENGINE ROOM WIRE



(a) Disconnect the No. 2 engine room wire from the protector.

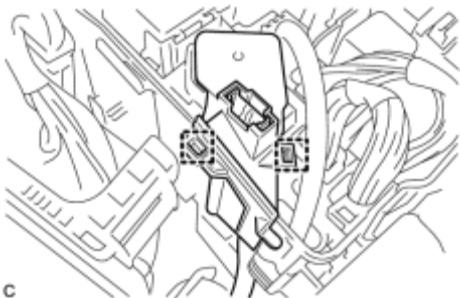


(b) Connect the No. 2 engine room wire with the bolt and 2 claws.

Torque: **8.3 N·m (85 kgf·cm, 73in·lbf)**

NOTICE:

Pass the No. 2 engine room wire under the two cooling hoses that pass beside the inverter.



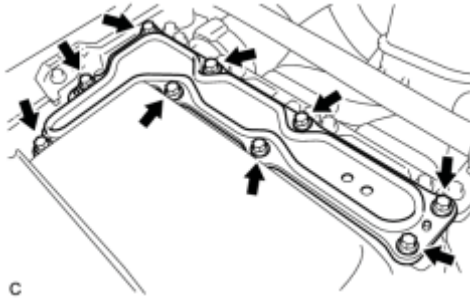
(c) Install the No. 1 relay block cover and 2 clamps.

(d) Install the relay block cover.

6. REMOVE INVERTER TERMINAL COVER

CAUTION:

Wear insulating gloves.



(a) Remove the 9 bolts and inverter terminal cover.

NOTICE:

Make sure to pull the inverter terminal cover straight up, as a connector is connected to the bottom of the cover.

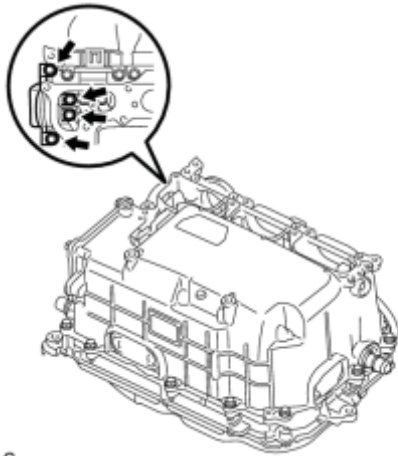
7. CONNECT NO. 2 ENGINE WIRE

CAUTION:

Wear insulating gloves.

NOTICE:

Do not allow any foreign objects or water to enter the inverter with converter assembly.



(a) Temporarily install the No. 2 engine wire (high voltage cables of the air conditioning) and 4 bolts to the inverter assembly by hand.

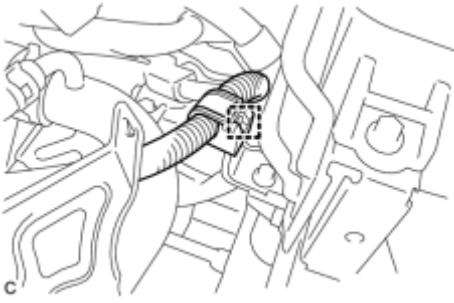
(b) Fully tighten the 4 bolts.

Torque: **8.0 N·m (82 kgf·cm, 71in·lbf)**

NOTICE:

Be sure to use a torque wrench to tighten the bolts.

(c) Connect the harness clamp.



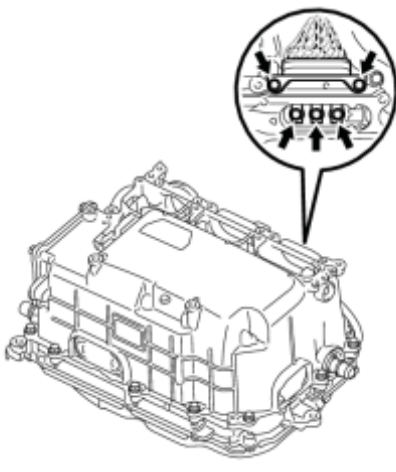
8. CONNECT HIGH VOLTAGE CABLE OF FRONT TRANSAXLE

CAUTION:

Wear insulating gloves.

NOTICE:

Do not allow any foreign objects or water to enter the inverter with converter assembly.



(a) Temporarily install the high voltage cable of the motor (MG2) and 5 bolts to the inverter assembly by hand.

(b) Fully tighten the 5 bolts.

Torque: **8.0 N·m (82 kgf·cm, 71in·lbf)**

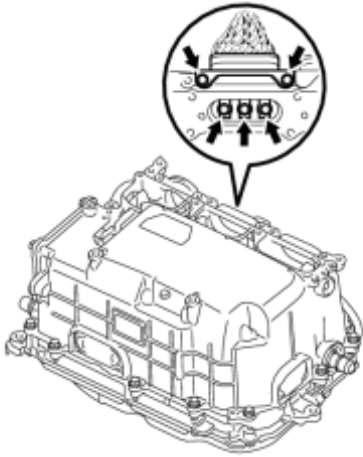
NOTICE:

Be sure to use a torque wrench to tighten the bolts.

(c) Connect the harness clamp.



c



c

(d) Temporarily install the high voltage cable of the generator (MG1) and 5 bolts to the inverter assembly by hand.

(e) Fully tighten the 5 bolts.

Torque: **8.0 N·m (82 kgf·cm, 71in·lbf)**

NOTICE:

Be sure to use a torque wrench to tighten the bolts.



(f) Install the cable and cover.

Text in Illustration

*1	Align Mark
----	------------

NOTICE:

Close the cover so that the matchmarks are not visible.

c

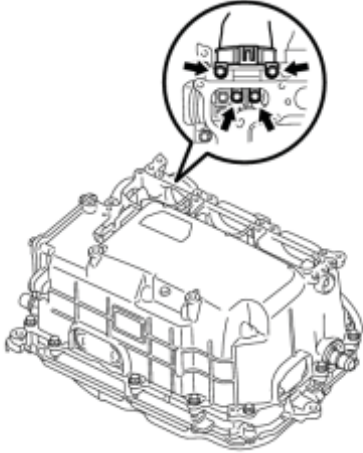
9. CONNECT FRAME WIRE

CAUTION:

Wear insulating gloves.

NOTICE:

- Make sure that the interlock is fully engaged.
- Do not allow any foreign objects or water to enter the inverter with converter assembly.



(a) Temporarily install the frame wire (high voltage cables of the hybrid battery) and 4 bolts to the inverter assembly by hand.

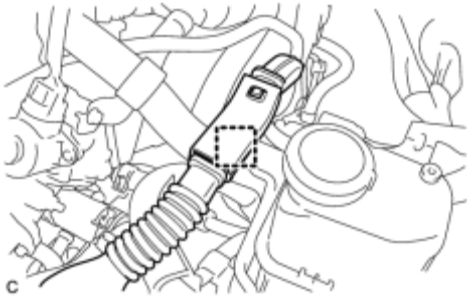
c

(b) Fully tighten the 4 bolts.

Torque: **8.0 N·m (82 kgf·cm, 71in·lbf)**

NOTICE:

Be sure to use a torque wrench to tighten the bolts.



(c) Connect the harness clamp.

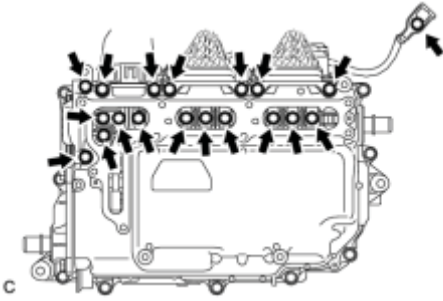
10. CHECK HIGH VOLTAGE CABLE CONNECTION

CAUTION:

Wear insulating gloves.

NOTICE:

Do not allow any foreign objects or water to enter the inverter with converter assembly.



(a) Check that each connector and terminal is firmly installed.

NOTICE:

Make sure that the bolts are fully tightened.

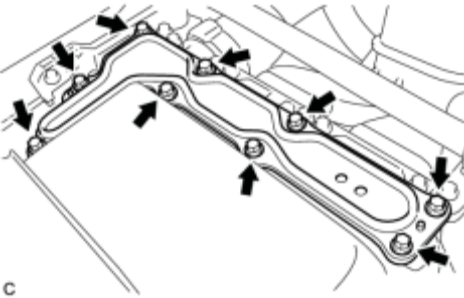
11. INSTALL INVERTER TERMINAL COVER

CAUTION:

Wear insulating gloves.

NOTICE:

- Make sure that the interlock is fully engaged.
- Do not allow any foreign objects or water to enter the inverter with converter assembly.



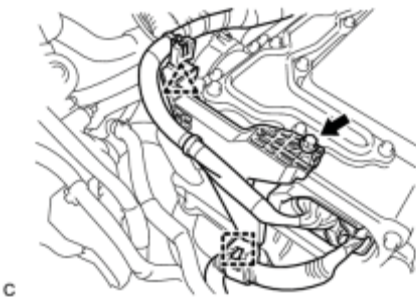
(a) Install the inverter terminal cover with the 9 bolts to the inverter with converter assembly.

Torque: **8.0 N·m (82 kgf·cm, 71in·lbf)**

12. INSTALL ENGINE ROOM MAIN WIRE

NOTICE:

- Make sure that the connectors are fully engaged.
- Do not allow any foreign objects or water to enter the inverter with converter assembly.

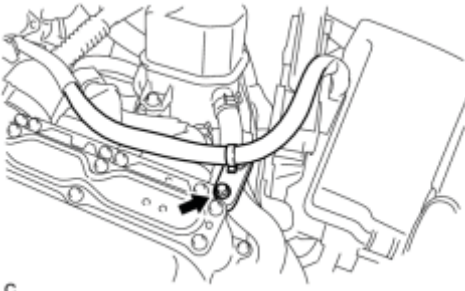


(a) Install the bolt, clamp and clip, and connect the engine room main wire.

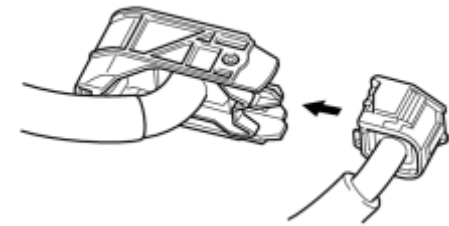
Torque: **12 N·m (122 kgf·cm, 9ft·lbf)**

(b) Install the bolt.

Torque: 12 N·m (122 kgf·cm, 9ft·lbf)

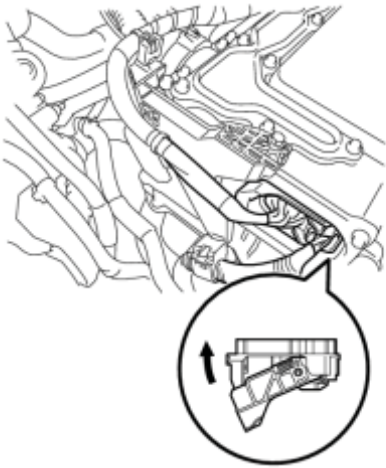


c



(c) Connect the engine wire to the engine room main wire.

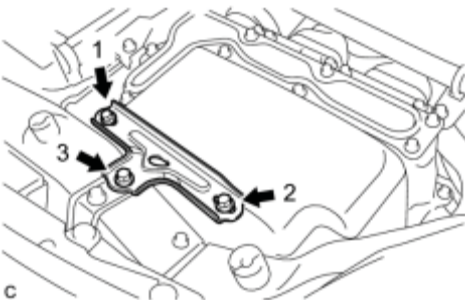
c



(d) Connect the connector to the inverter with converter assembly and lock the connector with the lock lever.

c

13. INSTALL NO. 1 INVERTER BRACKET



(a) Temporarily install the No. 1 inverter bracket with the 3 bolts.

c


(b) Tighten the 3 bolts in the order shown in the illustration.


Torque: 14 N·m (140 kgf·cm, 10ft·lbf)

14. INSTALL SERVICE PLUG GRIP INFO

15. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected .

16. INSTALL REAR NO. 3 FLOOR BOARD_ 

17. INSTALL REAR DECK FLOOR BOX_ 

18. INSTALL REAR NO. 2 FLOOR BOARD (for Separate Type)_ 

19. ADD COOLANT (for Inverter)_ 

20. INSPECT FOR COOLANT LEAK (for Inverter)_ 

21. INSTALL NO. 1 ENGINE UNDER COVER

22. INSTALL FRONT SPOILER COVER (w/ Front Spoiler)

23. INSTALL ENGINE UNDER COVER (w/ Cover)

24. INSTALL RADIATOR SUPPORT OPENING COVER_ 