

REPLACEMENT

NOTICE:

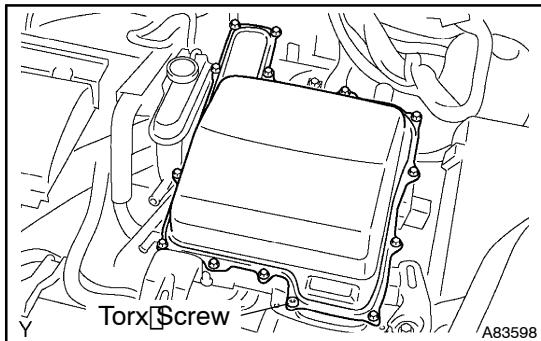
- When working on the high voltage systems, always wear insulating gloves.
- After removing the service plug grip, do not operate the power switch as it may damage the hybrid vehicle control ECU.
- Keep the removed service plug in your pocket to prevent other technicians from reconnecting it while you are servicing the vehicle.
- After removing the service plug grip, do not touch the high voltage connectors and terminals for 5 minutes.

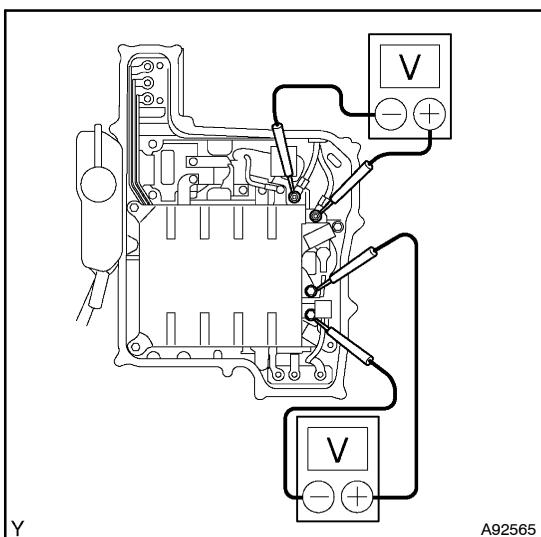
1.0 PRECAUTION (See page 21-8)

2. REMOVE ENGINE UNDER COVER LH
3. REMOVE ENGINE UNDER COVER RH
4. DRAIN HV COOLANT (See page 22-4)
5. REMOVE REAR FLOOR BOARD NO.2 (See page 21-120)
6. REMOVE DECK FLOOR BOX REAR (See page 21-120)
7. REMOVE REAR FLOOR BOARD NO.3 (See page 21-120)
8. DISCONNECT BATTERY NEGATIVE TERMINAL (See page 21-120)
9. REMOVE SERVICE PLUG GRIP (See page 21-120)
10. REMOVE FRONT WIPER ARM HEAD CAP (See page 66-16)
11. REMOVE FRONT WIPER ARM (DRIVER SIDE POSITION) (See page 66-16)
12. REMOVE FRONT WIPER ARM (PASSENGER SIDE POSITION) (See page 66-16)
13. REMOVE HOOD TO COWL TOP SEAL (See page 66-16)
14. REMOVE COWL TOP VENTILATOR LOUVER LH (See page 66-16)
15. REMOVE COWL TOP VENTILATOR LOUVER RH (See page 66-16)
16. REMOVE WINDSHIELD WIPER MOTOR & LINK ASSY (See page 66-16)
17. REMOVE COWL TOP PANEL SUB-ASSY OUTER FRONT (See page 11-16)
18. REMOVE RADIATOR SUPPORT OPENING COVER

19. REMOVE INVERTER COVER

- (a) Using a T30 Torx socket wrench, remove the Torx screw.
- (b) Remove the 12 bolts and inverter cover.





20. VERIFY THAT VOLTAGE OF W/CONVERTER INVERTER ASSY IS 0V

NOTICE:

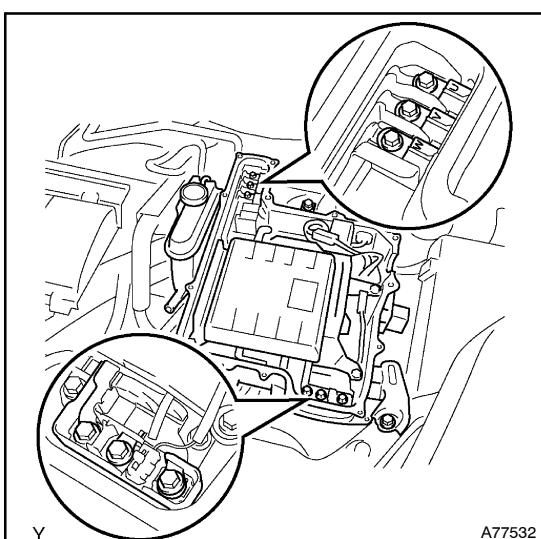
Wear insulating gloves.

(a) Using a voltmeter, measure the voltage of the high voltage DC line.

Standard: 0 V

HINT:

Use measuring range of DC 400 V or more on the voltmeter.

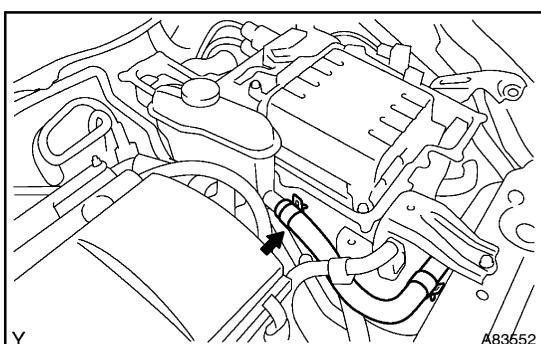


(b) Using the voltmeter, measure the voltage between the terminals of the three phase connector (U – V, V – W, U – W).

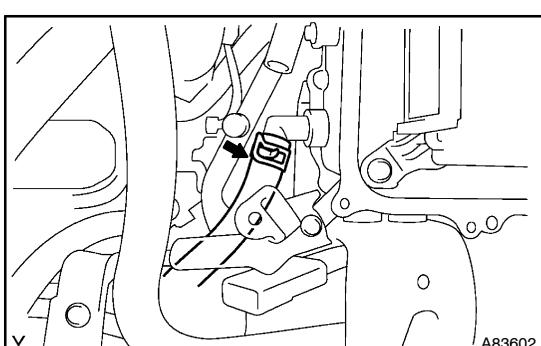
Standard: 0 V

HINT:

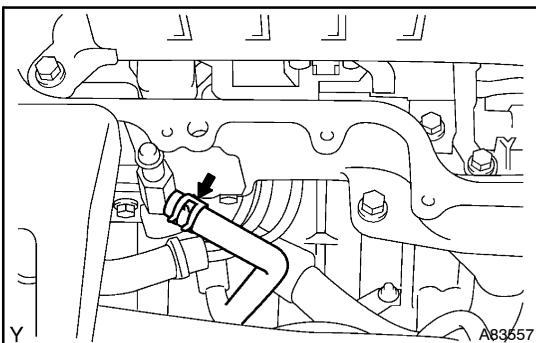
Use measuring range of DC 400 V or more on the voltmeter.



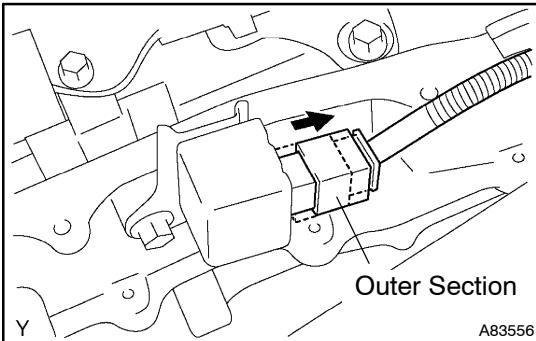
21. DISCONNECT INVERTER COOLING HOSE NO.2



22. DISCONNECT INVERTER COOLING HOSE NO.1

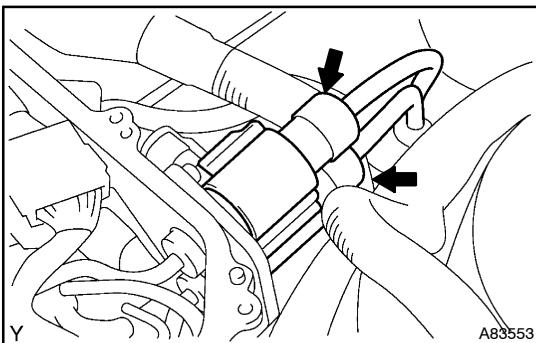


23. DISCONNECT INVERTER COOLING HOSE NO.6



24. SEPARATE CIRCUIT BREAKER SENSOR NO.1

(a) Move the outer section to the wire harness side as illustrated, then disconnect the circuit breaker sensor No. 1.



25. DISCONNECT FRAME WIRE

NOTICE:

- **Wear insulating gloves.**
- **After removing the service plug grip, be sure to wait for at least 5 minutes before performing any work.**
- **Insulate the electrode and connector parts with insulating tape.**

(a) Remove the 2 frame wire connectors from the with converter inverter assembly.

26. REMOVE W/CONVERTER INVERTER ASSY

(a) Using a small screwdriver, lift up the lock pin (green) as illustrated to unlock.

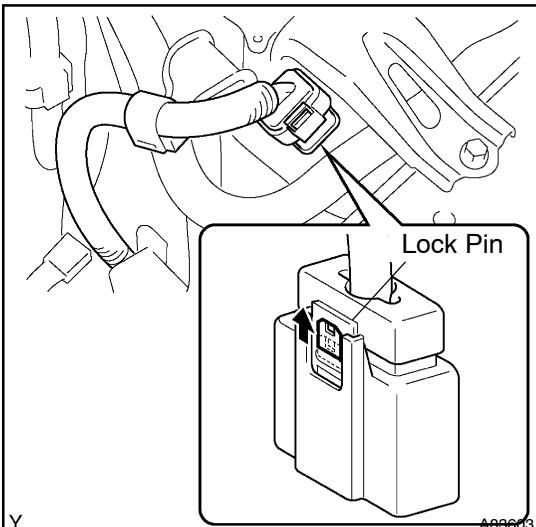
NOTICE:

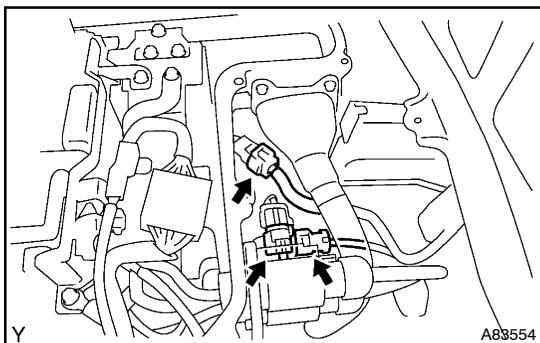
Wear insulating gloves.

(b) Disconnect the connector for the air conditioner inverter.

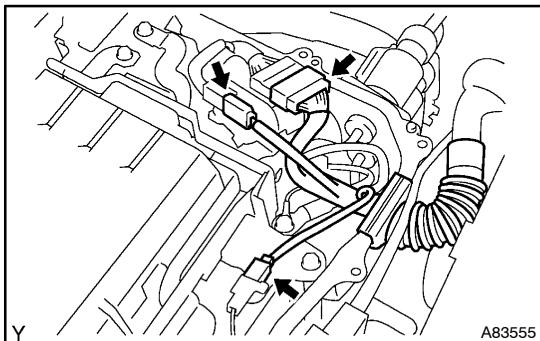
NOTICE:

Wear insulating gloves.

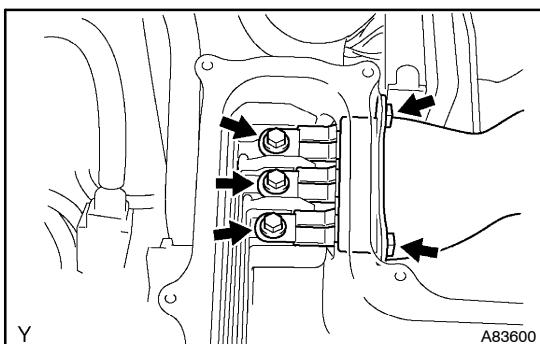




(c) Disconnect the 3 connectors shown in the illustration.



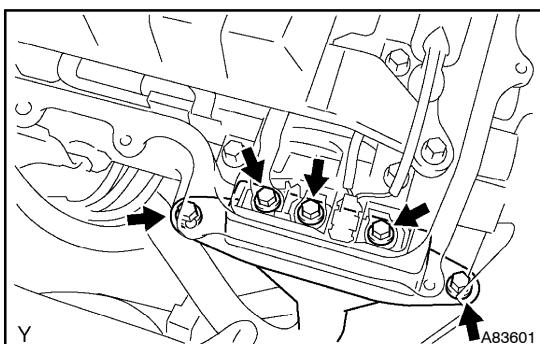
(d) Disconnect the 3 connectors shown in the illustration and the engine main wire harness.



(e) Remove the 5 bolts, then disconnect the MG2 power cable.

NOTICE:

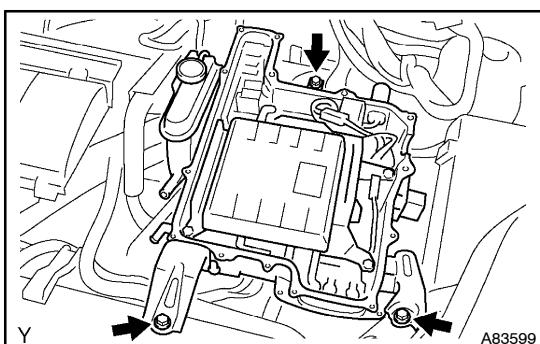
- **Wear insulating gloves.**
- **Insulate the connector parts with insulating tape.**



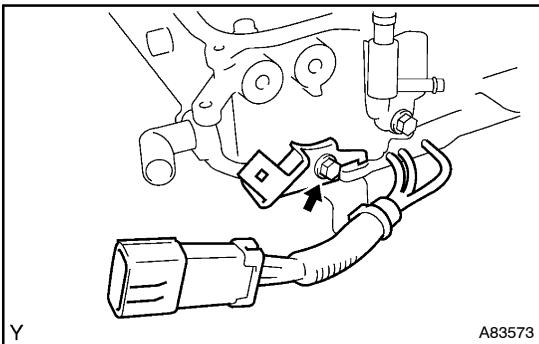
(f) Remove the 5 bolts, then disconnect the MG1 power cable.

NOTICE:

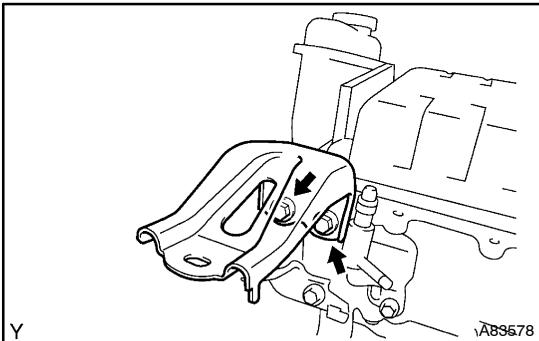
- **Wear insulating gloves.**
- **Insulate the connector parts with insulating tape.**



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

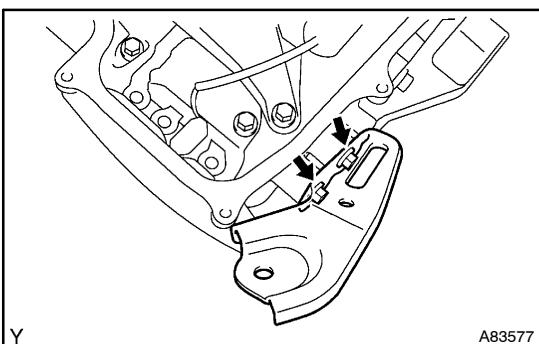


- (h) Disconnect the connector for the air conditioner inverter from the bracket.
- (i) Remove the bolt and connector bracket for the air conditioner inverter.



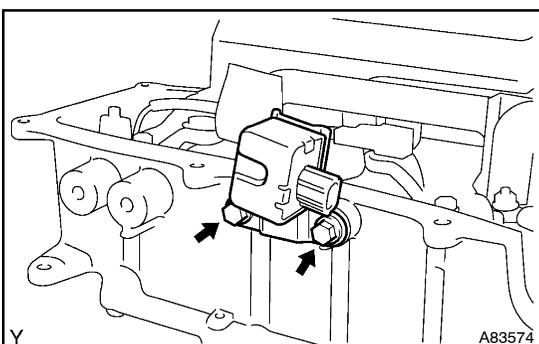
27. REMOVE INVERTER BRACKET NO.1

- (a) Remove the 2 bolts and inverter bracket No. 1.



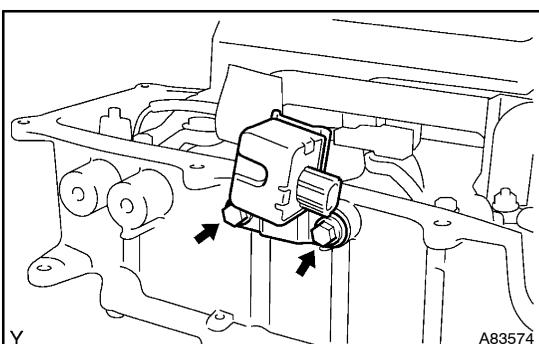
28. REMOVE INVERTER BRACKET NO.2

- (a) Remove the 2 bolts and inverter bracket No. 2.



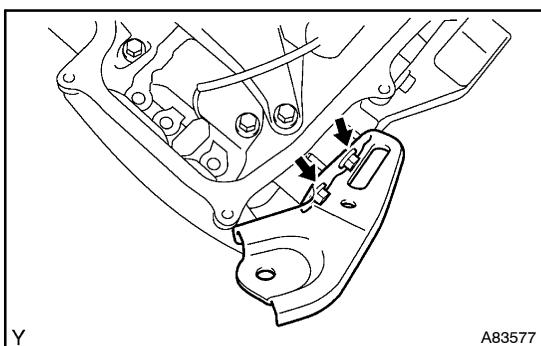
29. REMOVE CIRCUIT BREAKER SENSOR NO.1

- (a) Remove the 2 bolts and circuit breaker sensor No. 1.



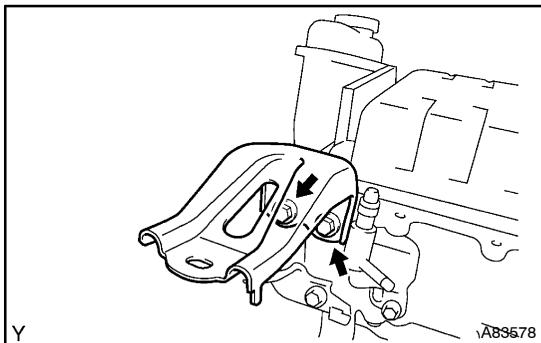
30. INSTALL CIRCUIT BREAKER SENSOR NO.1

- (a) Install the circuit breaker sensor No. 1 with the 2 bolts.
Torque: 8.0 N·m (82 kgf·cm, 71 in.·lbf)



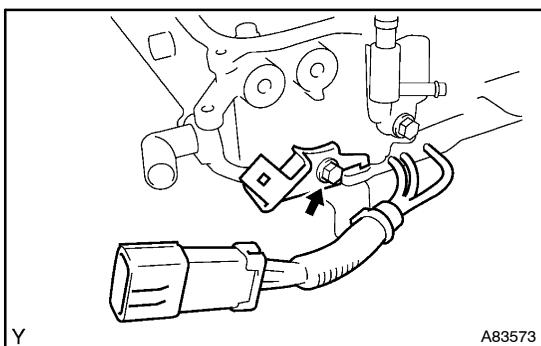
31. INSTALL INVERTER BRACKET NO.2

(a) Install the inverter bracket No. 2 with the 2 bolts.
Torque: 25 N·m (255 kgf·cm, 18 ft·lbf)



32. INSTALL INVERTER BRACKET NO.1

(a) Install the inverter bracket No. 1 with the 2 bolts.
Torque: 25 N·m (255 kgf·cm, 18 ft·lbf)



33. INSTALL W/CONVERTER INVERTER ASSY

(a) Install the connector bracket for the air conditioner inverter with the bolt.
Torque: 8.0 N·m (82 kgf·cm, 71 in·lbf)

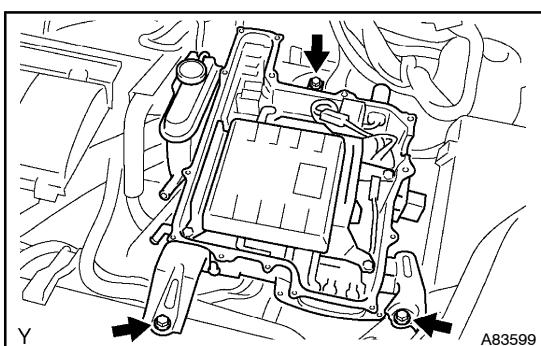
(b) Install the connector for the air conditioner inverter on the bracket.

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

NOTICE:

Wear insulating gloves.

Torque: 21 N·m (214 kgf·cm, 16 ft·lbf)

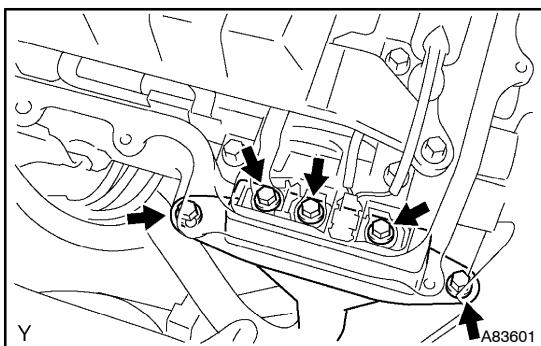


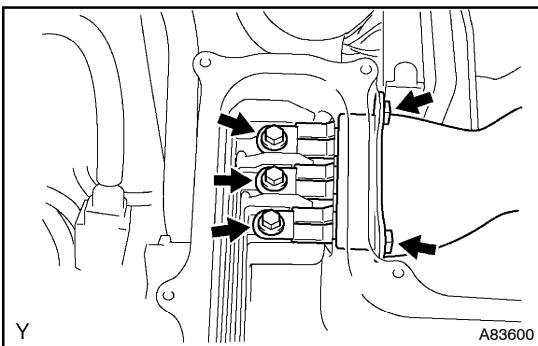
(d) Install the MG1 power cable to the MG1 power cable terminal with the 5 bolts.

NOTICE:

Wear insulating gloves.

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



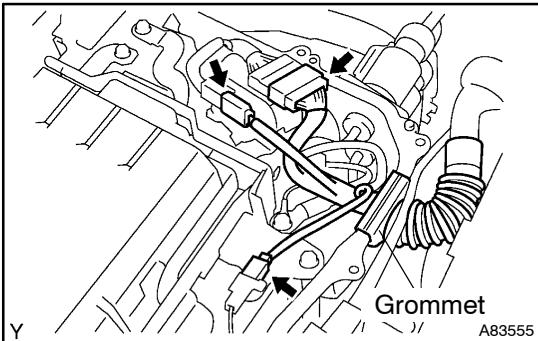


(e) Install the MG2 power cable to the MG2 power cable terminal with the 3 bolts.

NOTICE:

Wear insulating gloves.

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



(f) Connect the 3 connectors shown in the illustration.

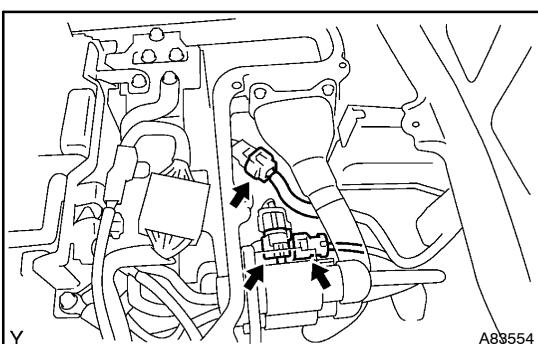
NOTICE:

Wear insulating gloves.

(g) Insert the grommet of the engine main wire harness into the U-shaped groove of the inverter case.

NOTICE:

Wear insulating gloves.



(h) Connect the 3 connectors shown in the illustration.

NOTICE:

Wear insulating gloves.

(i) Connect the connector for the air conditioner inverter, then lock the connector with the lock pin.

NOTICE:

Wear insulating gloves.

34. CONNECT FRAME WIRE

NOTICE:

Wear insulating gloves.

35. CONNECT CIRCUIT BREAKER SENSOR NO.1

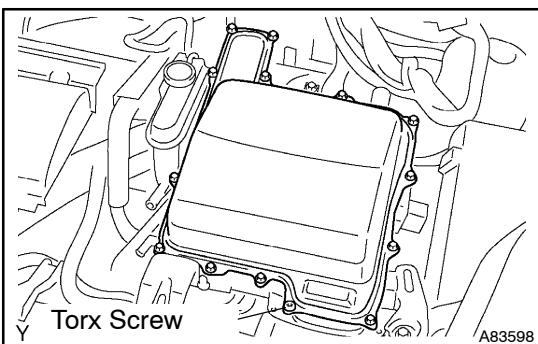
NOTICE:

Wear insulating gloves.

36. CONNECT INVERTER COOLING HOSE NO.6

37. CONNECT INVERTER COOLING HOSE NO.1

38. CONNECT INVERTER COOLING HOSE NO.2



39. INSTALL INVERTER COVER

(a) Temporarily fasten the inverter cover with the 12 bolts and Torx screw.

(b) Tighten the 12 bolts.

Torque: 11 N·m (112 kgf·cm, 8.1 ft·lbf)

(c) Using a T30 Torx socket wrench, tighten the Torx screw.

Torque: 11 N·m (112 kgf·cm, 8.1 ft·lbf)

- 40. INSTALL RADIATOR SUPPORT OPENING COVER
- 41. INSTALL COWL TOP PANEL SUB-ASSY OUTER FRONT
- 42. INSTALL WINDSHIELD WIPER MOTOR & LINK ASSY (See page 66-16)
- 43. INSTALL COWL TOP VENTILATOR LOUVER RH
- 44. INSTALL COWL TOP VENTILATOR LOUVER LH
- 45. INSTALL HOOD TO COWL TOP SEAL
- 46. INSTALL FRONT WIPER ARM (DRIVER SIDE POSITION) (See page 66-16)
- 47. INSTALL FRONT WIPER ARM (PASSENGER SIDE POSITION) (See page 66-16)
- 48. INSTALL FRONT WIPER ARM HEAD CAP
- 49. INSTALL SERVICE PLUG GRIP (See page 21-120)

NOTICE:

Wear insulating gloves.

- 50. CONNECT BATTERY NEGATIVE TERMINAL
Torque: 6.0 N·m (61 kgf·cm, 53 in.·lbf)
- 51. INSTALL REAR FLOOR BOARD NO.3
- 52. INSTALL DECK FLOOR BOX REAR
- 53. INSTALL REAR FLOOR BOARD NO.2
- 54. ADD HV COOLANT (See page 22-4)
- 55. CHECK FOR ENGINE COOLANT LEAKS (See page 6-2)
- 56. INSTALL ENGINE UNDER COVER RH
- 57. INSTALL ENGINE UNDER COVER LH
- 58. POWER WINDOW CONTROL SYSTEM INITIALIZE (See page 01-29)