

February 11, 2021

Version 1

Hybrid System Failure Message Comes On with DTC P1D8D

AFFECTED VEHICLES

| Year | Model | Trim Level | VIN Range |
|---------|------------------------|------------|--|
| 2018-19 | Clarity Plug-In Hybrid | ALL | ALL |
| 2020 | | ALL | JHMZC5***LC000001 thru JHMZC5***LC002657 |

SYMPTOM

The Hybrid System Failure message comes on the MID, and DTC P1D8D (Generator Motor Inverter Short) is stored.

POSSIBLE CAUSE

There is an internal failure of the Powertrain Control Unit (PCU).

CORRECTIVE ACTION

Replace the PCU.

PARTS INFORMATION

| Part Name | Part Number | Quantity |
|-----------------------------------|---------------|----------|
| Power Control Unit Assembly (PCU) | 1B000-5WJ-A05 | 1 |
| Cable Connector Bolt | 90130-5WM-A01 | 1 |
| DT Drain Plug O-Ring | 19012-671-300 | 1 |

REQUIRED MATERIALS

| Part Name | Part Number | Quantity |
|----------------|-------------|----------|
| Coolant Type 2 | OL999-9011 | 1 |

CUSTOMER INFORMATION: The information in this bulletin is intended for use only by skilled technicians who have the proper tools, equipment, and training to correctly and safely maintain your vehicle. These procedures should not be attempted by "do-it-yourselfers," and you should not assume this bulletin applies to your vehicle, or that your vehicle has the condition described. To determine whether this information applies, contact an authorized Honda automobile dealer.

WARRANTY CLAIM INFORMATION

The normal warranty applies.

| Operation Number | Description | Flat Rate Time | Defect Code | Symptom Code | Template ID | Failed Part Number |
|------------------|---|----------------|-------------|--------------|-------------|--------------------|
| 1181P3 | Replace the PCU (Includes DTC check and clear). | 2.5 hr | 03214 | 03217 | A21008A | 1B000-5WJ-A05 |

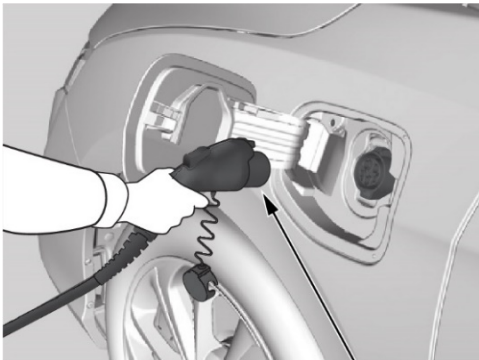
Skill Level: Repair Technician

REPAIR PROCEDURE

⚠ WARNING

- The power cables carry high voltage when the electric power system is energized. To avoid serious injury from electrical shock, do not turn on the system with the power cables disconnected.
- Wear insulated gloves and use insulated tools to protect you from electrical shock. When removing or installing high voltage items, always use them. Wrap the high voltage items with protective tape after removing. Please be careful when you see ⚠ on the illustration.

1. Turn the vehicle to ON.
2. Connect the i-HDS.
3. Select ELECTRIC POWERTRAIN system.
4. Check and clear DTC P1D8D, and note if any other DTCs are stored.
5. Turn the vehicle to OFF.
6. Make sure the charging connector is not connected to the vehicle.

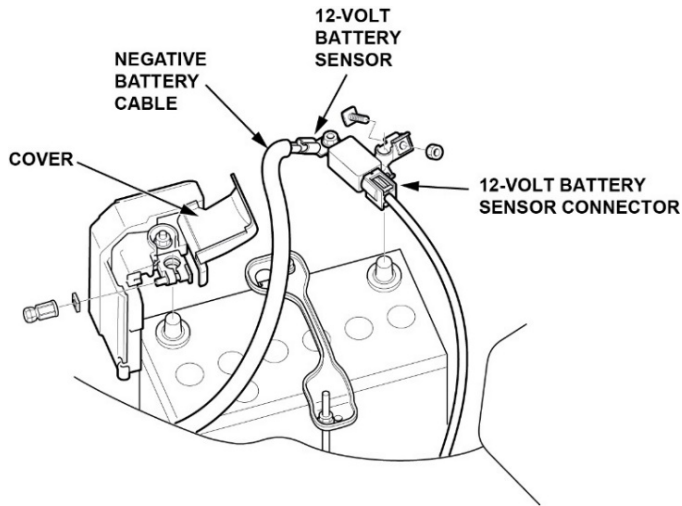


CHARGING CONNECTOR

7. Disconnect and isolate the negative cable with the 12-volt battery sensor from the 12-volt battery.

NOTE:

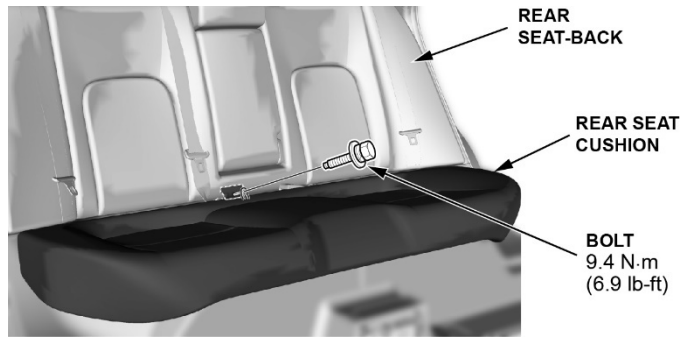
- Always disconnect the negative side first.
- To protect the connector from damage, do not hold it when removing the terminal.
- Do not disconnect the 12-volt battery sensor from the negative cable.



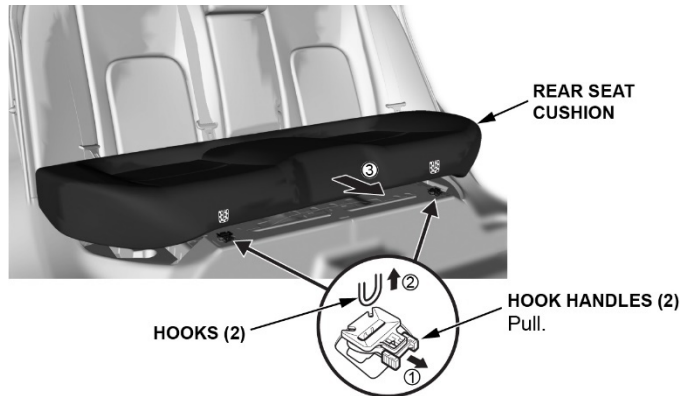
8. Open the cover. Remove it if necessary.

9. Disconnect the positive terminal from the 12-volt battery.

10. Remove the bolt between the rear seat-back and the rear seat cushion.

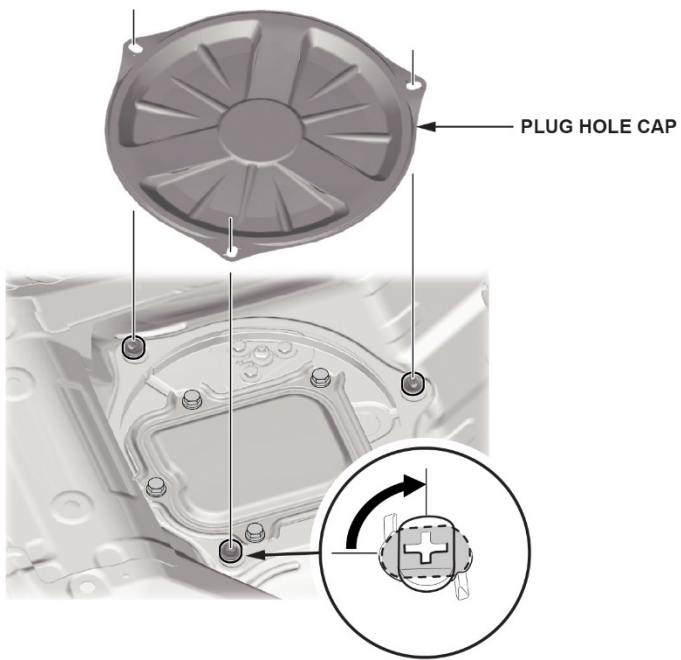


11. While pushing down on the seat cushion, pull the seat hook handles to release the hooks.

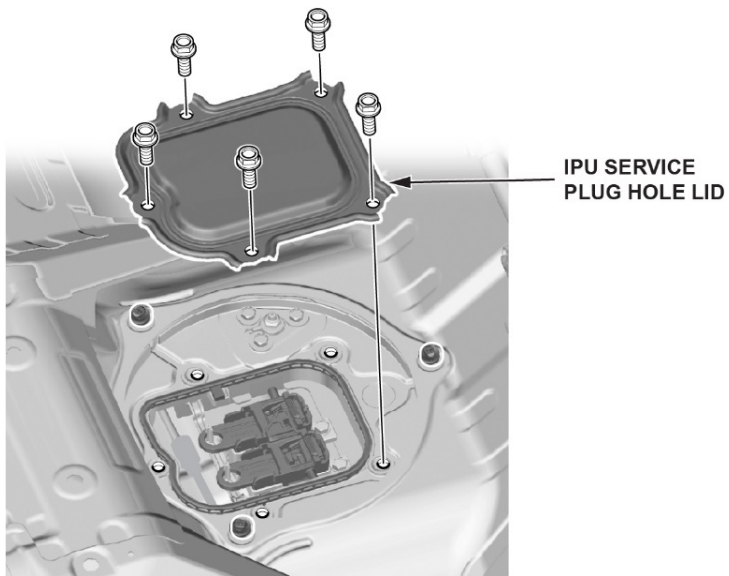


12. Remove the rear seat cushion.

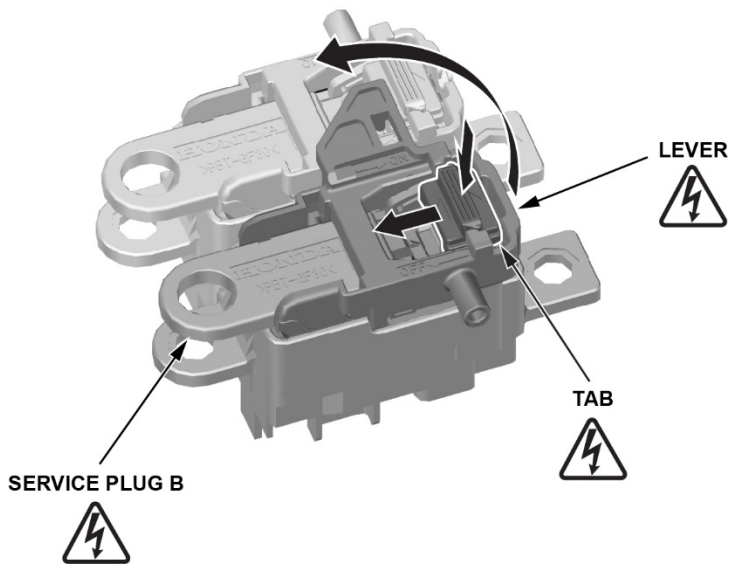
13. Remove the service plug hole cap.



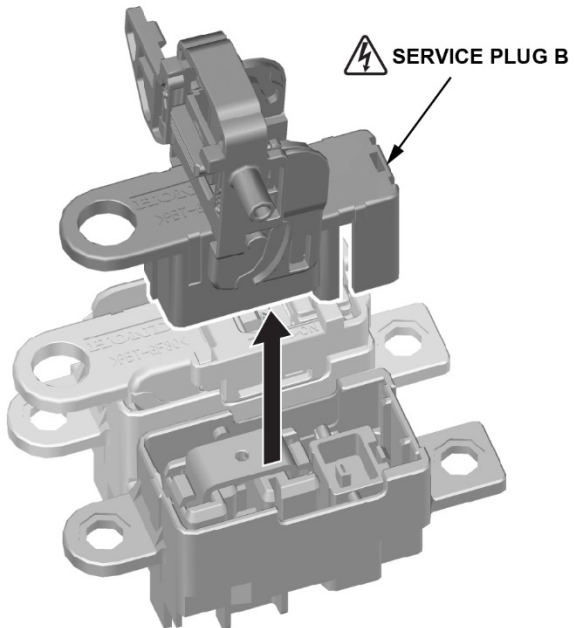
14. Remove the Intelligent Power Unit (IPU) service plug hole lid.



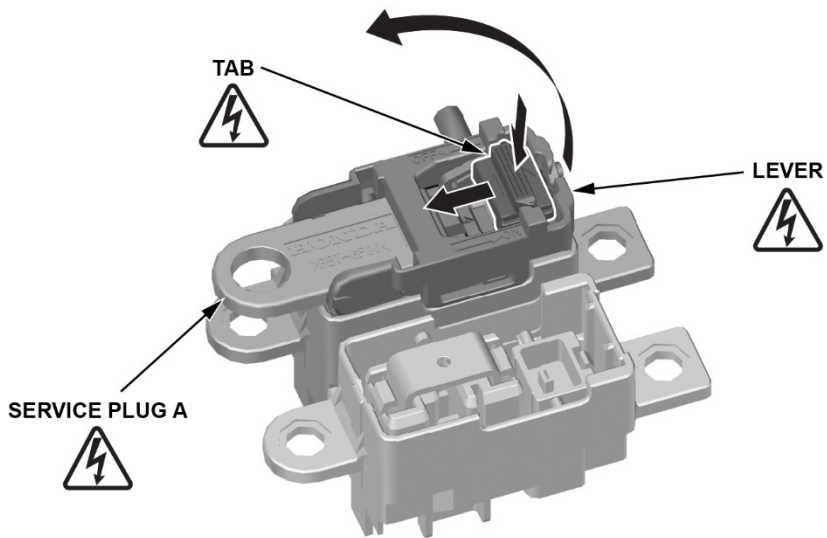
15. Raise the lever for service plug B while pushing and sliding the tab in the direction of the arrow.



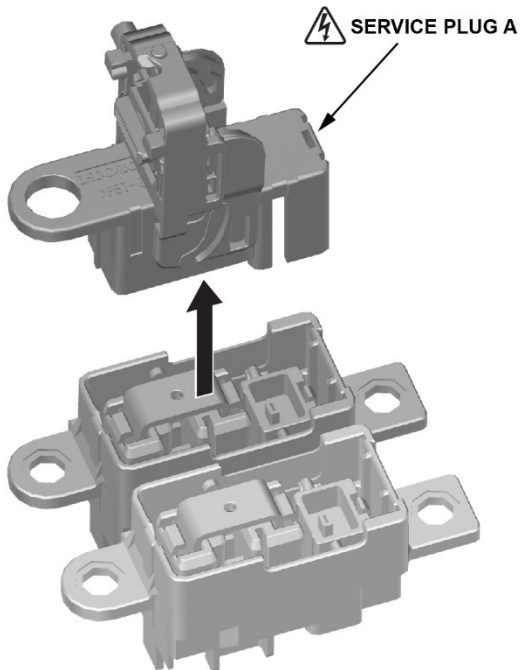
16. Remove service plug B.



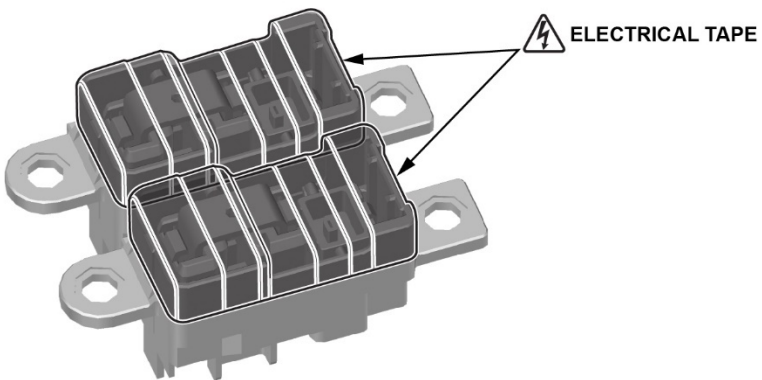
17. Raise the lever for service plug A while pushing and sliding the tab in the direction of the arrow.



18. Remove service plug A.



19. Wrap the service plug base with protective tape.



20. Connect the positive terminal to the 12-volt battery.

NOTE: Always connect the positive side first.

21. Connect the negative cable and the 12-volt battery sensor to the 12-volt battery.

NOTE: To protect the connector from damage, do not hold it when installing the terminal.

22. Turn the vehicle to ON.

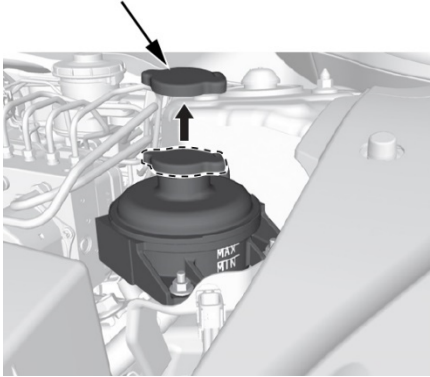
23. Select ELECTRIC POWERTRAIN system.

24. Select DATA LIST and check that V1 VOLTAGE (W1INV) is 30V or less.

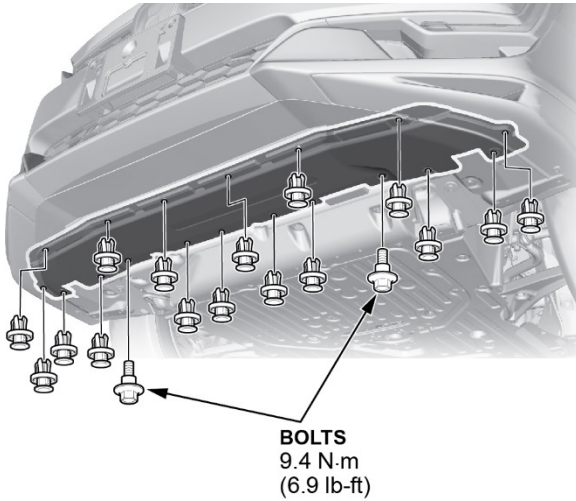
NOTE: If V1 VOLTAGE (W1INV) is higher than 30V, wait until it becomes 30V or less.

25. Make sure the DT coolant is cool, then carefully remove the DT coolant expansion tank cap.

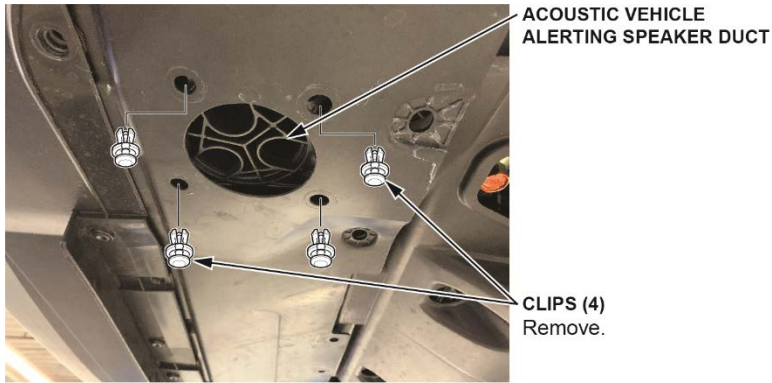
DT EXPANSION TANK



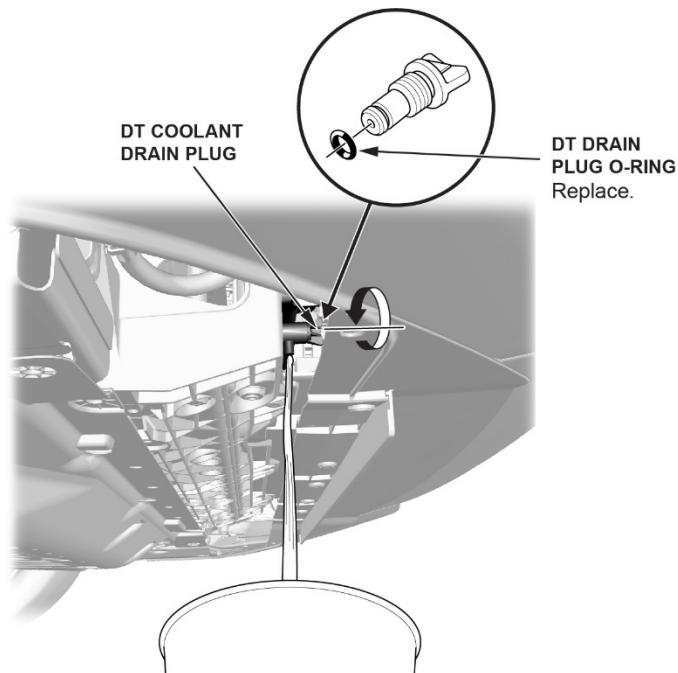
26. Remove the clips and hardware securing the front under cover.



2020 models only: Unclip the acoustic vehicle alerting speaker.

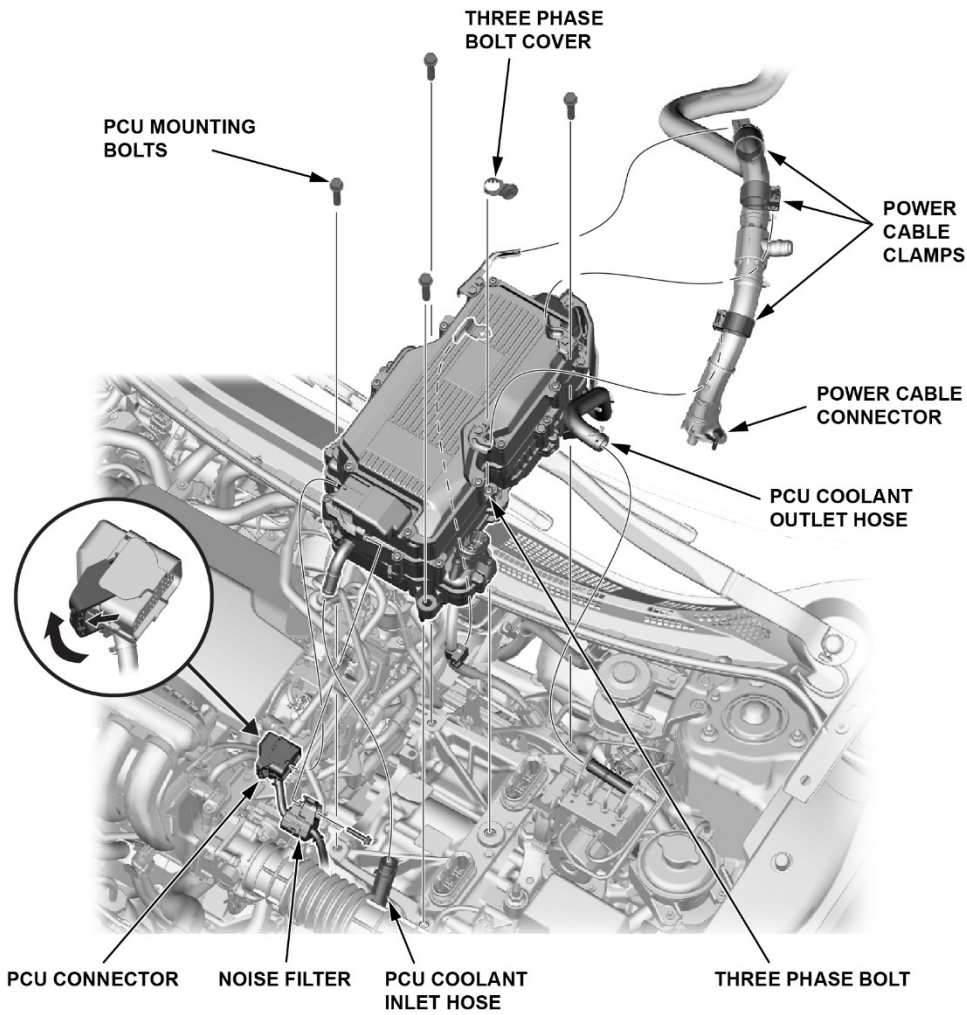


27. Loosen the DT coolant drain plug and drain the coolant.



28. After the coolant has drained, tighten the DT drain plug with a new O-ring.

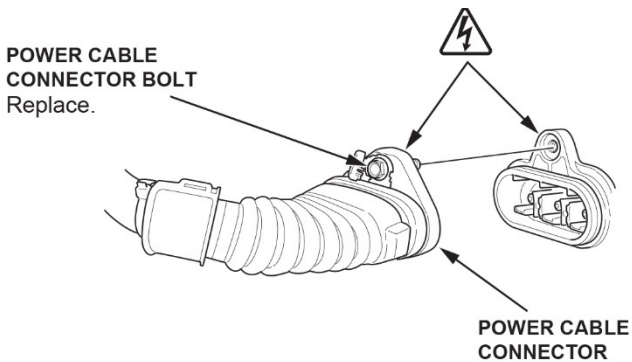
29. Disconnect the PCU connector and the noise filter.



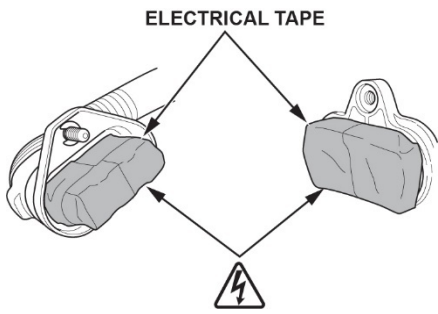
30. Disconnect the PCU coolant inlet and outlet hoses.

31. Remove the power cable clamps. Loosen the power cable connector bolt, then disconnect the power cable connector.

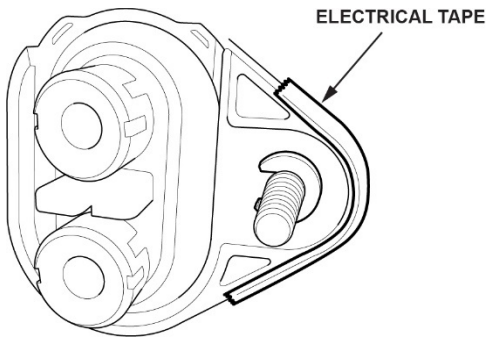
NOTE: If you see any damage, scratches, or deterioration of the coating on the aluminum portion of the connector or plastic parts, replace the cable.



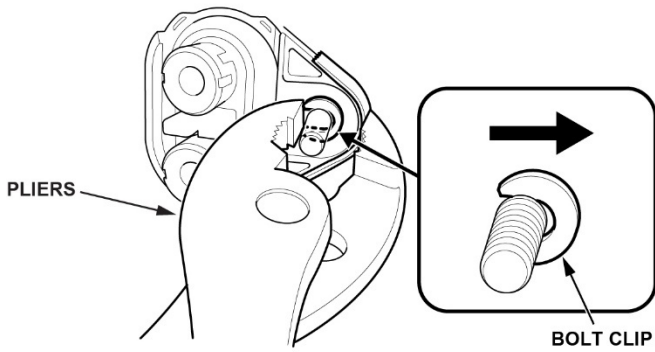
32. Wrap the connector with protective tape.



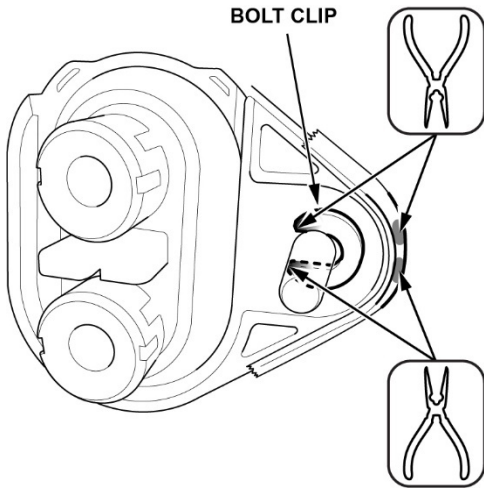
33. Apply protective tape to the connector as shown.



34. Using pliers, move the bolt clip in the direction shown.

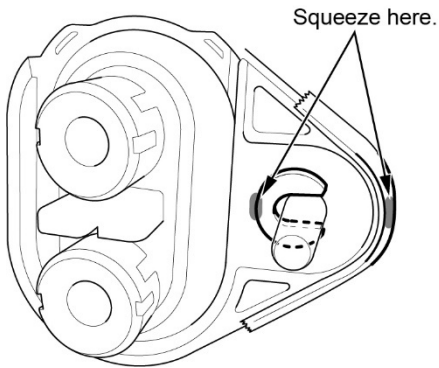


35. Position 2 pairs of long nose pliers on the areas as shown and remove the bolt clip by gripping the pliers tightly. Then, replace the bolt.

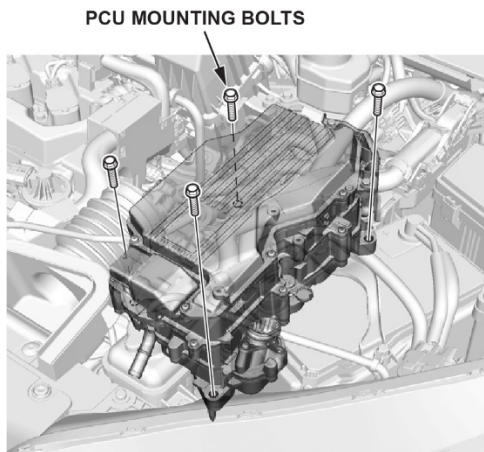


36. Place the bolt clip as shown. Position a pair of pliers on the areas as shown and install the clip by gripping the pliers tightly.

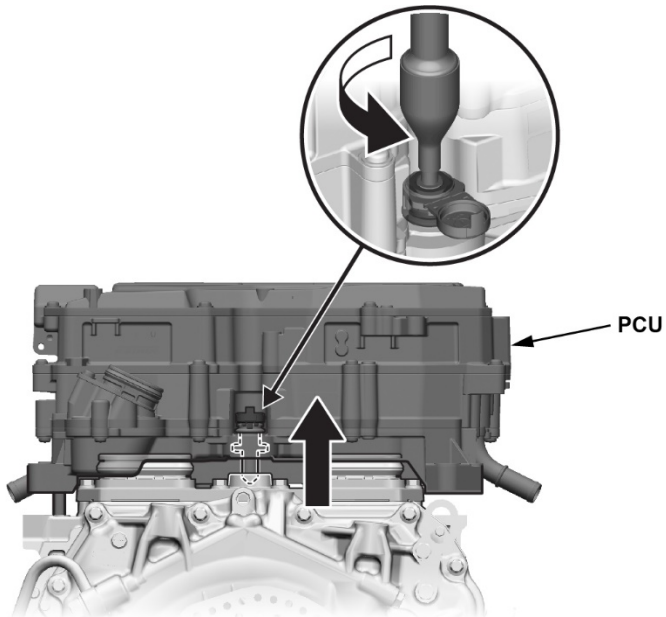
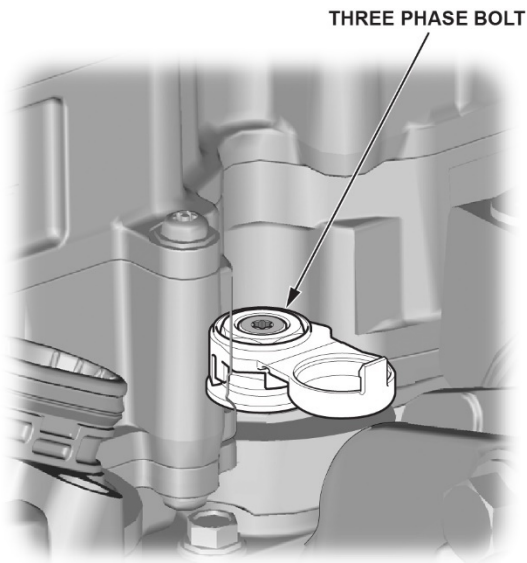
NOTE: Install the bolt clip into the bolt groove, not into the threads.



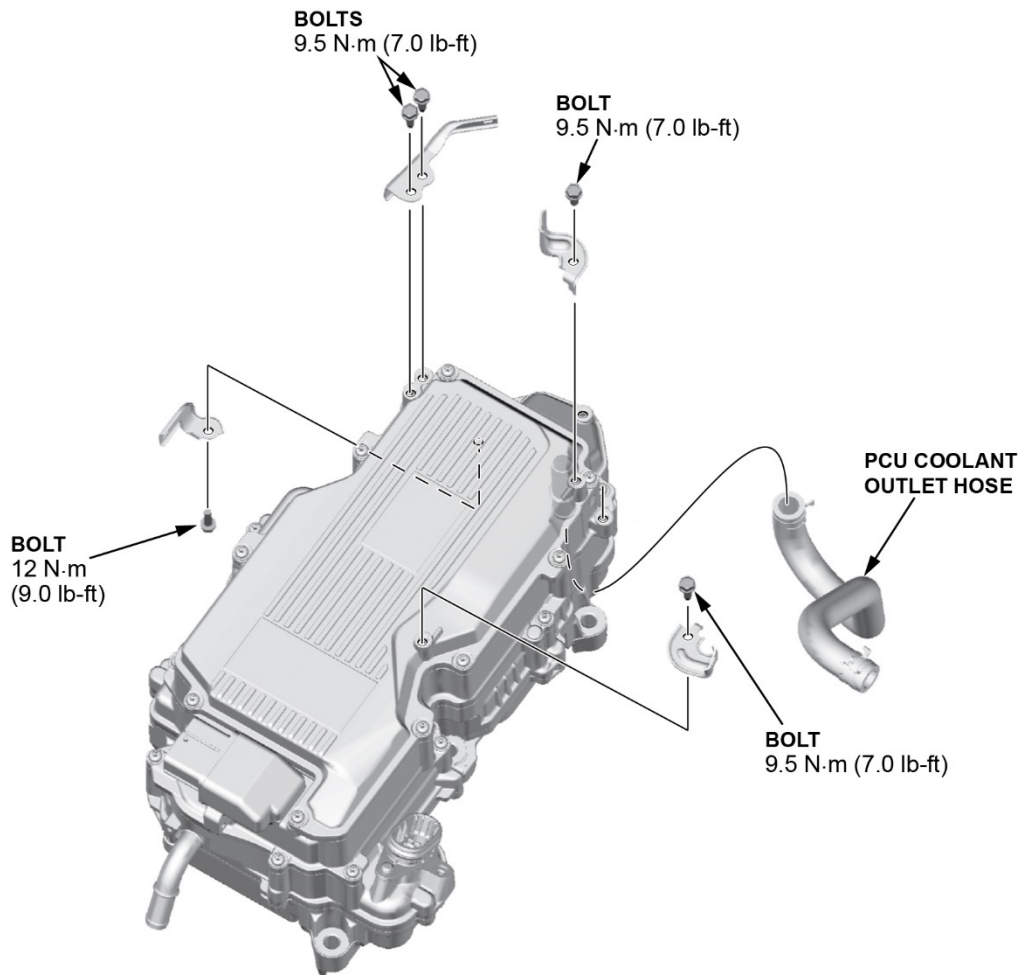
37. Remove the PCU mounting bolts.



38. Loosen the three phase bolt and remove the PCU.



39. Remove the PCU coolant outlet hose and brackets, then install them on the new PCU.

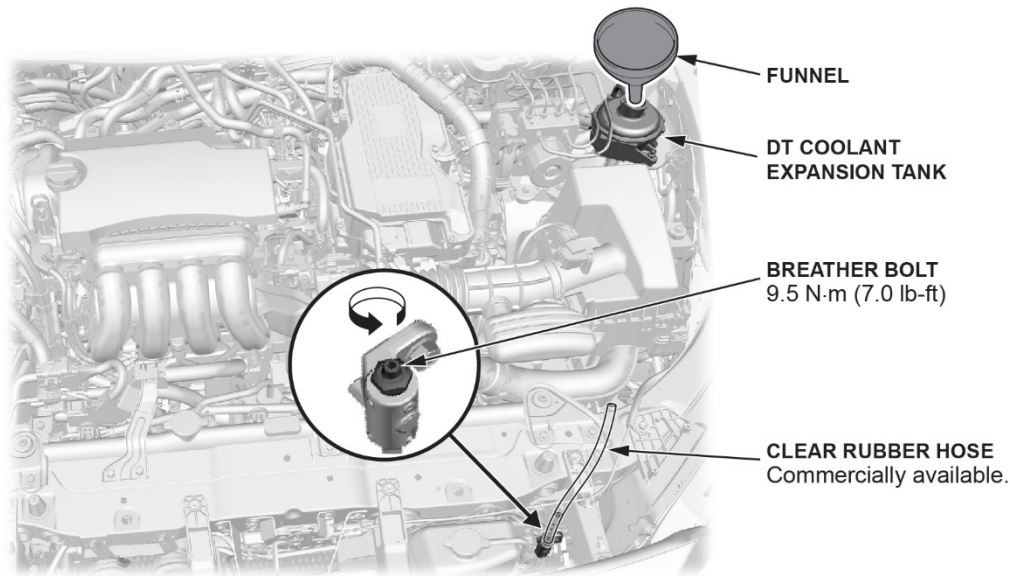


40. Install the new PCU assembly and removed parts in the reverse order of removal.

NOTE:

- Tighten the three phase bolt first, then tighten the PCU mounting bolts.
- Torque all fasteners to specification.

41. Attach a clear rubber hose to the breather bolt.



42. Loosen the breather bolt.

43. Install a coolant fill funnel to the DT expansion tank.

44. Pour Honda Long Life Antifreeze/Coolant Type 2 until the coolant fill funnel is filled.

NOTE: Pour coolant into the fill funnel as necessary during the bleeding process.

45. Wait until the bubbles stop coming out from the clear rubber hose, then tighten the breather bolt.

46. Connect a fully charged jumper battery to the vehicle, and leave it connected during the entire procedure to maintain steady voltage.

47. Turn vehicle to ON.

48. On the i-HDS, select the ELECTRIC POWERTRAIN system, then ADJUSTMENT, then DT COOLANT AIR BLEEDING. Select START to start the air bleeding.

NOTE:

- Do not run the DT electric water pump without coolant in the cooling system.
- Do not loosen the breather bolt when running the DT electric water pump.
- Watch the electric water pump speed during the procedure. If you do not see the speed fluctuate or hear operating noise from the water pump, exit the function and start over. In some cases, it may be necessary to restart the i-HDS.

49. Run the air bleeding for 10 minutes, then select STOP.

50. Exit the air bleeding and turn vehicle to OFF. Loosen the breather bolt and wait until the bubbles stop coming out of the clear rubber hose.

51. Tighten the breather bolt.

52. Remove the coolant fill funnel and the clear rubber hose.

53. Check the coolant level in the DT coolant expansion tank.

54. Turn the vehicle to ON.

55. On the i-HDS, select ADJUSTMENT MENU in the ELECTRIC POWERTRAIN system. Select MOTOR ROTOR POSITION SENSOR LEARNING, and follow the screen prompts.

56. Turn the vehicle to OFF.

57. Disconnect the 12-volt battery as shown in steps 7 through 9.

58. Install IPU service plugs A and B.

59. Do an all-DTC check and make sure DTC P1D8D is no longer present. If P1D8D is still stored, continue with normal troubleshooting.

NOTE: Some DTCs may have been introduced when V1 VOLTAGE (W1INV) was checked.

60. Install the remaining removed parts in the reverse order of removal.

NOTE: Torque all fasteners to specification.

END