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1992 FORD Orion OEM Service and Repair Workshop Manual

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C1035C-38	Ω	C1458A-K3

Is the resistance less than 3 ohms?

Yes	GO to CE10

No	REPAIR the open circuit.

CE10 CHECK THE INVERTER SYSTEM CONTROLLER (ISC) VPWR CIRCUITS FOR A SHORT TO VOLTAGE

NOTE

Do not use dielectric grease in the Inverter System Controller (ISC) connector.

- Measure and record:

Positive Lead	Measurement / Action	Negative Lead
C1458A-L2	V⎓	Ground
C1458A-M2	V⎓	Ground

Is any voltage present?

Yes	REPAIR the short circuit. CLEAR the diagnostic trouble codes (DTCs) and REPEAT the self-test.

No	GO to CE11

CE11 CHECK THE INVERTER SYSTEM CONTROLLER (ISC) VPWR CIRCUITS FOR VOLTAGE

Do not use dielectric grease in the Inverter System Controller (ISC) connector.

- Ignition OFF.
- Disconnect GWM (gateway module A) C2431A .
- Measure and record:

Positive Lead	Measurement / Action	Negative Lead
C2431-19	Ω	C1458A-G1
C2431-20	Ω	C1458A-F1

Are the resistances less than 5 ohms?

Yes	GO to CE15

No	REPAIR the open circuit. CLEAR the diagnostic trouble codes (DTCs) and REPEAT the self-test.

CE13 CHECK THE INVERTER SYSTEM CONTROLLER (ISC) ISP-R CIRCUIT FOR VOLTAGE

NOTE

Do not use dielectric grease in the Inverter System Controller (ISC) connector.

- Ignition OFF.
- Connect BCMC (body control module C) C1035C .
- Ignition ON.
- Measure and record:

Positive Lead	Measurement / Action	Negative Lead

Do not use dielectric grease in the Inverter System Controller (ISC) connector.

- Disconnect and inspect all the Inverter System Controller (ISC) connectors.
- Visually inspect for:
  - Spread or loose terminals
  - Corrosion
  - Damaged, bent or pushed out pins

Is a concern present?

Yes	REPAIR as necessary. CLEAR the diagnostic trouble codes (DTCs) and REPEAT the self-test.

No	GO to CE16

CE16 CHECK THE INVERTER SYSTEM CONTROLLER (ISC) FOR CORRECT OPERATION

High Voltage Battery Coolant Temperature Sensor

303-14F Electric Powertrain Control - 3.5L V6 PowerBoost (CN)	***2022 F-150***
Removal and Installation	***Procedure revision date: 10/5/2020***

High Voltage Battery Coolant Temperature Sensor

Removal

1. **NOTE**

   Removal steps in this procedure may contain installation details.

   Drain the Electric Powertrain Cooling System.

   Refer to: Cooling System Filling and Bleeding(303-03F Electric Powertrain Cooling - 3.5L V6 PowerBoost (CN), General Procedures).

2. Disconnect the electrical connector. Remove the clip and the high voltage battery coolant temperature sensor.

Inverter System Controller [SOBDMC]

303-14F Electric Powertrain Control - 3.5L V6 PowerBoost (CN)	***2022 F-150***
Removal and Installation	***Procedure revision date: 08/11/2022***

Inverter System Controller [SOBDMC]

Removal

1. **NOTE**

   Removal steps in this procedure may contain installation details.

   De-energize the high voltage system.

   Refer to: High Voltage System De-energizing - Full Hybrid Electric Vehicle (FHEV)(414-03A High Voltage Battery, Mounting and Cables, General Procedures).

2. **WARNING**

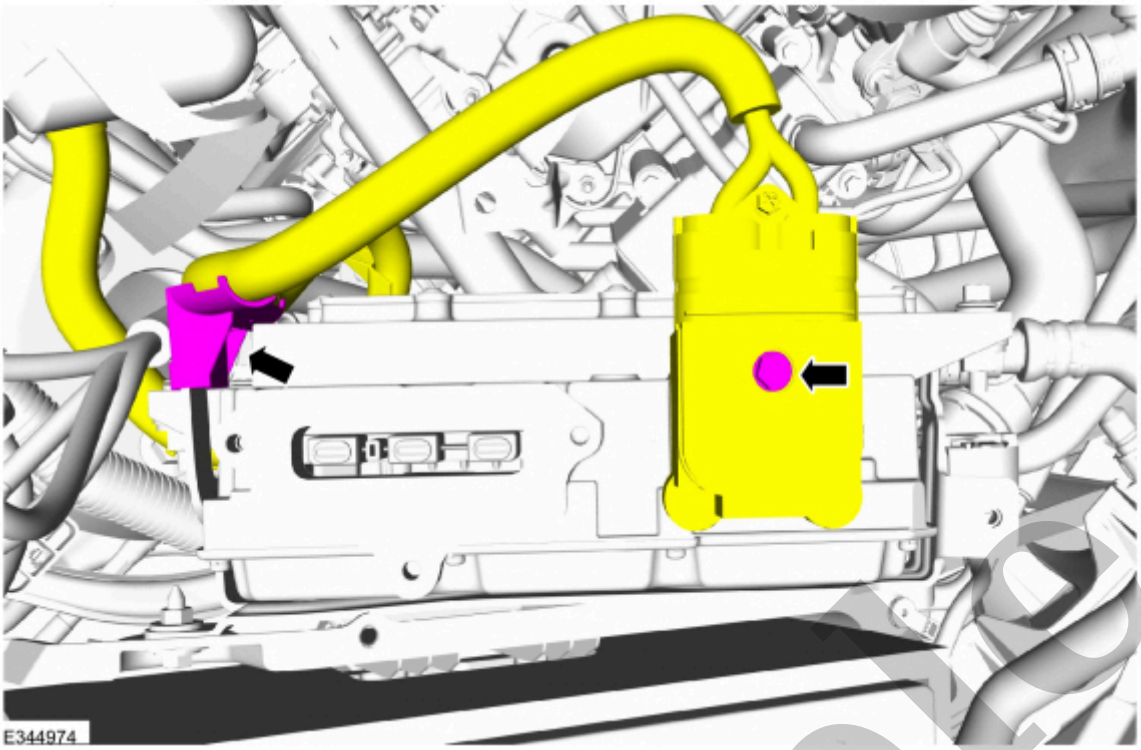
   Disconnect the 12 volt battery before servicing the direct current to alternating current (DC-AC) inverter or alternating current (AC) powerpoint to prevent the risk of high voltage shock. Failure to follow this instruction may result in serious personal injury.

   NOTE

   This step is only necessary when installing a new component.

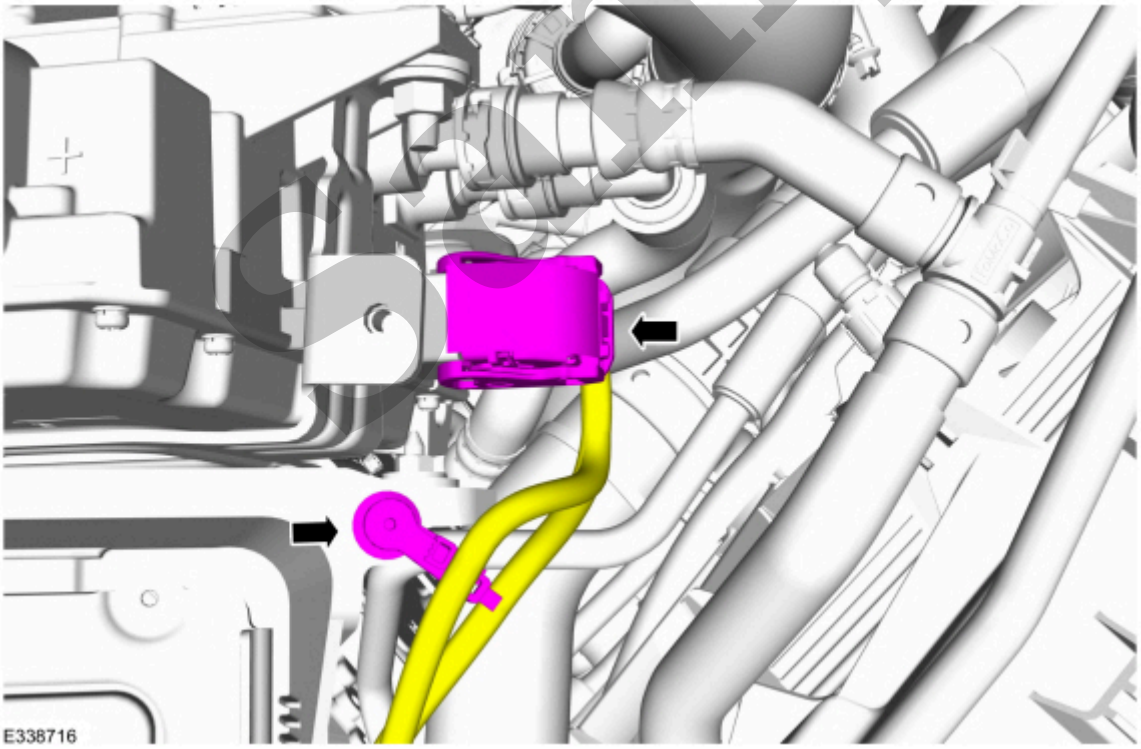
   Download the inverter system controller [SOBDMC] information to the diagnostic tool using the Programmable Modules Installation routine.

   Refer to: Module Programming(418-01A Module Configuration, General Procedures).



Click here to learn about symbols, color coding, and icons used in this manual.

8. Disconnect the electrical connector and harness retainer.



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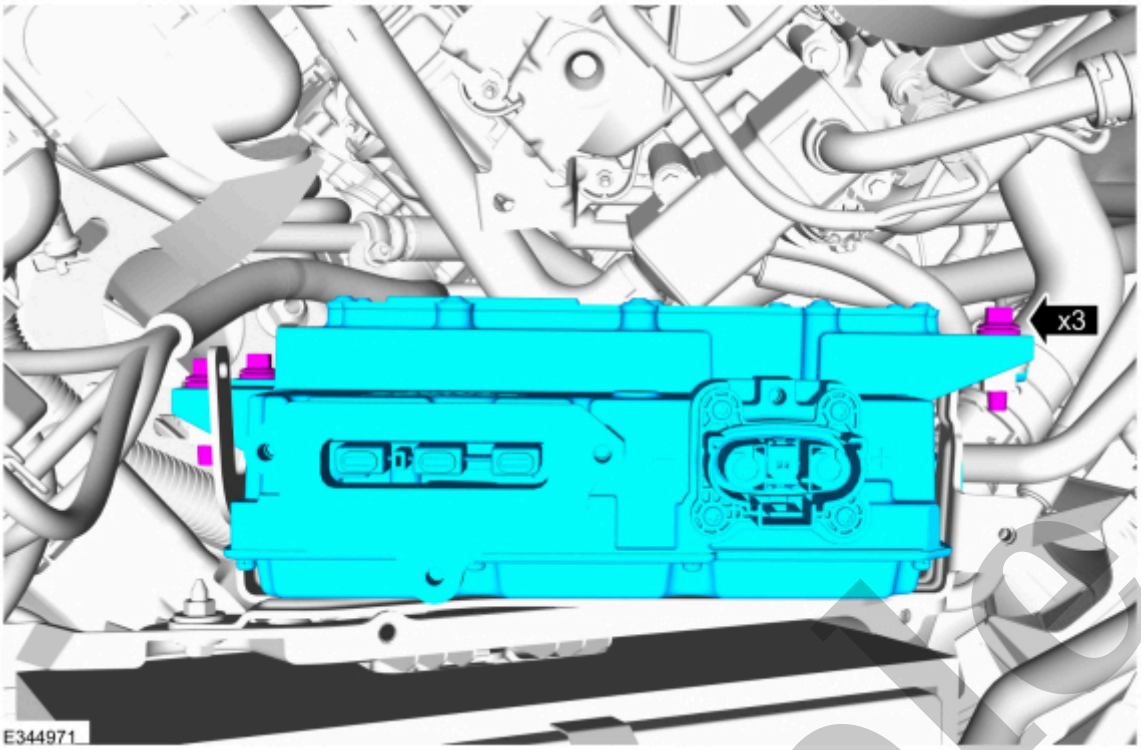


Click here to learn about symbols, color coding, and icons used in this manual.

Installation

1. **NOTE**

   Steps For ISC LV Harness Connector Assembling:

   NOTE

   1. Ensure the Harness Connector is fully seated with the ISC header when pluged in.

   NOTE

   2. Ensure ISC header and harness connector are aligned properly, no drooping.

   NOTE

   3. Gently close the latch clockwise.

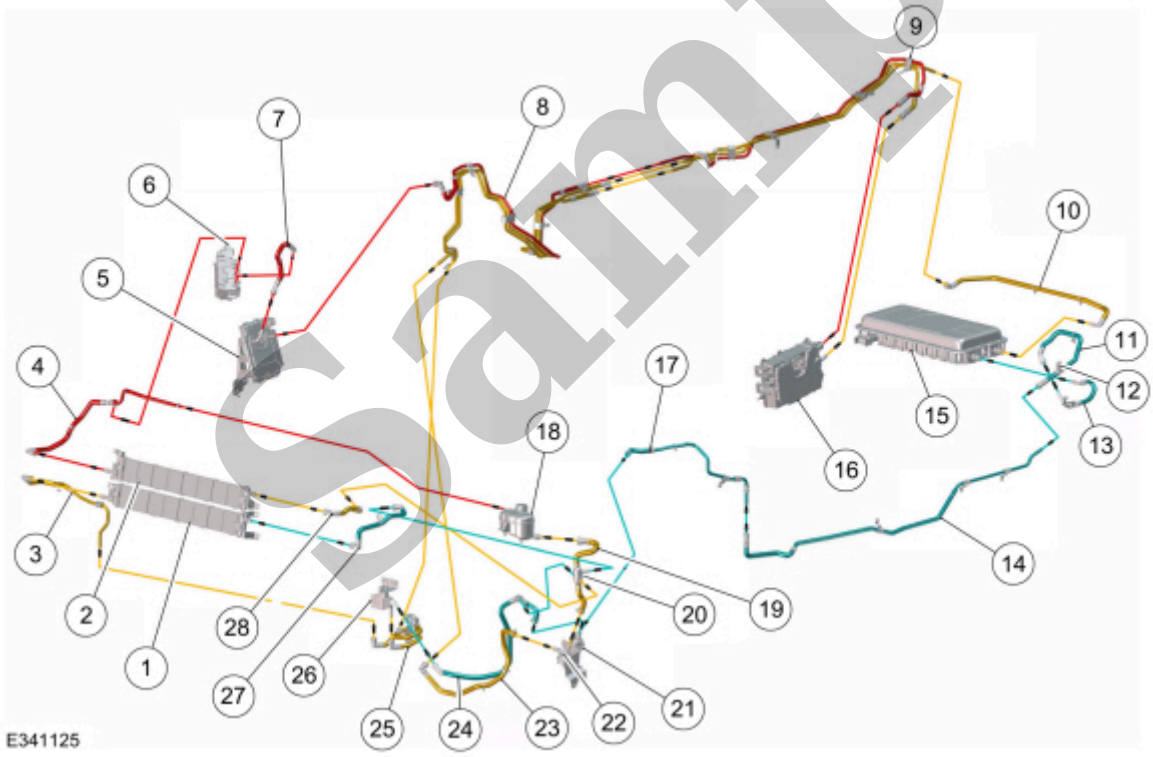
   NOTE

Electric Powertrain Cooling - Component Location

303-03F Electric Powertrain Cooling - 3.5L V6 PowerBoost (CN)	***2022 F-150***
Description and Operation	***Procedure revision date: 02/15/2022***

Electric Powertrain Cooling - Component Location

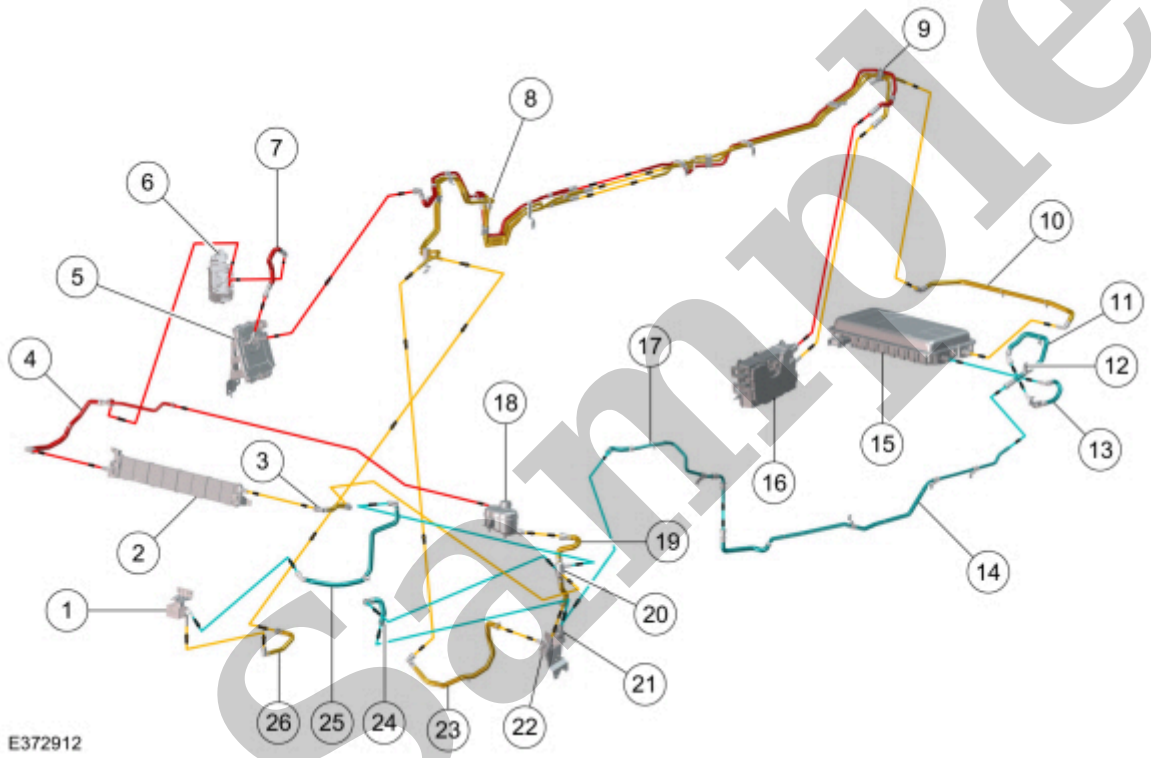
With high voltage battery radiator



Item	Description
1	High voltage battery radiator
2	Motor electronics radiator

24	High voltage battery coolant pump inlet hose
25	High voltage battery coolant diverter valve
26	High voltage battery coolant cooler
27	High voltage battery radiator outlet hose
28	Motor electronics radiator outlet hose

Without high voltage battery radiator



Item	Description
1	High voltage battery coolant cooler
2	Motor electronics radiator
3	Motor electronics radiator outlet hose
4	Motor electronics radiator inlet hose
5	DCDC (direct current/direct current converter control module)