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**Article No.  
03-12-1**

- **ELECTRICAL - THINK NEIGHBOR - GAUGE INOPERATIVE OR INACCURATE - VEHICLE DOES NOT MOVE FORWARD OR REVERSE - VEHICLE DOES NOT CHARGE PROPERLY**

Publication Date: June 4, 2003

**THINK:** 2002 THINK NEIGHBOR

**ISSUE:**

Some 2002 Think Neighbor vehicles may exhibit a gauge malfunction, gauge failure or the inability to move forward or reverse.

**ACTION:**

The folling Service Procedure will help further seal the DC connector to the onboard battery charger. Moisture in the connector is directly linked to gauge failure.

**SERVICE PROCEDURE**



**WARNING: CONTINUE TO USE ALL APPROPRIATE HIGH VOLTAGE SAFETY PROCEDURES WHEN WORKING ON A VEHICLE.**



**WARNING: THE BATTERY PACK ASSEMBLY CAN DELIVER IN EXCESS OF 72 VOLTS OF DC POWER. IMPROPER HANDLING OF THE BATTERY PACK CAN RESULT IN INJURY OR FATALITY. ONLY AUTHORIZED PERSONNEL TRAINED TO WORK WITH BATTERY PACK COMPONENTS ARE PERMITTED TO HANDLE THE BATTERIES.**



**WARNING: THE BATTERY PACK CONTAINS HIGH VOLTAGE COMPONENTS AND WIRING. HIGH VOLTAGE INSULATED SAFETY GLOVES AND FACE SHIELD MUST BE WORN WHEN PERFORMING THE FOLLOWING STEPS. FAILURE TO FOLLOW THIS WARNING MAY RESULT IN SEVERE PERSONAL INJURY OR DEATH. THE ILLUSTRATIONS DO NOT SHOW GLOVES BEING WORN SO THAT THE PROPER SEALING TECHNIQUE COULD BE ILLUSTRATED.**



**WARNING: MAKE SURE THE VEHICLE IS NOT BEING CHARGED.**

To insure gauge long-term reliability, the following DC charger connection seal must be performed.

**Disable The Battery Pack**

1. Remove key from ignition.
2. Remove seat cushions.
3. Remove seat belt access panel.
4. Remove seat stanchion covers.
5. Remove seat belt buckle bolts.
6. Remove both front seats.

7. Turn Service Disconnect Switch (SDS) to the off position.
8. Disable the battery pack. Refer to Steps a through j referenced from the "Power Shut Down Procedure" in the Electrical Section of the Service Manual.
  - a. Connect the capacitor discharge tool to discharge the motor controller.
  - b. Touch the negative probe of the Digital Volt-Ohm Meter (DVOM) to the B- (Battery Negative, labeled "BATT 1 NEG").
  - c. Touch the positive probe of the DVOM to the load side of the 10-amp fuse for the motor controller circuit. This will be the spade connector closest to the front of the fuse holder and it is labeled "GAUGE/MTR-CNTR".
  - d. The DVOM will display any voltage present. Repeat steps a and b if DVOM reads more than 0 volts.
  - e. To discharge the DC/DC converter 1 (standard) or DC/DC converter 2 (optional), touch the negative probe of the DVOM to the B- (Battery Negative, which is labeled "BATT 1 NEG").
  - f. Touch the positive probe of the DVOM to the load side of the 10-amp fuse for the DC/DC circuit. This will be the spade connector closest to the front of the fuse holder and it is labeled "DC/DC".
  - g. The DVOM will display any voltage present. Repeat steps a and b if DVOM reads more than 0 volts.
  - h. With a DVOM, measure the resistance from the battery negative terminal to the chassis. If the resistance is over 40K ohms proceed.
  - i. With a DVOM measure the resistance from the battery positive terminal to the chassis, if it is above 40K ohms proceed. If the resistance is below 40K in steps h & i, break the battery pack connection by removing at the post that has the most clearance with the frame and diagnose the electrical problem.
  - j. Disconnect the battery cables between battery 2 & 3 and between battery 4 & 5, wrap the terminals on the cables with electrical tape. Battery location can be referenced at [Figure 10](#).

### **Sealing The Onboard Charger DC Connection**

1. Remove the DC connection from the onboard charger as seen in [Figure 1](#).
2. Separate the back shell from housing as shown in [Figure 2](#). A description of the various parts of the DC connector is shown in [Figure 3](#).
3. Saturate the area between the wires at the back of the housing with Clear Silicone Rubber F7AZ-19554-CA as shown in [Figure 4](#).
4. Fill the back shell with sealer as shown in [Figure 5](#). Connect the back shell and housing together, be careful not to twist wires going into the housing. Wipe the excess sealer away with a clean rag.
5. Squeeze sealer into the rear of the back shell as shown in [Figure 6](#). Tighten down the strain relief to the back shell. Wipe away any excess sealer with a clean rag.
6. Squeeze sealer into the top of the strain relief as shown in [Figure 7](#). Wipe away any excess sealer with a clean rag.
7. Connect the DC connector to the onboard charger, make sure the coupling ring is secure to the on board charger. Position the connection in the down position as shown in [Figure 8](#). This can be performed by loosing the back shell from the housing, when the position is aligned, tighten back shell to the housing.
8. Remove the DC connection from the onboard charger and wrap electrical tape around the entire connector up to the coupling ring as seen in [Figure 9](#).
9. Reattach the DC connector to the on board charger.

**NOTE: THE CLEAR SILICONE RUBBER F7AZ-19554-CA MUST DRY FOR 8 HOURS.**

### **Reconnect The Battery Connection**

1. Reconnect the battery cables between battery 2 and between batteries 4 & 5.

2. Replace seat belt buckle bolts.
3. Replace stanchion covers.
4. Replace seats.
5. Replace seat cushions.

| PART NUMBER   | PART NAME             |
|---------------|-----------------------|
| F7AZ-19554-CA | Clear Silicone Rubber |

**OTHER APPLICABLE ARTICLES:**

NONE

**WARRANTY STATUS:**

INFORMATION ONLY

**OASIS CODES:**

203000, 203100, 203200, 204100, 206000, 603300, 614000

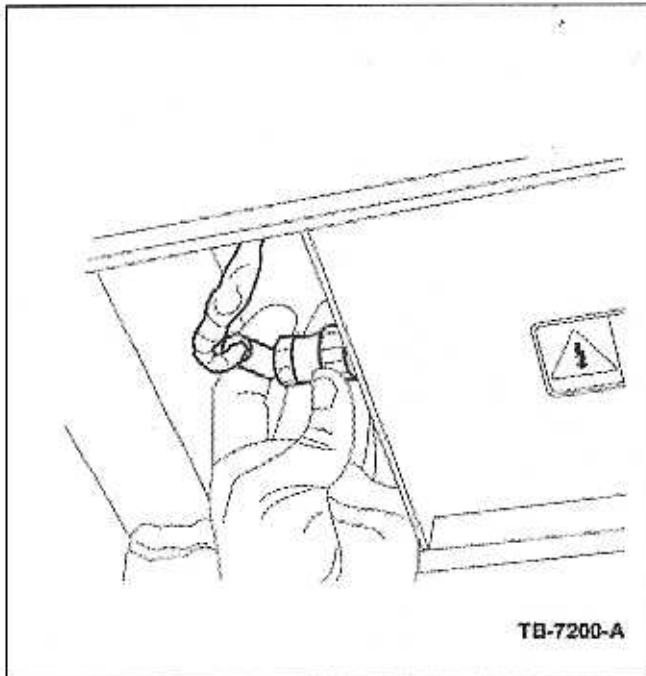


Figure 1 - Article 03-12-1

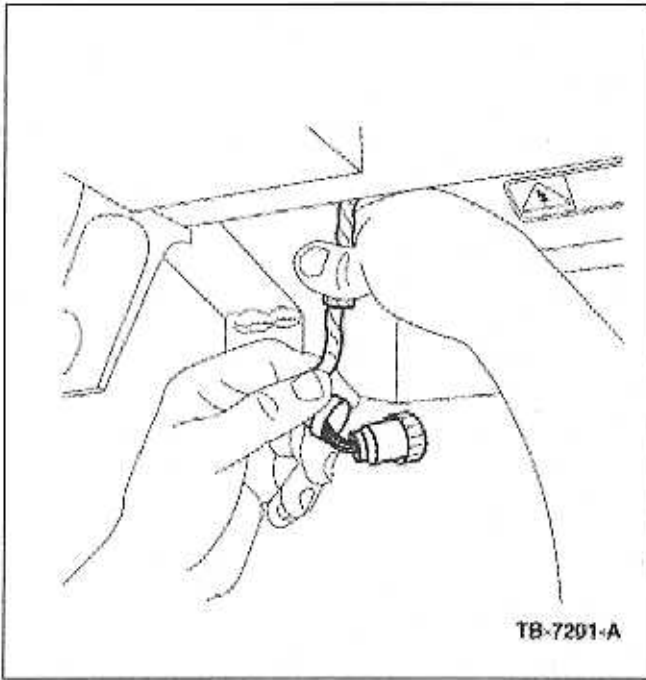


Figure 2 - Article 03-12-1

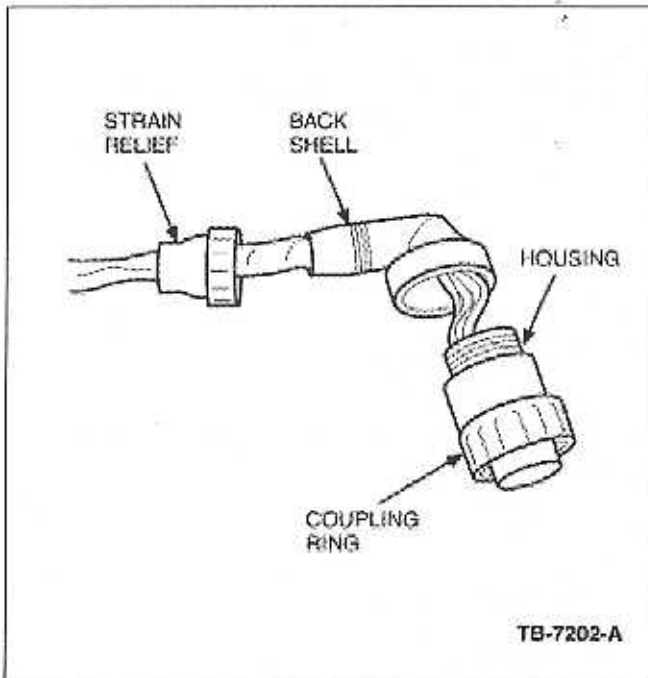
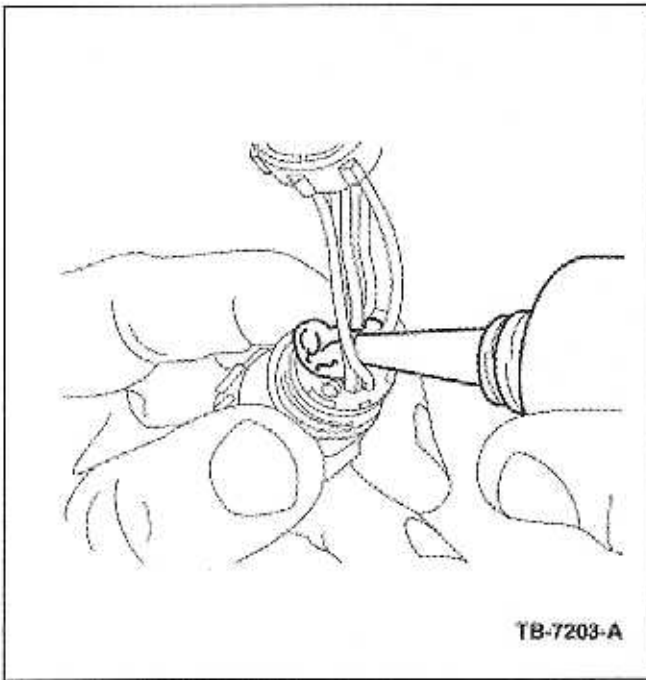
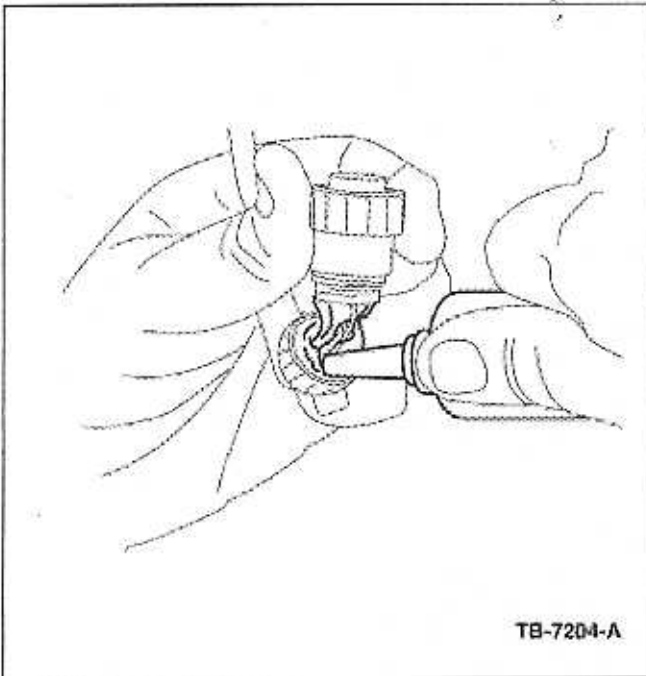


Figure 3 - Article 03-12-1



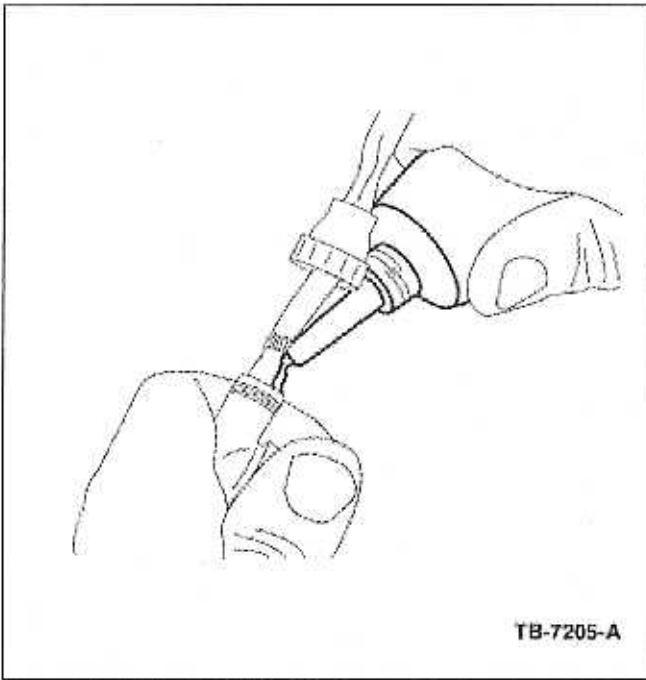
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Figure 4 - Article 03-12-1



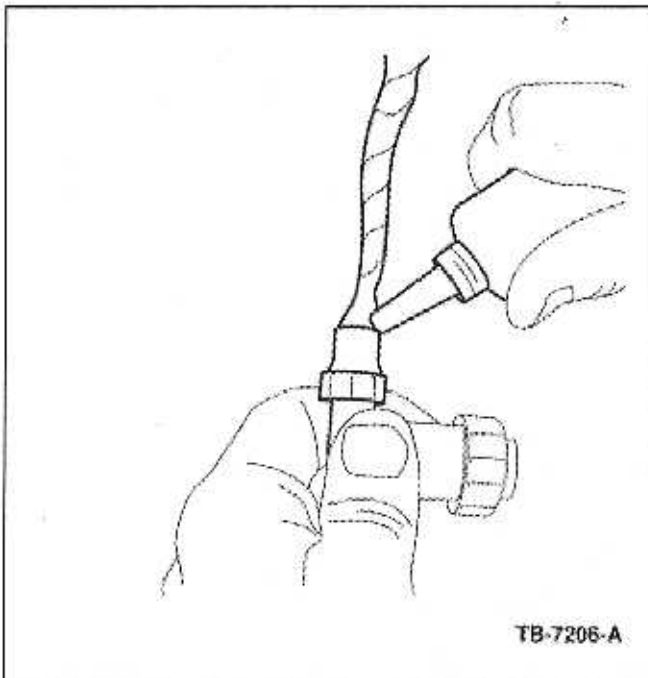
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Figure 5 - Article 03-12-1



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Figure 6 - Article 03-12-1



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Figure 7 - Article 03-12-1

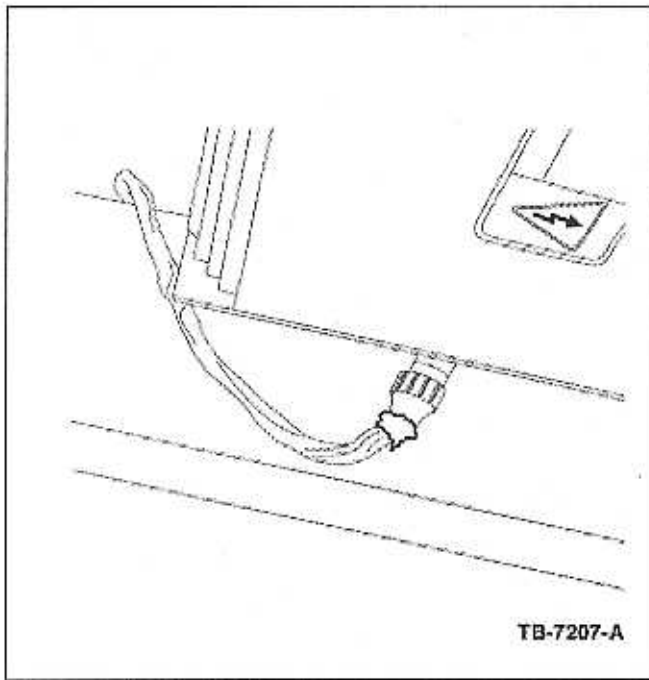


Figure 8 - Article 03-12-1

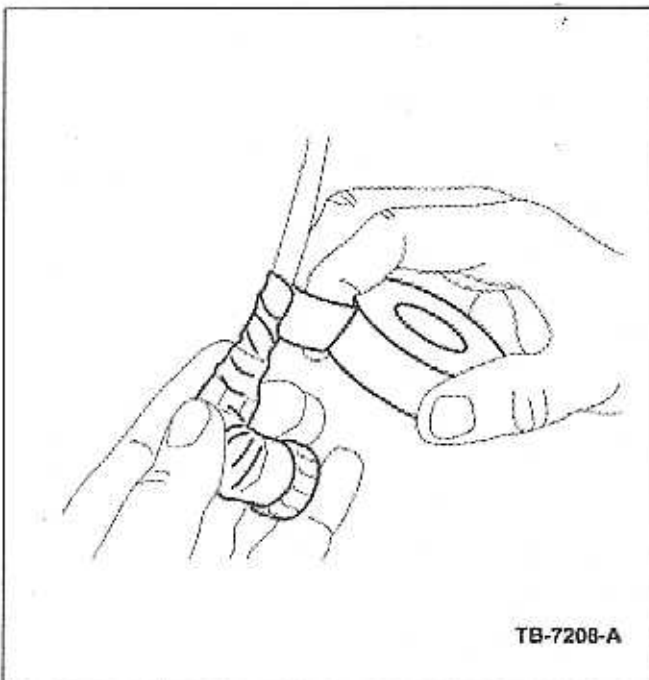


Figure 9 - Article 03-12-1

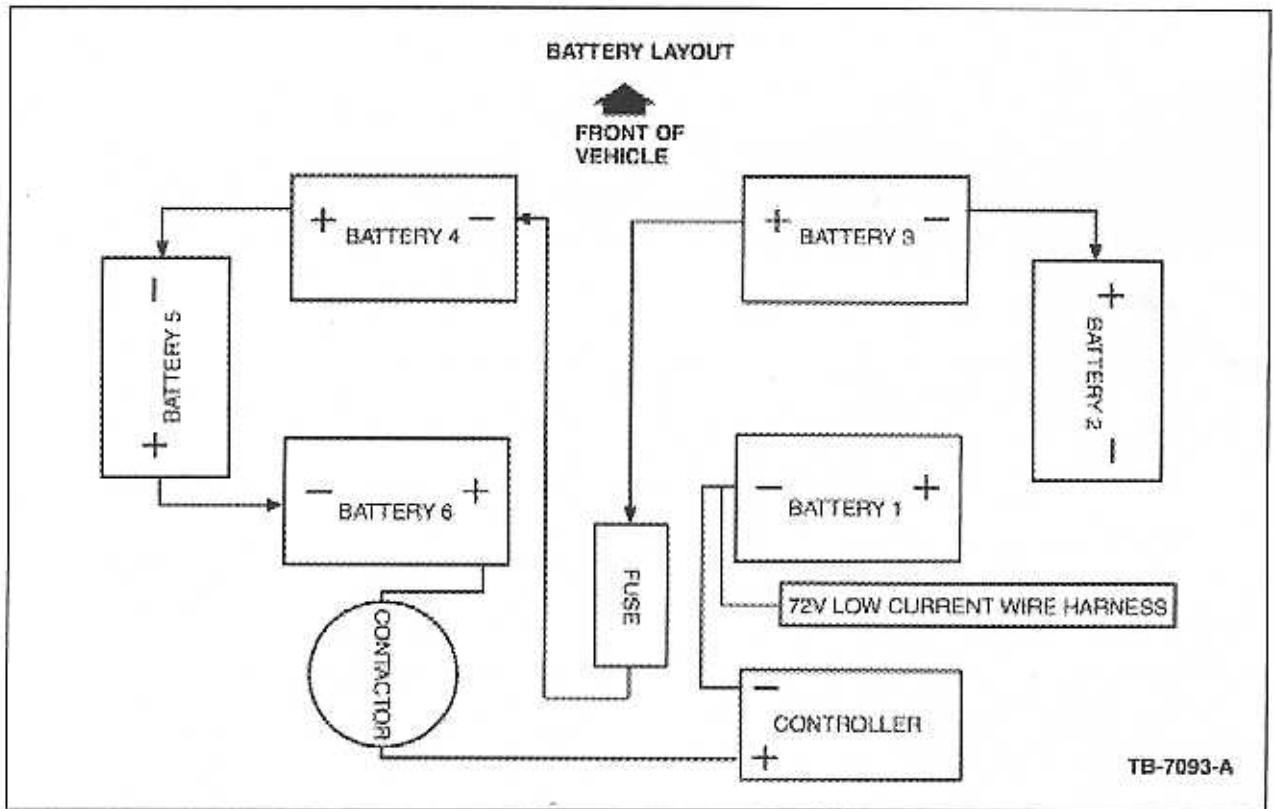


Figure 10 - Article 03-12-1

**NOTE:** The information in Technical Service Bulletins is intended for use by trained, professional technicians with the knowledge, tools, and equipment to do the job properly and safely. It informs these technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by "do-it-yourselfers". Do not assume that a condition described affects your car or truck. Contact a Ford, Lincoln, or Mercury dealership to determine whether the Bulletin applies to your vehicle.

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