

Technical Service Information

NAVISTAR[®]

TSI-11-08-02

This TSI replaces 06-08-04

Date: July, 2011

Subject File: ELECTRICAL

Subject: Low Current Circuit Oxidation and Connector Corrosion Repair Procedure

Model: DuraStar[®]

Model: WorkStar[®]

Model: TransStar[®]

Model: ProStar[®]

Model: LoneStar[®]

Model: TerraStar[®]

Model: CE Bus

Model: BE Bus

Model: RE Bus

Model: HC Bus

Model: 5500i

Model: 5900i

Model: 9900i

Model: 9900ix

DESCRIPTION


Low current circuits, such as data link, sensor circuits, analog, and digital circuits are more susceptible to oxidation. The oxidation forms a layer between the mating terminals that over time could result in an intermittent connection or high resistance in the circuit. Should you encounter this condition, following the procedure outlined will protect connector terminals and receptacles from oxidation and alleviate most intermittent conditions that can occur at connection interfaces.


PARTS INFORMATION

Table 1

| Part Number | Description |
|-------------|---|
| 2591041C1 | Ecoline Contact Cleaner, Aerosol Spray |
| 2591044C1 | RidOx Contact Protector/Enhancer, Aerosol Spray |
| 2592073C1 | Nyogel Lube 1 oz. Tube |
| 2591046C1 | Certified Labs Electra Coat Rubberized Coating |

SERVICE PROCEDURE

 **WARNING** – To avoid property damage, personal injury, or death, park the vehicle on a flat level surface, set the parking brake, turn the engine off, and chock the wheels.

 **WARNING** – Batteries expel explosive gases. Keep sparks, flames, burning cigarettes, or other ignition sources away at all times. Always wear safety glasses and a face shield when working near batteries to prevent personal injury.

1. Disconnect the negative battery cable.
2. Locate and clean the low-current circuit connectors.
3. Disconnect the low-current circuit connectors and inspect for corrosion. Clean the connector terminals with Ecoline Contact Cleaner, Part Number 2591041C1 (Figure 1). Use shop air to remove any contaminants or moisture inside or outside the connector that can migrate inside the connection. This will also remove any remaining contact cleaner prior to applying the terminal protector.
4. Inspect the cleaned connector and repair / replace the connector terminals with signs of corrosion as needed.
5. After the connector terminals are fully dry, apply RidOx Contact Protector / Enhancer, Part Number 2591044C1 (Figure 1) OR Nyogel part number 2592073C1 (Figure 2).

SERVICE PROCEDURE (CONT.)



Figure 1 Ecoline contact cleaner

NOTE – It is safe to use Ecoline Contact Cleaner on electrical connector body plastics, rubber products, and surface plating such as tin or gold. More information on Ecoline Contact Cleaner can be found at www.techspray.com.

NOTE – Ridox Contact Protector / Enhancer is a spray form terminal lubricant that is useful when repairing large multi-cavity connectors and lubricates the terminals to prevent oxidation. This product will seal, protect, improve conductivity of the terminal, prevent oxidation, prevent fretting and fretting corrosion, and will not migrate.

NOTE – Nyogel 760G (see Figure 2) is a dielectric grease that is silica thickened, medium viscosity, synthetic, hydrocarbon grease for lubrication and protection of electrical contacts with good water resistance.

CAUTION – Overfilling a connector with dielectric grease will push the wire seals and cavity plugs out of the back of the connector and induce a direct path for water and contaminants to enter the connector body.

SERVICE PROCEDURE (CONT.)



Figure 2 Nyogel dielectric grease

6. Reassemble the connector and make sure all plug seals are in place in the unused connector holes and the connector wires are not pulled to the side due to the cable tie strap being too tight or a cable tie strap too close to the connector. Wipe off any external residual material.
7. Optional but recommended: Hermetically seal the connector body with Certified Labs Electra Coat Rubberized Coating, Part Number 2591046C1.
8. Reconnect the negative battery cable and check for proper operation.

NOTE – This procedure and these products also work well on high-current connectors.