LIONC

Inspection Bulletin – LionC

Bulletin	IB-0500_00_C - HVAC control panel wiring inspection
Lion maintenance reporting system (LMRS)	03-09-99-31
Publication date	2025-09-15
Coverage	Lion 360 (Diesel), LionC Gen3, Gen2 et Gen1
Repair time	4 Hours
Point of contact	Mathieu Guay Brassard

Document version

Version	Date	Description
00_A	2025-09-11	Initial publication
00_B (Draft)	2025-09-14	Modifications and additions: replacement of fuses, addition of fan switch inspection criteria, replacement of 4- and 6-pin fan connectors, starter solenoid inspection, electrical panel inspection, bulkhead pass-through stud inspection.
00_C	2025-09-15	Modifications and additions: addition of a 5A fuse on HVAC control panel circuit and removal of connectors 1-2-3 at step 2-F

Objective

We have identified some potential anomalies in a sub-component of the HVAC system that Lion obtains from a third-party supplier.

In the interest of safety above all else, we request that Lion bus operators perform the following inspections and modifications:

- mandatory inspection of several low-voltage electrical connections;

- replacement of certain electrical connectors;

- replace fan fuses with less powerful ones;

- adding a fuse to an HVAC control panel circuit.

This inspection and modification procedure must be carried out on all Lion360 (diesel) and LionC 3rd generation and earlier buses (Gen3, Gen2 and Gen1).

NOTE : LionC Gen4 buses (VIN number "5" in 8th position) are not affected by this inspection.

Tools

- Hand tools
- Crimping tool
- Torque wrench

WARNING: electrical connections of a vehicle's wiring are components that must be handled with care. Please exercise caution when handling them.

Bill of material

Lion P/N	SKU	Description	Technical specs link
N/A	63097-1 (Or equivalent)	Quick Disconnect (Spade) Receptacle 18 – 14 AWG	PRODUCT-63097-1.DATASHEET.PDF
N/A	170266-2 (Or equivalent)	Quick Disconnect (Spade) Receptacle 12 - 10AWG	PRODUCT-170266-2.DATASHEET.PDF
12604430_01	0FHM0002ZXJ (Or equivalent)	FUSE HOLDER MINI BLADE IN LINE, 12 AWG	0FHM0002ZXJ
12610236_00	BK/ATM-25 (Or equivalent)	FUSE AUTO 25A 32VDC BLADE MINI	BK/ATM-25
12611017_00	0FHM0001ZXJ (Or equivalent)	FUSE HOLDER MINI BLADE IN LINE, 14 AWG	0FHM0001ZXJ
12610231_00	0297005.WXNV (Or equivalent)	FUSE,BLADE MINI 5A TAN	0297005.WXNV
12810033_01	2400-052 (SGM COMPANY INC)	Defroster Speed Selector Switch	INDAK 2J775
15311002	2400-004 (SGM COMPANY INC)	Stepwell Speed Selector Switch	INDAK 3T54
12610351_00	Techspan 761752 (Or equivalent)	CONNECTOR,BUTT (SPLICE) CRIMP SOLDER-SEAL 12-10GA YELLOW	TA-761752
12610352_00	Techspan 761751 (Or equivalent)	CONNECTOR,BUTT (SPLICE) CRIMP SOLDER-SEAL 16-14GA BLUE	TA-761751
12600121_00	484-0989076002-ND (Or equivalent)	Adhesive-Lined Heat Shrink Tubing	484-0989076002-ND
15322006_00	BX24213	SOLENOID,CUMMINS ENGINE IGNITION	N/A
15500073_00	298-10050-ND	RING TERMINAL, 12-10 AWG, 5/16'' STUD	298-10050-ND
12610185_00	58593	DISCONNECT,QUICK G10-12 FEMALE (GROTE 84-3587) YELLOW	58593
12604832_01	07009718	Heat-Shrink Reducing Crimp-on Butt Splice	07009718

12610054_00	0708152	LOOM,SPLITTED POLYETHYLENE .375 (3/8'') BLACK	0708152
12610041_00	0708151	LOOM,SPLITTED POLYETHYLENE .250 (1/4'') BLACK	0708151

Consumables

Item
100% GENERAL-PURPOSE SILICONE SEALANT
DIELECTRIC GREASE
ELECTRICAL CONTACT CLEANER
CABLE TIES (VARIOUS SIZES)

Safety measures

Important Information

1. Make sure the work can be carried out safely.
2. Park the vehicle in a safe place.
3. Apply the parking brake.
4. Place chocks in front of and behind wheels.
5. Turn start switch to "OFF" position.
6. Turn 12V battery switch to "OFF" position.

1. Removing the Heater Control Panel

Steps	
1-A	Remove the four screws securing the HVAC control panel to the center console.

Figure 1 – Heater Control Panel fasteners

2. Inspection of the Heater Control Panel wiring and connectors

Steps	
2-A	Pull the control panel out of the opening and perform a thorough visual inspection of all wiring, connectors, and components. Examine closely for: • Any signs of wire **chafing** or rubbing. • Evidence of **overheating** of melted parts or connectors. • **Discoloration** or **darkening** of electrical insulation. • **Bubbling** or **deformation** of wire insulation. • **Unseated connectors** or **loose terminals** within connectors. • Any **corrosion** on terminals, pins, or contacts. • Remove and clean off any foreign objects or dust that could be present. If any faults are detected, correct them using the approved method before returning the vehicle to service.

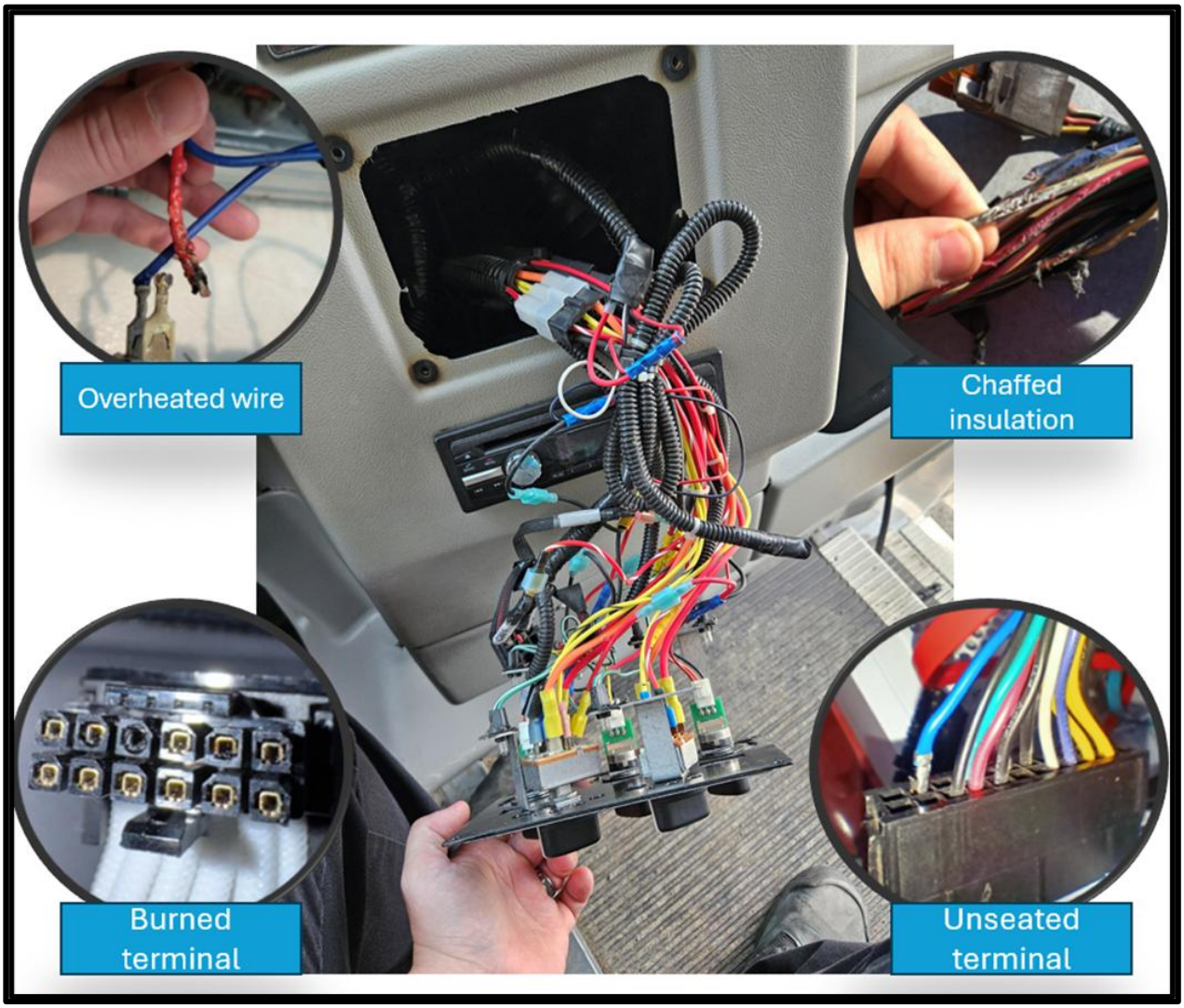


Figure 2 – HVAC Control Panel wiring and connectors

Steps	
2-B	Remove any foreign objects or flammable materials like: - piece of insulating foam - blue production label (do not remove white cable identification labels) - bubble wrap around a component.

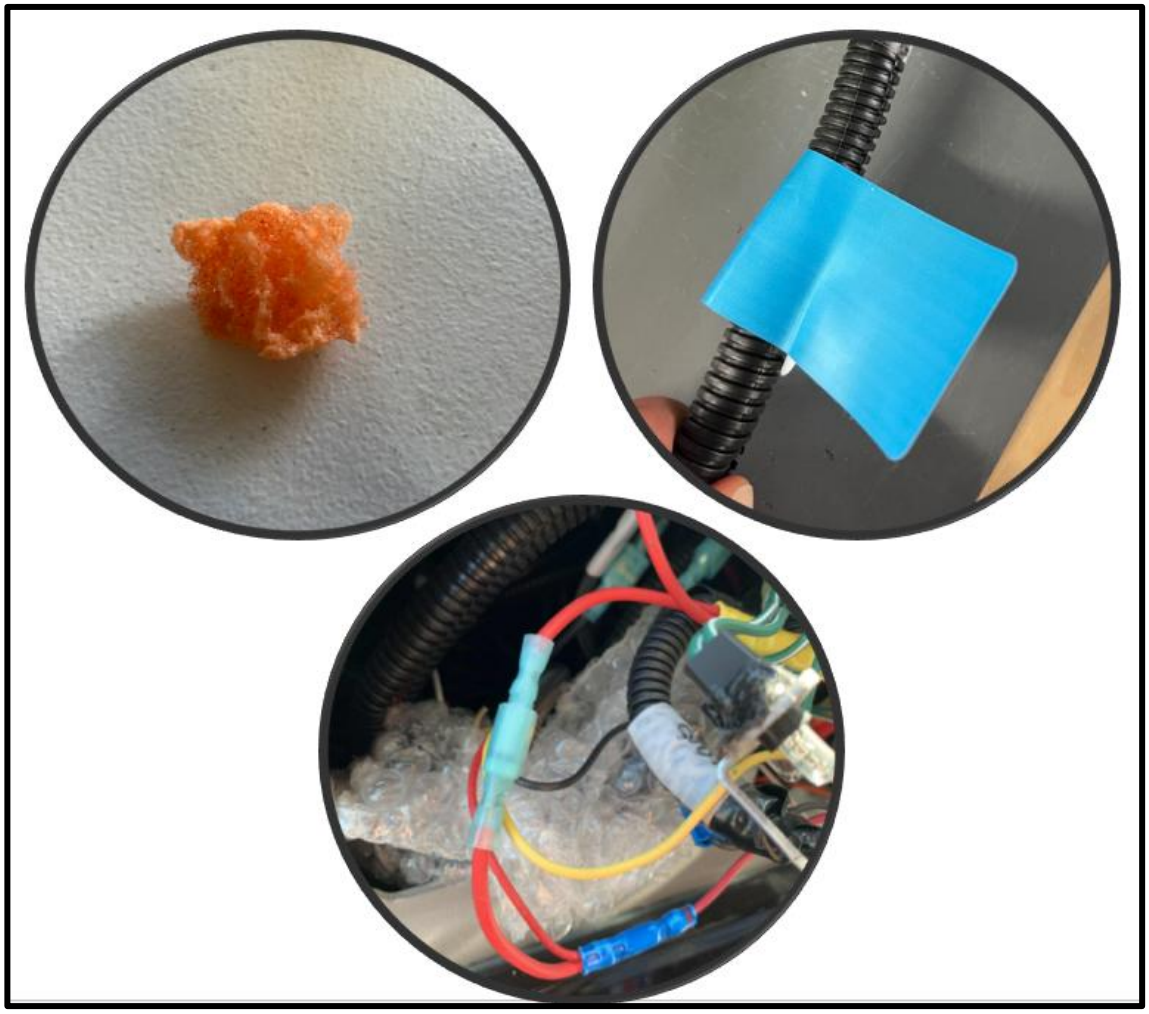


Figure 3 – Flammable material to be discarded.

Steps	
2-C	Pay attention to the male spades behind the two fan switches (Figure 4). All male terminals must be in good condition and securely fastened behind the switches. None of the rivets (Figure 5) securing the terminals should be loose or detached. If any connector, terminal or rivet is faulty, replace them.

Figure 4 – Fan switches.

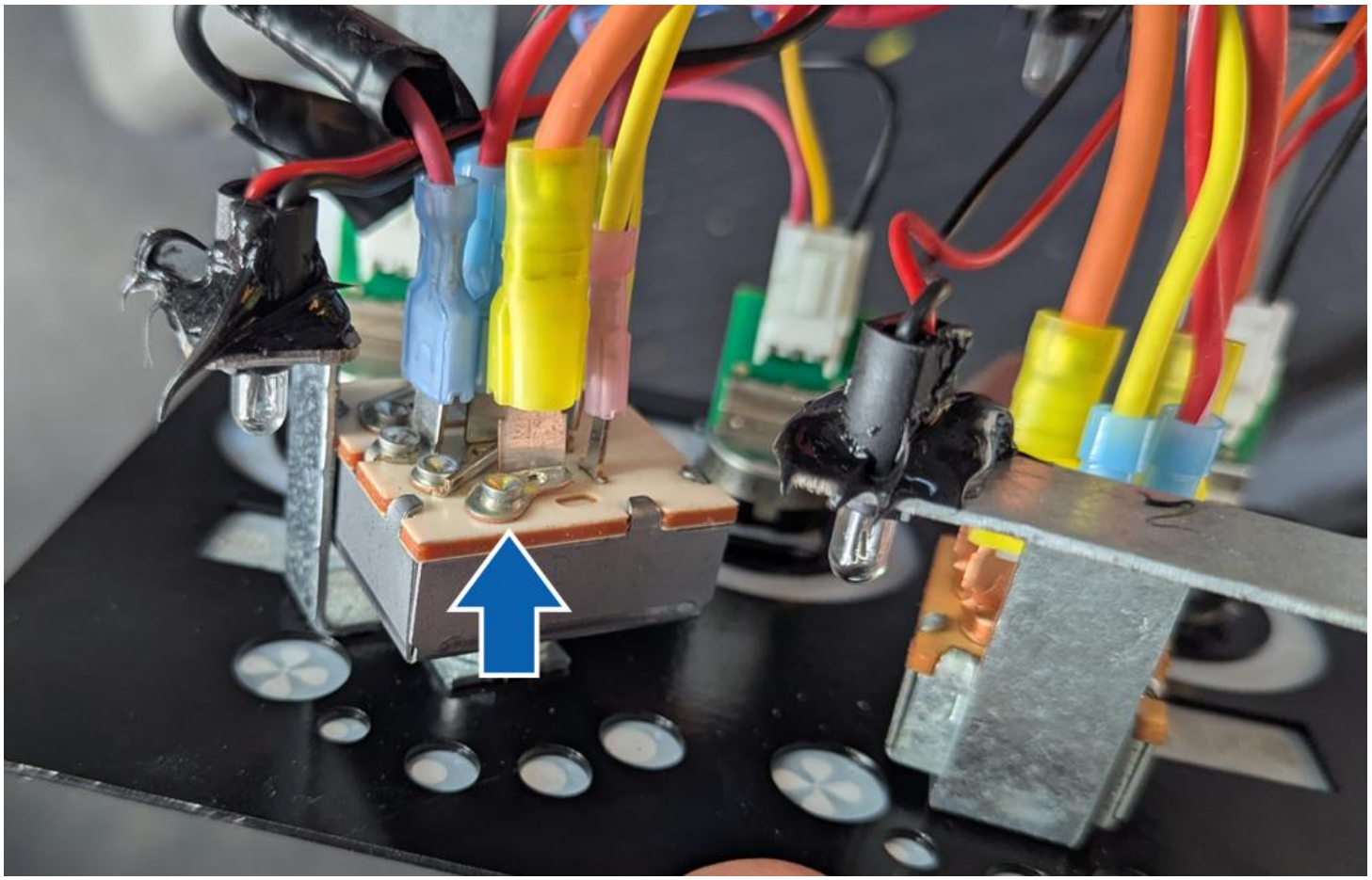


Figure 5 – Rivets and terminals on switches to be inspected.

Steps	
2-D	Remove the panel to the right of the garbage bin. Remove 5 screws (A), 2 pins (B) and an additional screw (C) hidden behind the lower panel to detach the center console from the dashboard.

Figure 6 – Center console fasteners

Steps	
2-E	Tilt the center console and disconnect the multifunction display and radio connectors. Put the center console away. You now have access to 5 other connectors to inspect, located behind the center console.

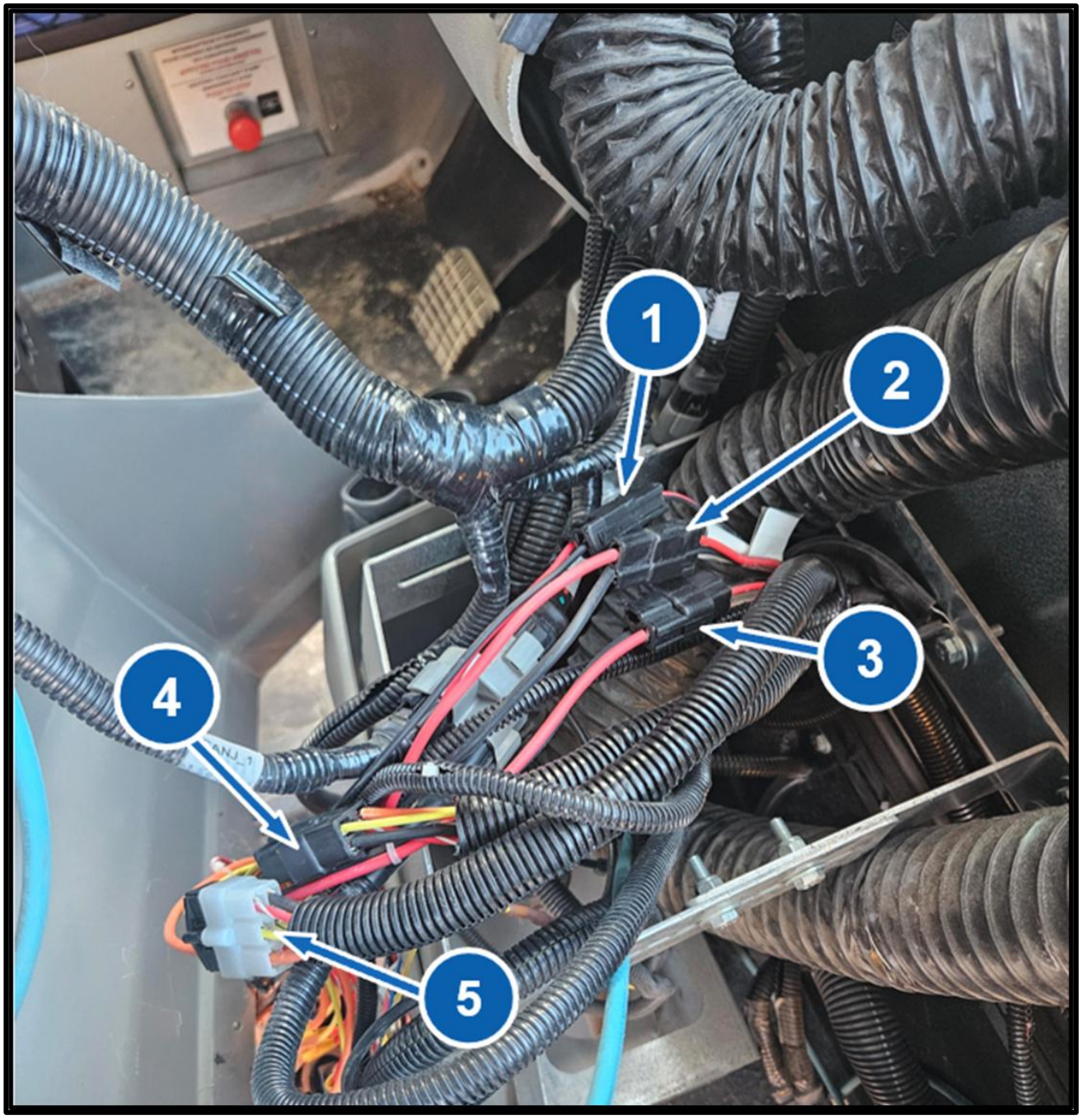


Figure 7 – Connectors to be inspected.

Steps	
2-F	Discard all 5 connectors and connect wires individually with butt splice connectors (see next step). Keep the discarded connectors to be sent to Lion for analysis.

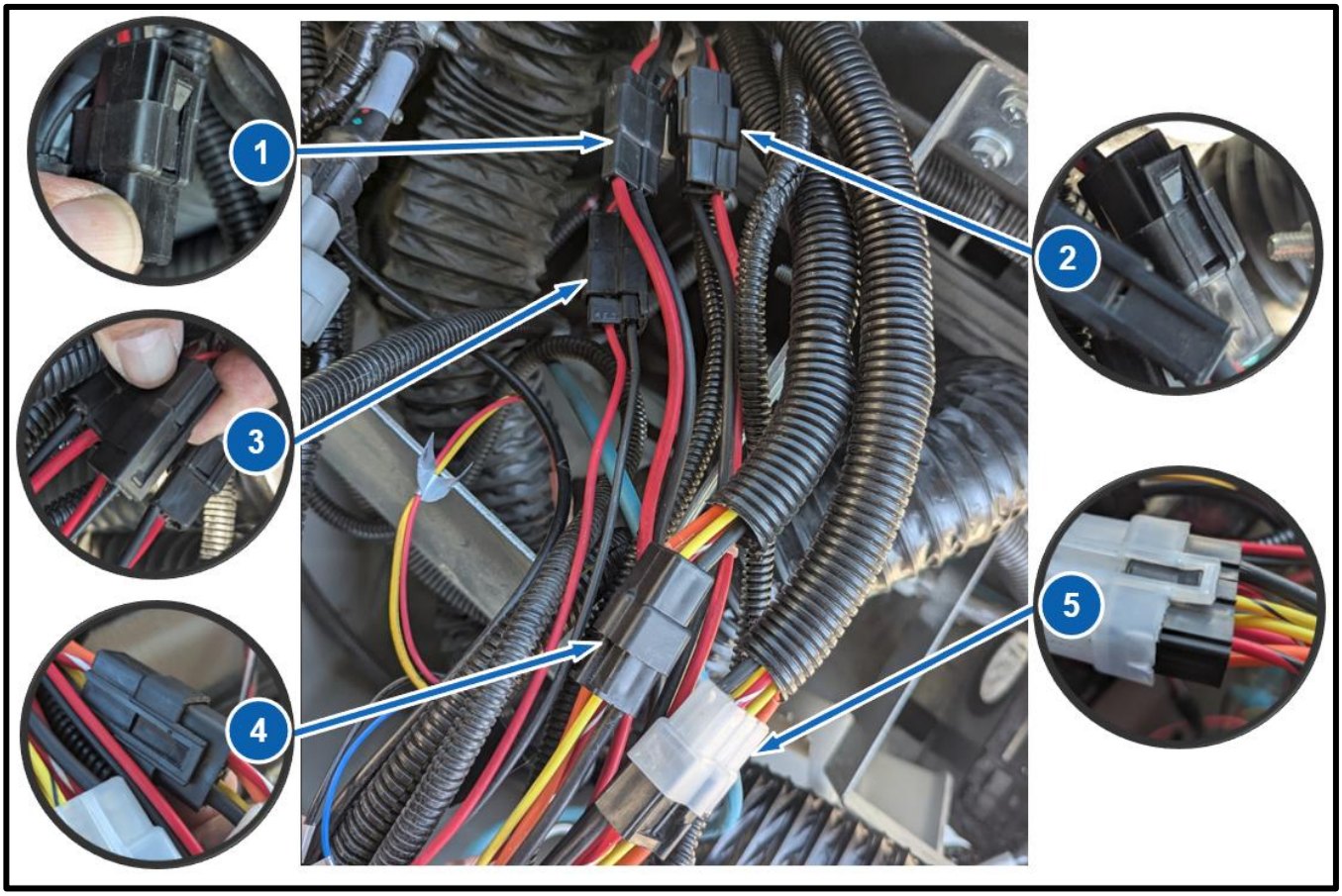


Figure 8 – Connectors to be replaced.

Étapes	
2-G	Cut the wires of the connectors to be removed. Connect the wires using solder-filled butt connectors. Note: It is recommended to cover connectors with shrink tubing.

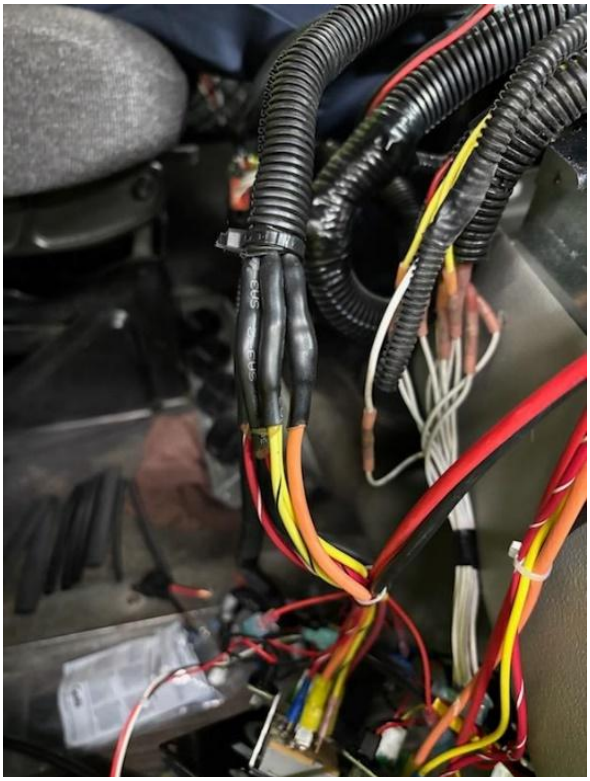


Figure 9 – Solder filled butt connectors and heat-shrink tubing.

Steps	
2-H	Beware, some connectors have wires of different sizes on either side of the connector. Connect the wires with butt splices of the appropriate size (yellow line on one side, blue on the other) for the two wires to be connected. Note: It is recommended to cover all butt splices with shrink tubing.

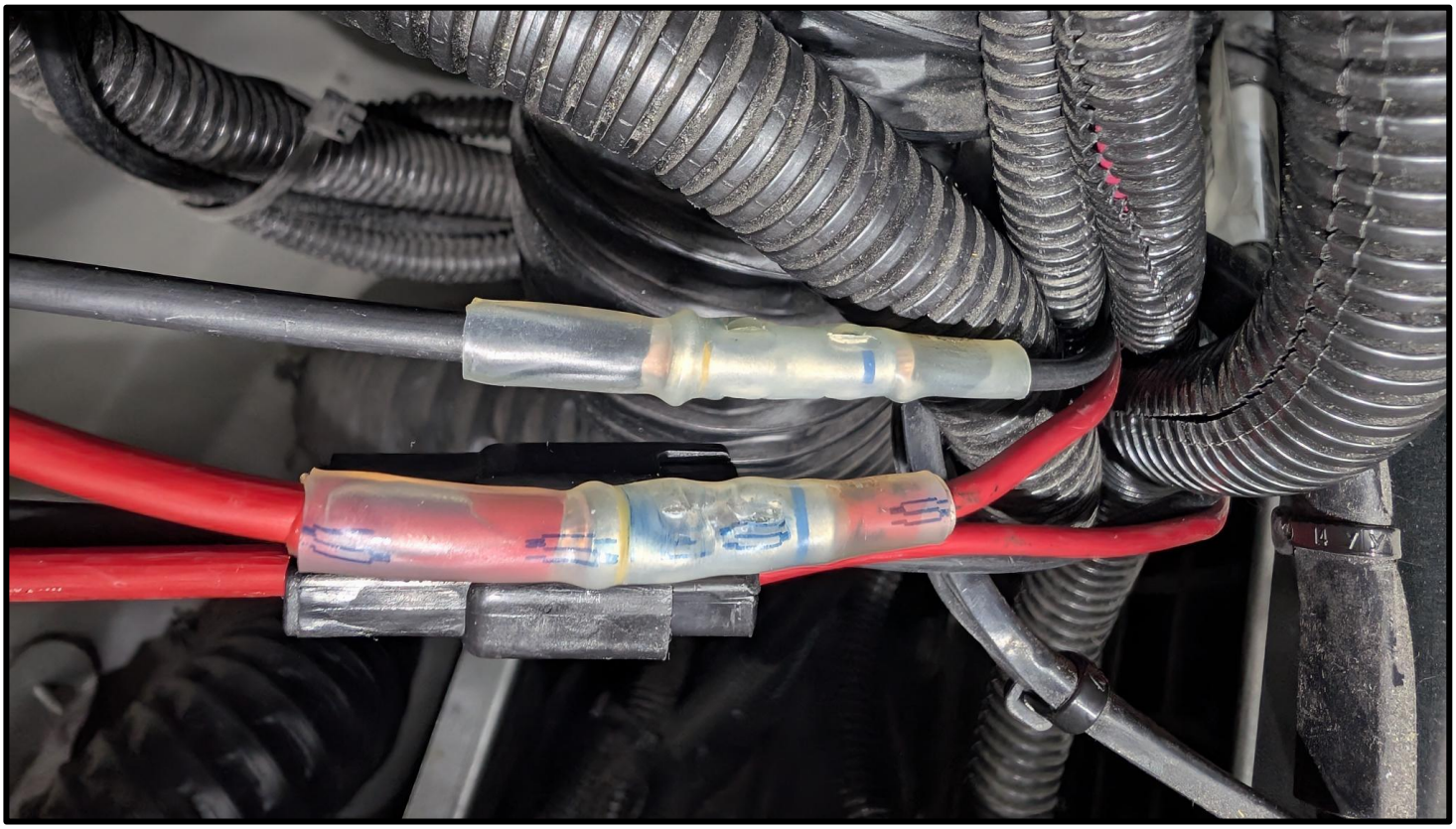
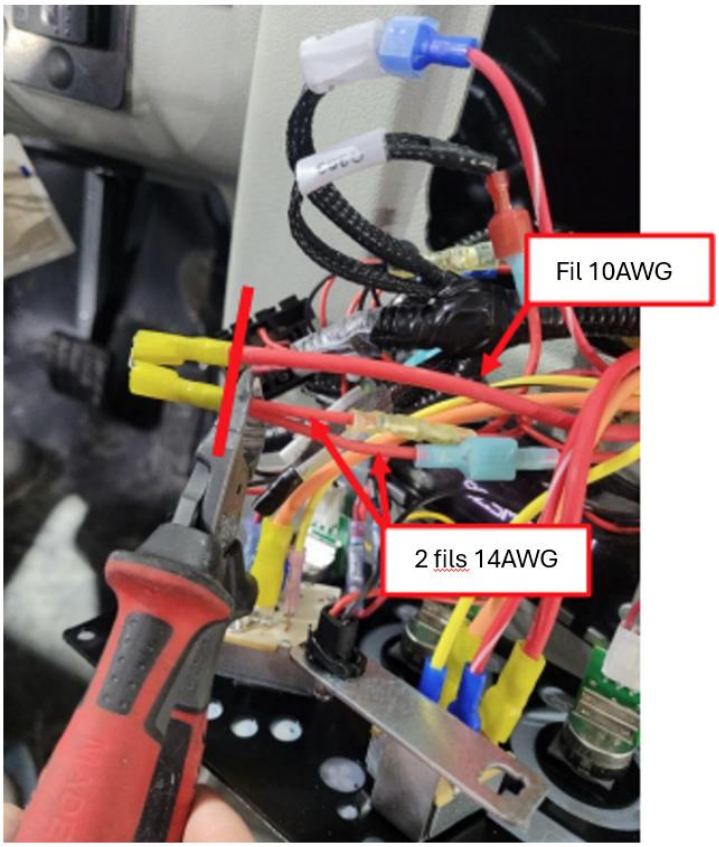


Figure 10 – Double size butt splice connectors.

Étapes	
2-I	Locate the two linked-together yellow connectors connected to plug B on the defrost fan switch. Cut the 3 red wires to eliminate the two yellow connectors linked together. Use a "Quick Disconnect" female connector to join together the larger wire (10 AWG) and an in-line fuse holder. Take the two small-diameter wires cut previously and connect them to the fuse holder using a double-size connecting sleeve (yellow/blue). Reconnect the "Quick Disconnect" female connector to plug B on the defrost fan switch.



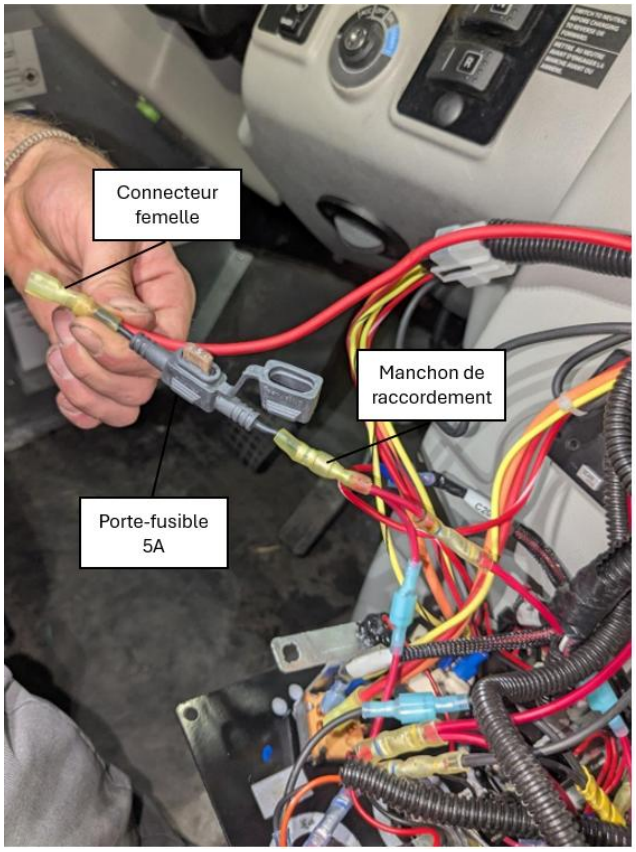


Figure 11 – Addition of a 5A fuse

Steps	
2-J	In the outside electrical panel under the driver's window, replace the stepwell fan fuse with a 25A fuse (Figure 11).

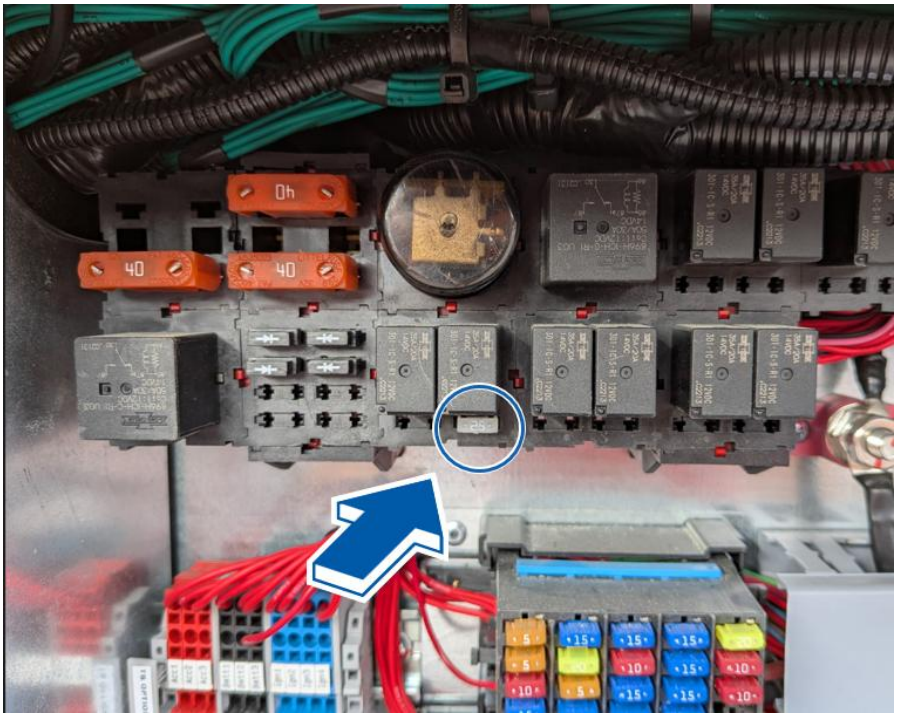
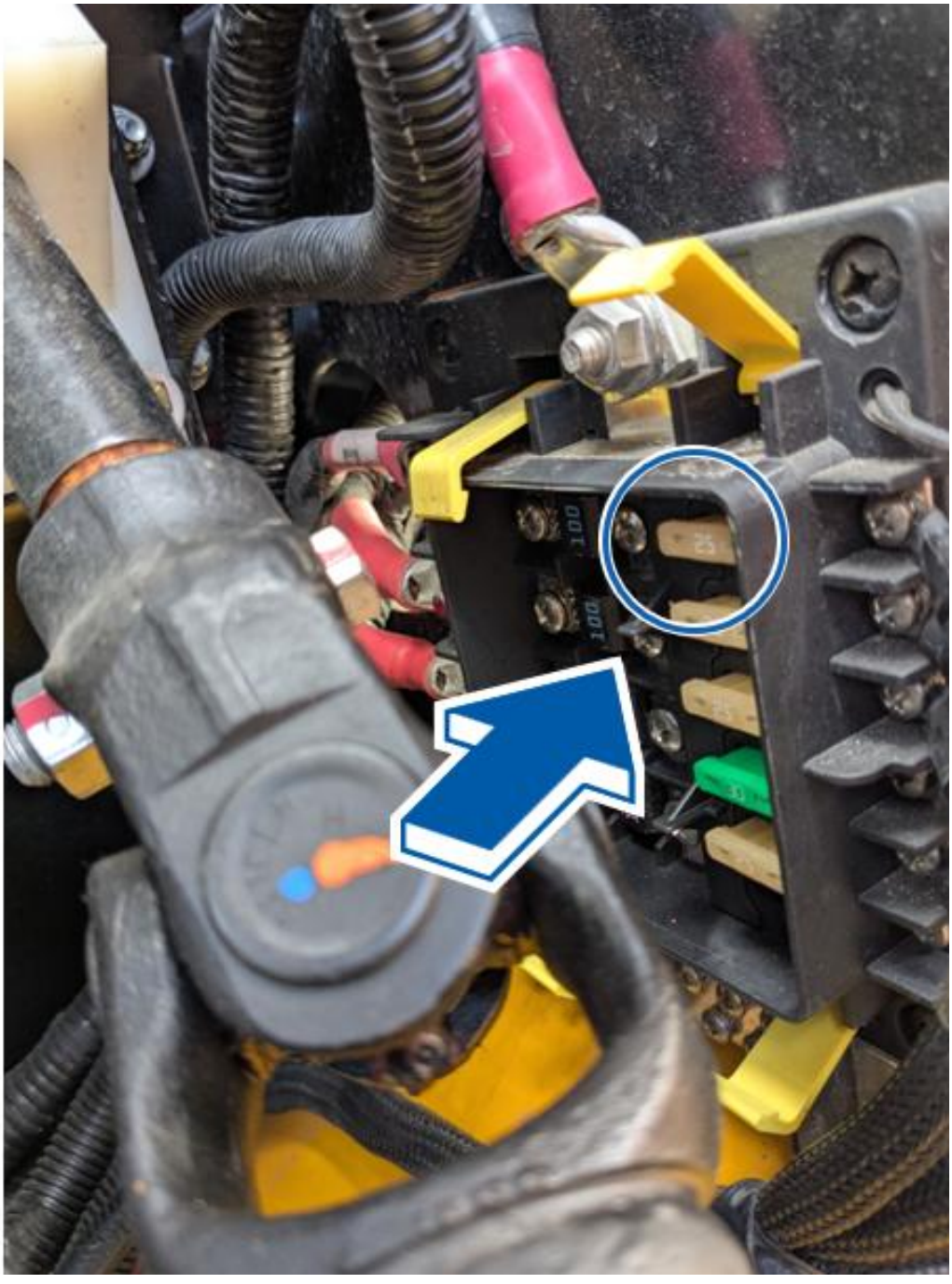


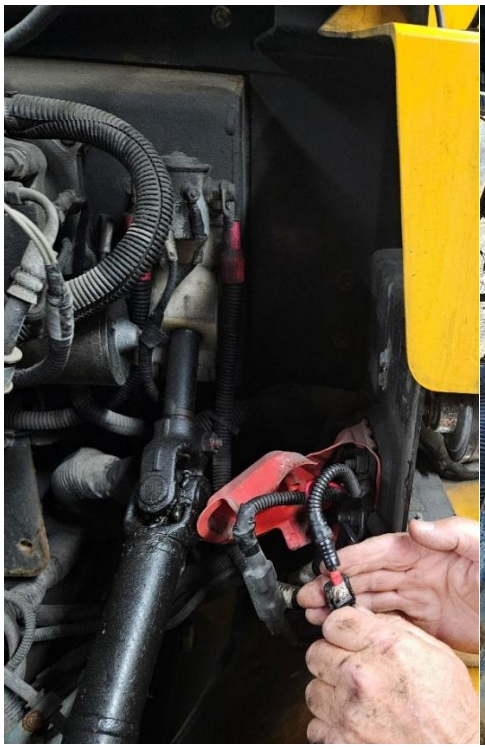
Figure 12 – Fuse to replace.

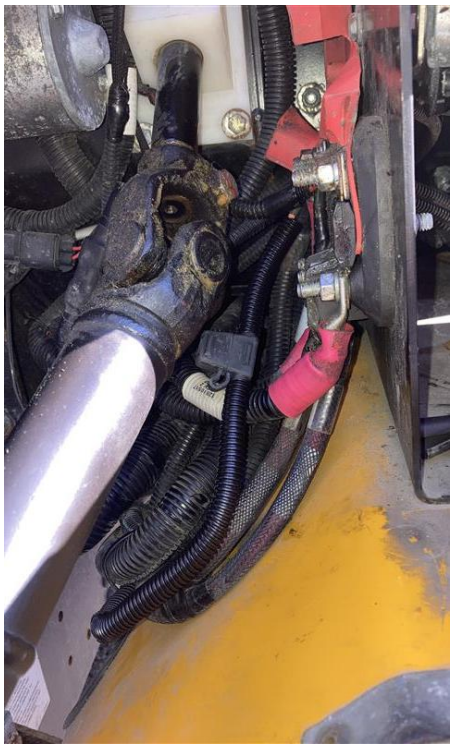
Étapes	
2-K	There are two types of fuse box on the left front fender (near the steering column) which include a fuse for the defroster fan. If the bus is equipped with a fuse box with a cover, replace the existing fuse by a 25A fuse. If the bus is equipped with MIDI fuses (under a red rubber cover), locate the 40A fan fuse (in-line fuse, label HVAC PWR) and replace it by a 25A in-line fuse. There is 2 possible methods to install the 25A fuse.

Fusebox with cover :

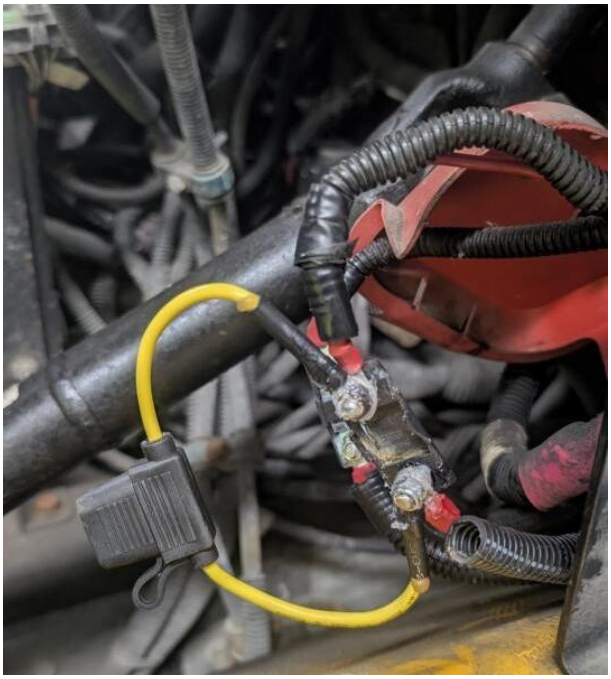


Method 1 for MIDI fuse:





Method 2 for MIDI fuse:




Method 2 for MIDI fuse:
(continued):

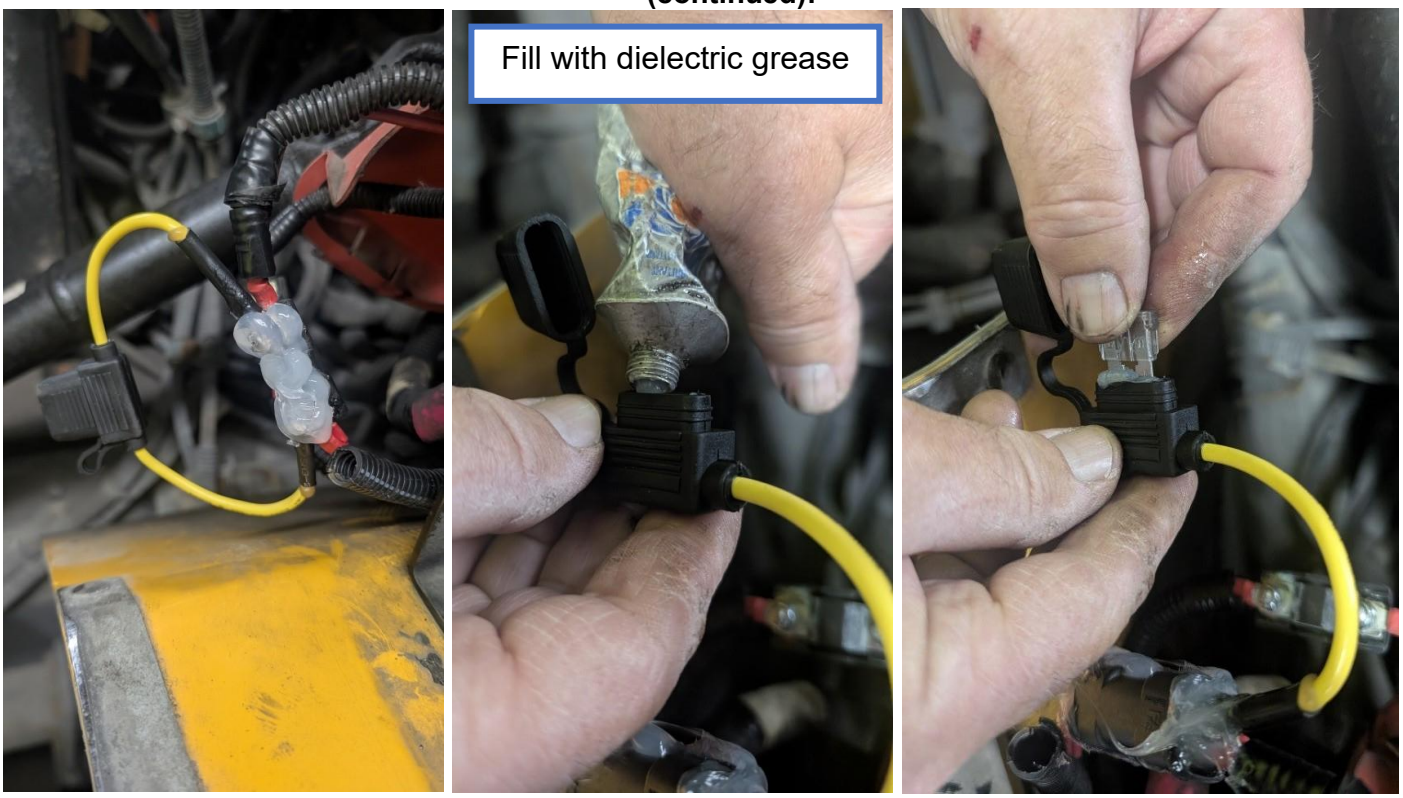


Figure 13 –Fuse to replace.

Étape	
2-L	Access the electrical panel located outside under the driver's window. Visually inspect the condition of the electrical connections: - 12V power supply stud - connectors for various relays - low-voltage distribution connectors. Correct any anomalies and report your results as indicated in section 4.

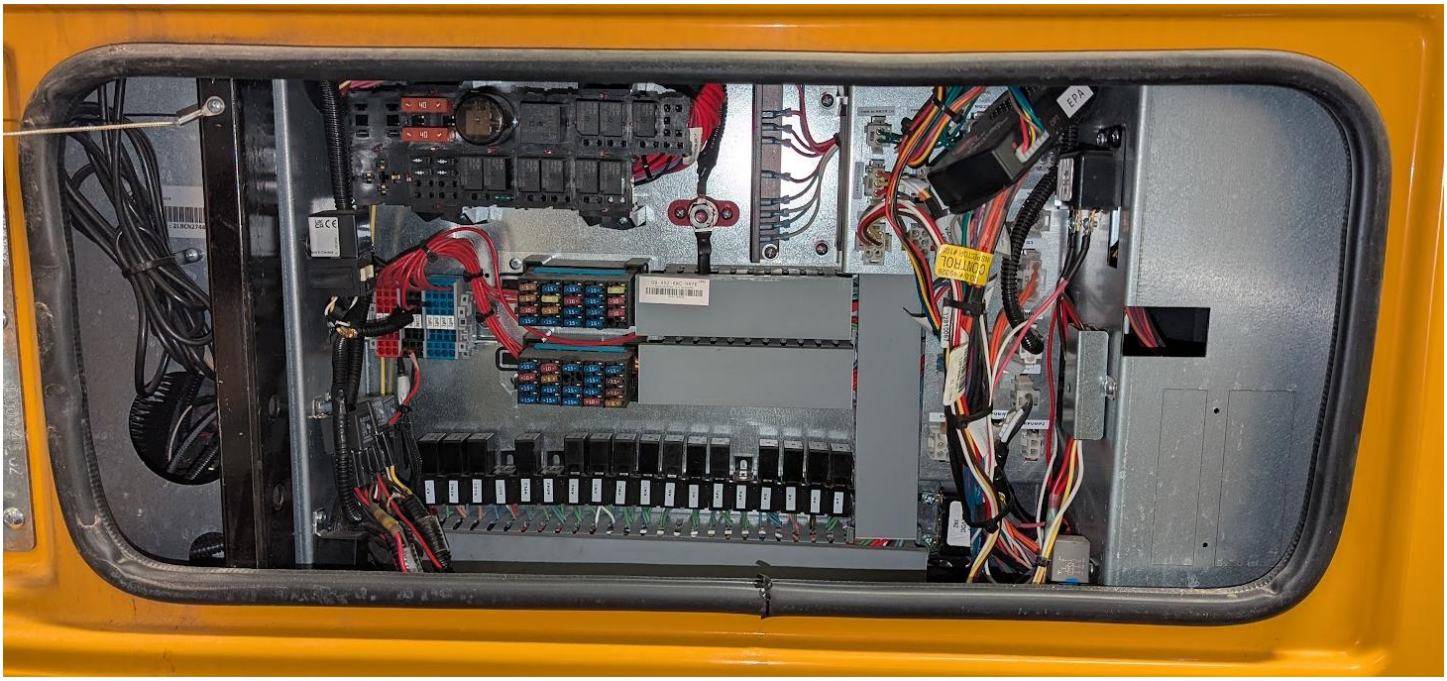


Figure 14 – Electrical panel.

Step	
2-M	Open the hood and check the condition of the wiring harness attached to the bottom of the opening. It must not be crushed or damaged. If this is the case, repair the damaged section of wiring and rectify the cause.

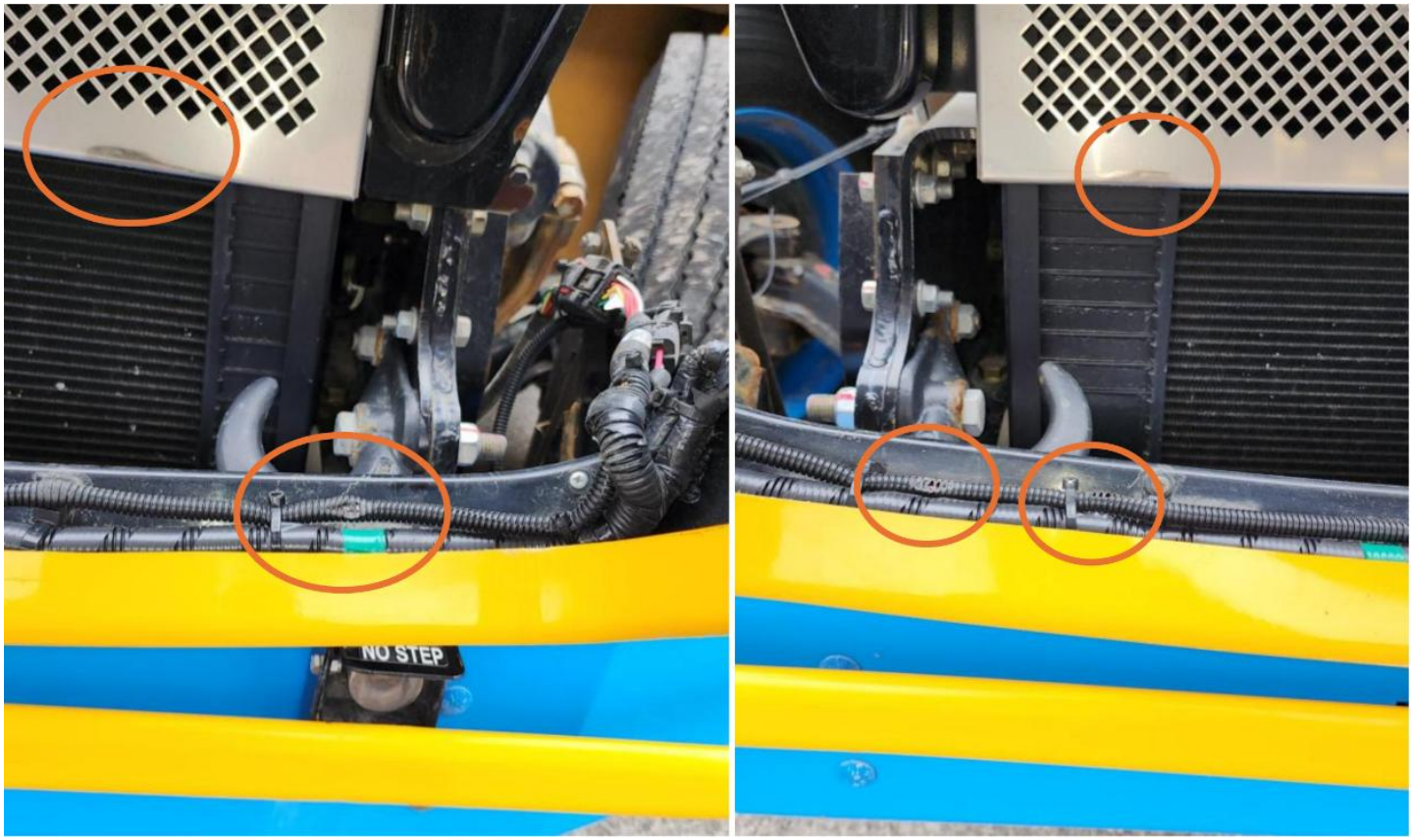


Figure 15 – Base of hood wiring harness.

Step	
2-N	With the hood open, check the condition of the wiring which passes through the opening at the bottom left of the accessory plate. It must not be damaged by abrasion or under tension. If this is the case, repair the damaged section of wiring and rectify the cause.

Figure 16 – Accessory plate wiring.

Step	
2-O	With the hood still open, check the condition of the wiring, relays and fuseholders located under the hydraulic fluid reservoir. They must not be loose or dangling. If this is the case, secure cables, connectors and fuse holders with cable ties.

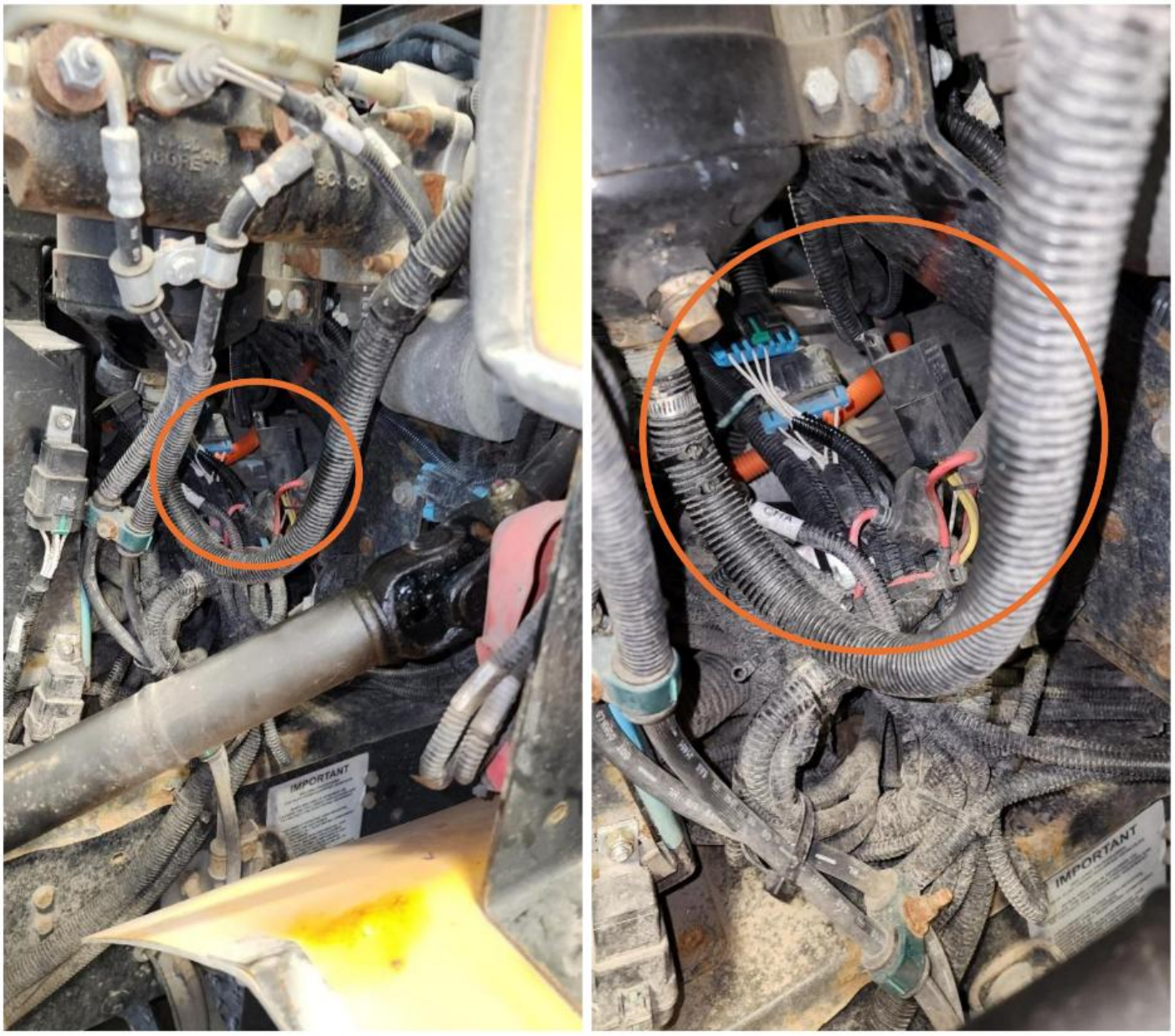
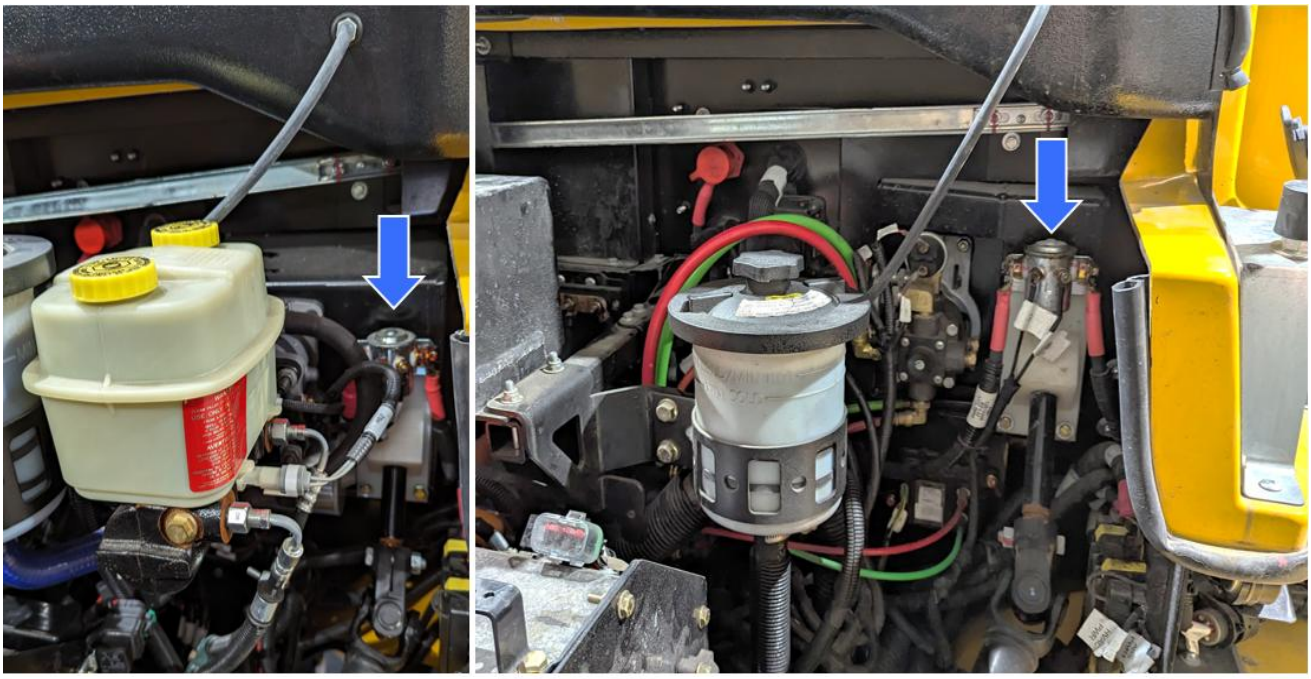


Figure 17 – Improperly secured wiring under hydraulic reservoir.

3. Start solenoid inspection

Steps	
3-A	Under the hood, locate the start solenoid attached to the firewall near the steering column.



Hydraulic brake

Air brakes

Figure 18 – Start solenoid location

3-B	Clean all grease from connections. **WARNING : If the solenoid studs show any sign of damage, replace it (PN 15322006_00).**
3-C	Check if the cables are properly tightened to the solenoid. If not, retorque them. Using a 1/4" torque wrench, tighten the two nuts on the sides of the solenoid to 35 in-lb, (i.e. 3 ft-lb or 4 Nm) (see Figure below). **WARNING: Please observe the torque values indicated. Overtightening may damage the solenoid's internal terminals.**

3-D	Tighten the two smaller nuts (center) to 18 in-lb (2 Nm). (see figure below). Hold the counter-nut under the cable lug when torquing to spec.

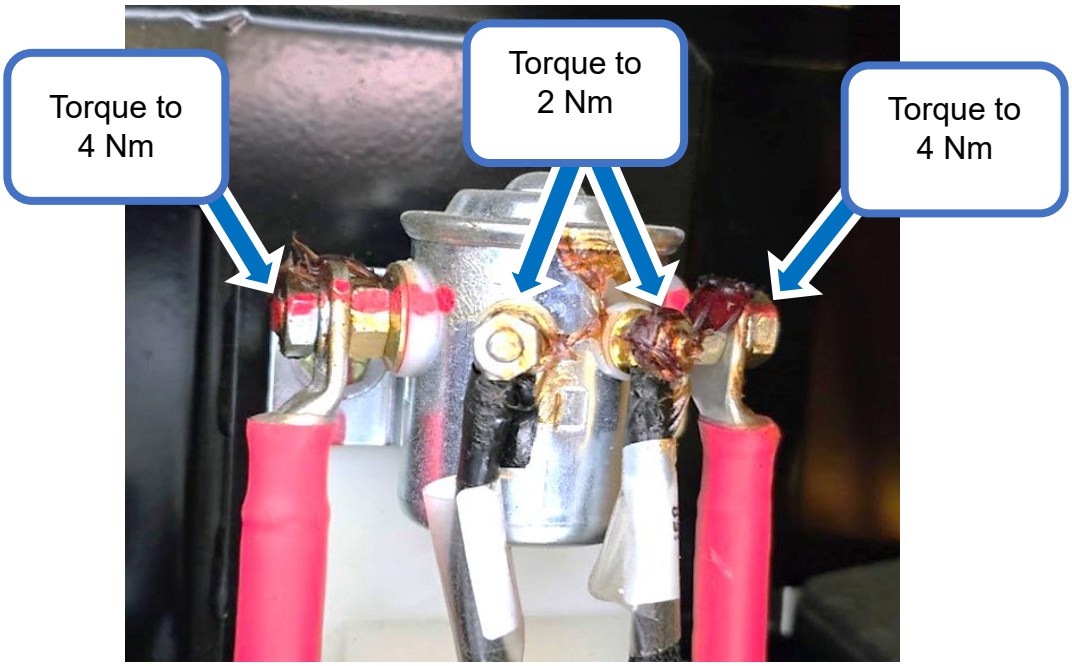


Figure 19 – Solenoid nuts to torque.

3-E	Draw a red line from the clamped fasteners to the base of the terminals to mark the relative position between components.
3-F	As a final validation, apply hand force to the clamped electrical cables and check for looseness. The red marks on the fasteners should remain aligned.
3-G	Apply Nyogel 760G grease (or any equivalent dieletric grease) to all tightened fasteners.

3-H	Use cable ties to keep the solenoid cables away from the steering shaft.

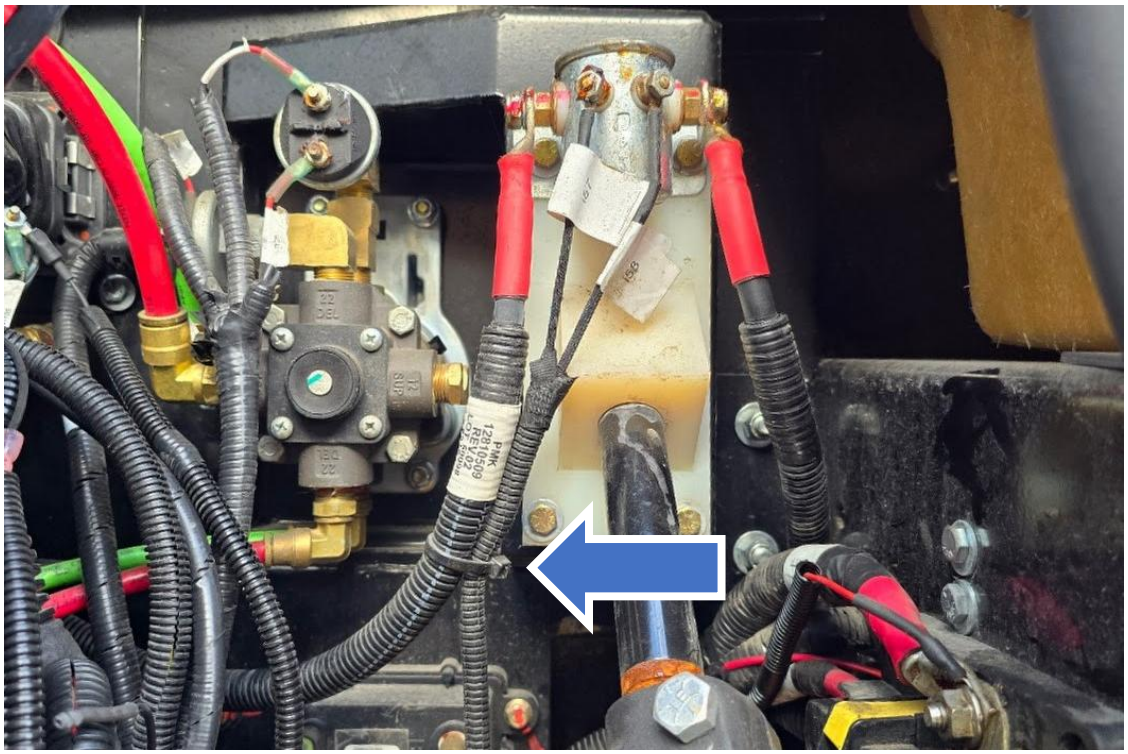


Figure 20 – Cable fastening

Steps	
3-I	Check the tightening of the two bulkhead pass-through terminals (black and red) located on the left of the hydraulic fluid reservoir behind the wiper linkage. If either is loose, perform Service Bulletin TB-0365_00_A.

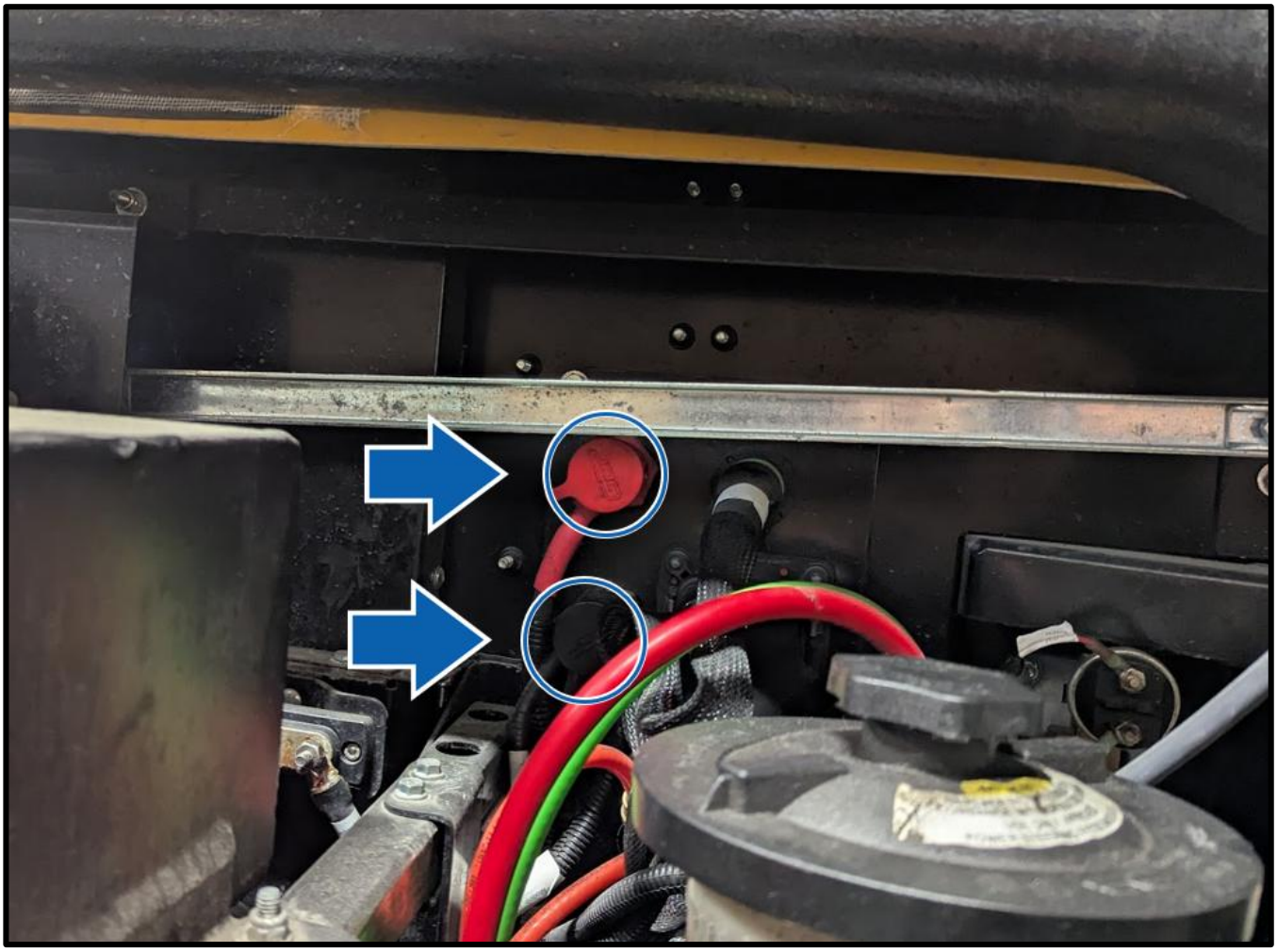


Figure 21 – Bulkhead pass-through studs.

Étapes	
3-J	To check the bulkhead pass-through terminals inside the bus, go through the opening on the right-hand side of the gas pedal. The two bulkhead studs are visible and accessible. You can also remove the lower part of the center console to gain easier access. If either terminal is loose, perform Service Bulletin TB-0365_00_A.

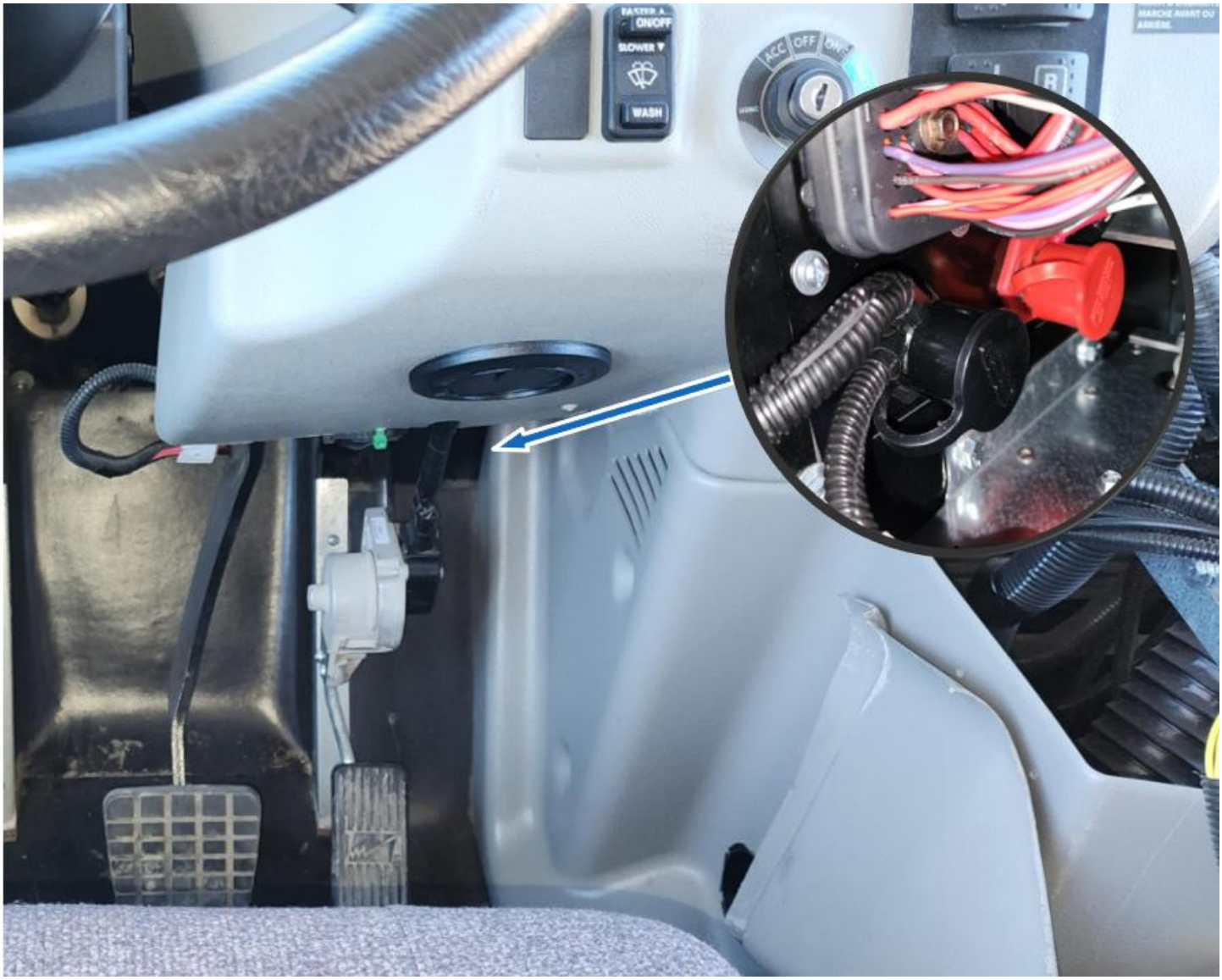


Figure 22 – Location of the pass-through studs

4. Validation of the work done.

- Check that both fan controls are working properly.
- Check that the mode control (defrost/heat) is operating correctly.
- Check that the temperature control starts the diesel heating system (if equipped) and that it operates correctly.
- Check that the air supply control (recirculation/outdoor air) is working properly.

We recommend that you add the following steps to your annual preventive maintenance program: visual inspection of HVAC control panel wiring and connections, and check the condition of the two 25 A fuses that have been installed.

5. Confirmation of inspection and work completed.

Please send us confirmation that this procedure has been followed. Send the following information by e-mail to GARANTIE.WARRANTY@THELIONELECTRIC.COM:

- the VIN of the vehicle;
- the odometer reading;
- result of the inspection (Fail/Pass)

And in the case of an anomaly that has been discovered and corrected, please also send the following information:

- a detailed description of the problem(s) detected;
- a photo or video of the fault(s);
- the serial number of the HVAC unit (see next figure).

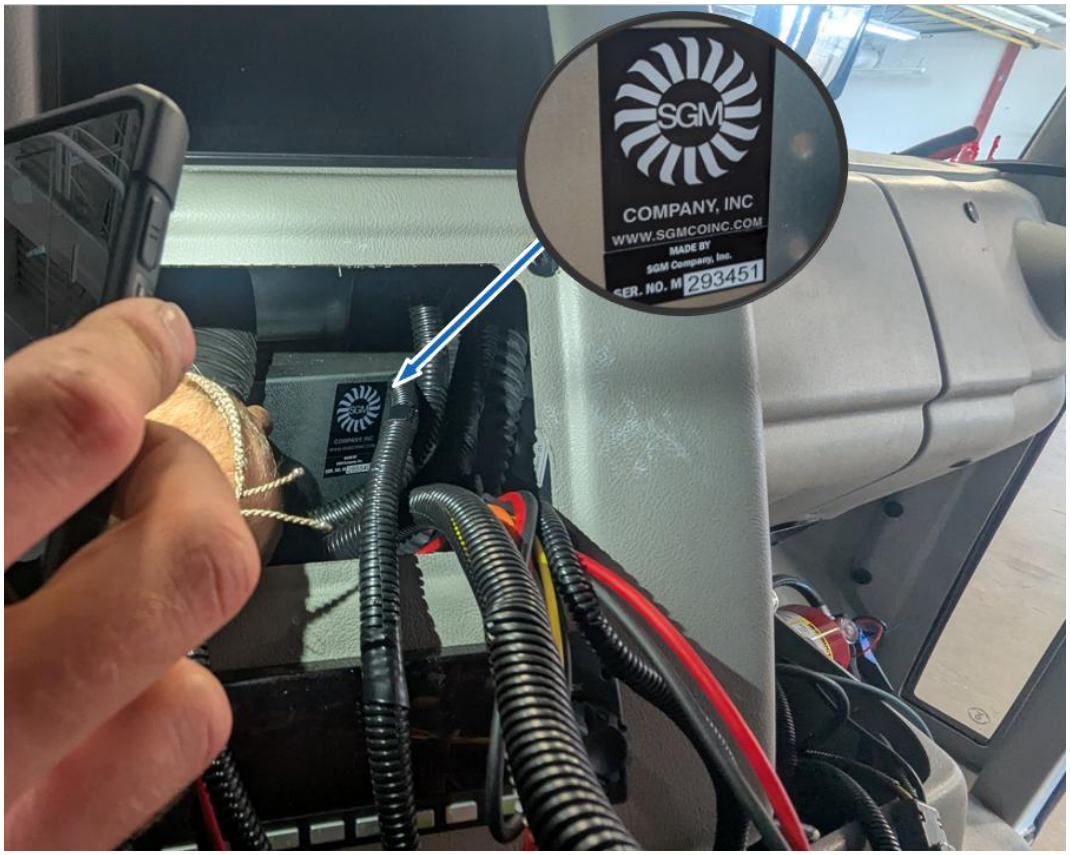
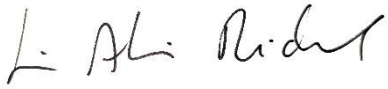


Figure 23 – Serial number of the HVAC unit

Connectors that have been discarded should be returned to Lion for analysis.

Figure 24: Parts to be returned to Lion

Approvals

Technical Publications			
Technical Writer	Louis-Alain Richard	Signed Date:	2025-09-15
Signature:			

Service Engineering			
Chief Technical Engineer - Service Engineer	Mathieu Guay Brassard	Signed Date:	2025-09-15
Signature: