

Authorized Field Change



AFC 20903

Date: JANUARY 2021

Subject File: BRAKES

Subject: IC Bus® CE Series School Bus Air Brakes

Model: IC Bus® CE Series

Start Date: 19 August 2019 End Date: 31 August 2020

Engine Family: N/A

DESCRIPTION

The electrical harness to the air dryer heater may have been assembled without the ground circuit for the heater element to function.

ELIGIBILITY

This procedure applies ONLY to vehicles marked in the International® Service PortalSM with AFC 20903. Check and complete any other open campaigns also at this time.

PARTS INFORMATION

Table 1. **Parts Information**

Part Number	Description	Quantity
Source locally	Sleeve, Cable Insulating 1/8-inch ID	1
Source locally	Cable Tie Strap; 14 inch	12
Source locally	Tube, Tube - Conduit	137 in
Source locally	Terminal, Cable, Eyelet (16-14 gauge with 0.25-inch diameter eyelet)	1
Source locally	Cable, Lighting, 14 Gauge (white insulation)	142 in
2033816C1 or source locally	Terminal Cable (for 14 gauge only) (Metri-Pack 280 series terminal 16 - 14 gauge female)	1
589391C1 or source locally	Plug Sealer Loose Piece (weatherpack seal use with 14 gauge wiring)	1
Source locally	Wire Harness Tape	1

SERVICE PROCEDURE



WARNING: To prevent personal injury and / or death, or damage to property, park vehicle on hard flat surface, turn the engine off, set the parking brake, and install wheel chocks to prevent the vehicle from moving in both directions.



WARNING: To prevent personal injury and / or death, or damage to property, if the vehicle must be raised, do not work under the vehicle supported only by jacks. Jacks can slip or fall over.



WARNING: To prevent personal injury and / or death, always wear safe eye protection when performing vehicle maintenance.



WARNING: To prevent personal injury and / or death, or damage to property, allow components in engine compartment to cool before servicing engine or vehicle.



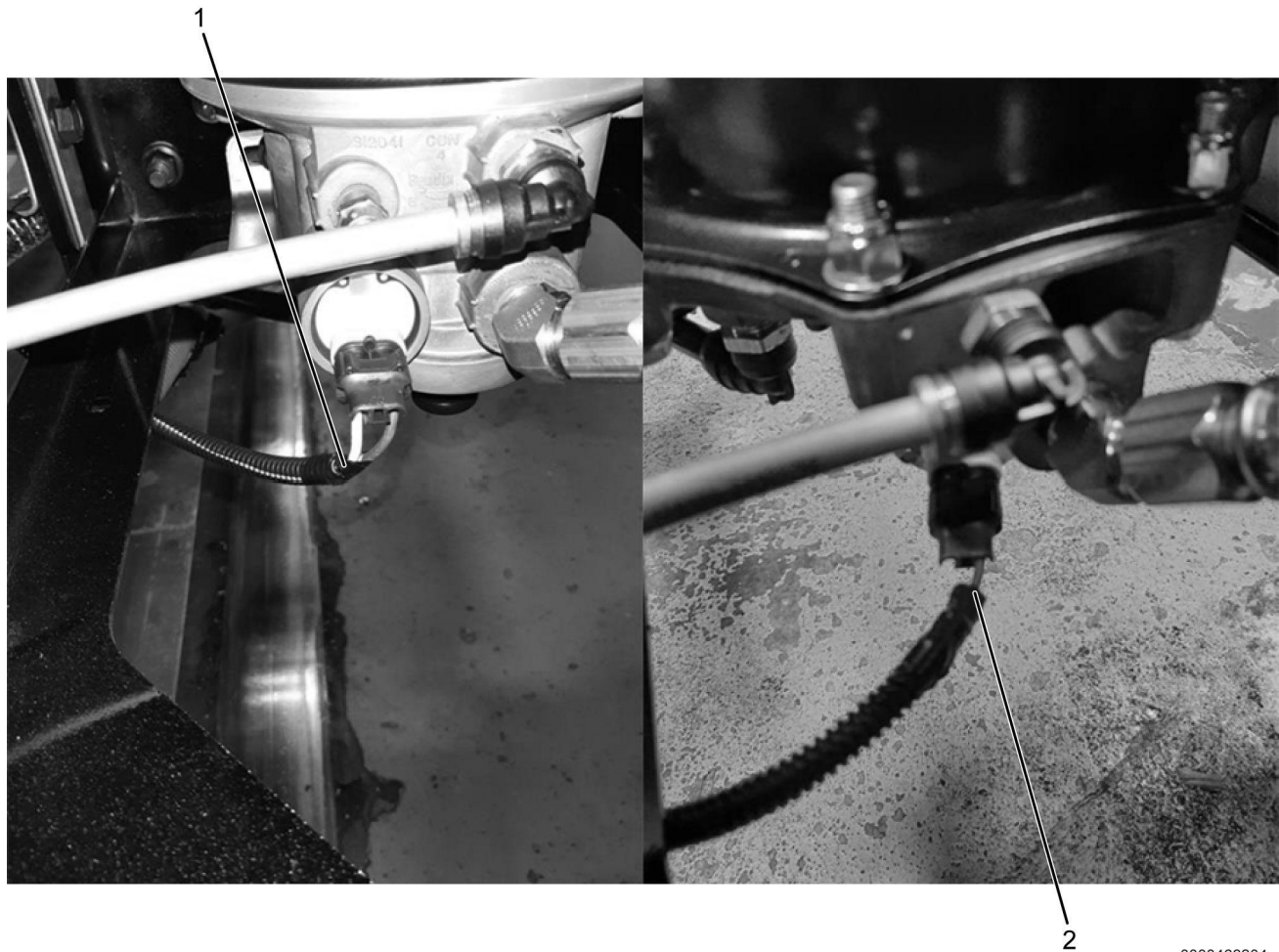
WARNING: To prevent personal injury and / or death, or damage to property, keep flames or sparks away from vehicle and do not smoke while servicing the vehicle's batteries. Batteries expel explosive gases.



WARNING: To prevent personal injury and / or death, or damage to property, remove ground cable from negative terminal of main battery before disconnecting or connecting electrical components. Always connect ground cable last.

1. Park vehicle on flat surface.
2. Shift the transmission to park or neutral and set parking brake.
3. Turn vehicle ignition to Key OFF position.
4. Install wheel chocks.

SERVICE PROCEDURE (CONT.)



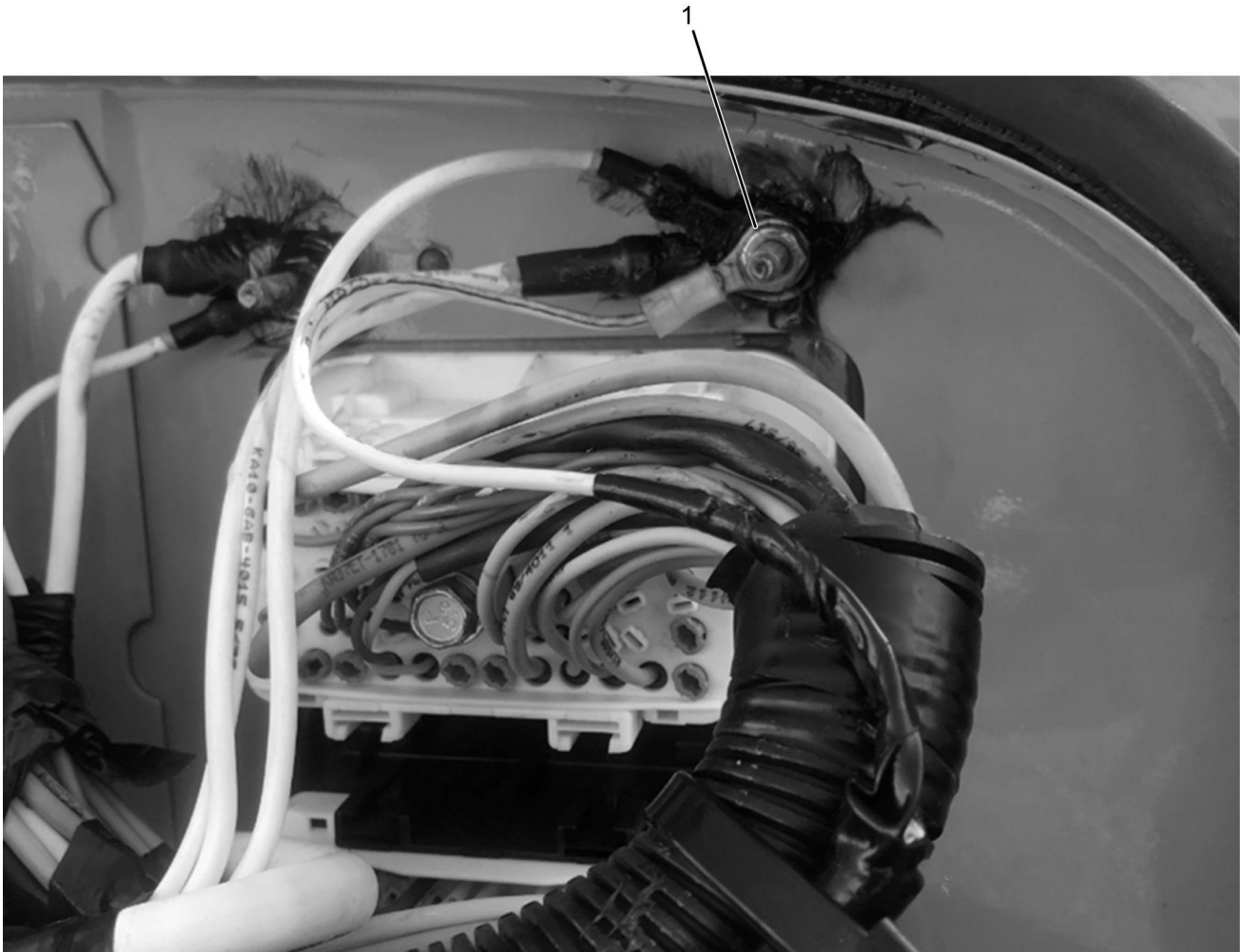
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Figure 1. Air Dryer Connections

1. Dryer connector with ground circuit
 2. Dryer connector without ground circuit
5. Inspect the wire harness connector at the air dryer.
 - a. If there are two wires populating the connector (Figure 1, Item 1), no repair is required. Proceed to Step 21.
 - b. If there is only one wire populating the connector (Figure 1, Item 2), proceed to Step 6.
 6. Disconnect negative battery cable from main battery.
 7. Unlatch and open hood.
 8. Assemble the ground overlay harness.
 - a. Using 14 gauge wire, cut length to 142 inches (360.7 cm).
 - b. Strip insulation from end of wire, install 1/4-inch eyelet, and crimp terminal.

SERVICE PROCEDURE (CONT.)

- c. Place heat shrink tube over crimped portion of eyelet terminal and heat to shrink tubing.
- d. Slide the conduit over the wire and position so it is approximately 2 inches (5 cm) from each end.
- e. Using wire harness tape, secure each end of conduit in place.
- f. Strip the remaining end of the wire, install Metri-Pack seal, position Metri-Pack terminal onto wire and crimp to wire.



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Figure 2. Engine Compartment Bulkhead (Cowl)

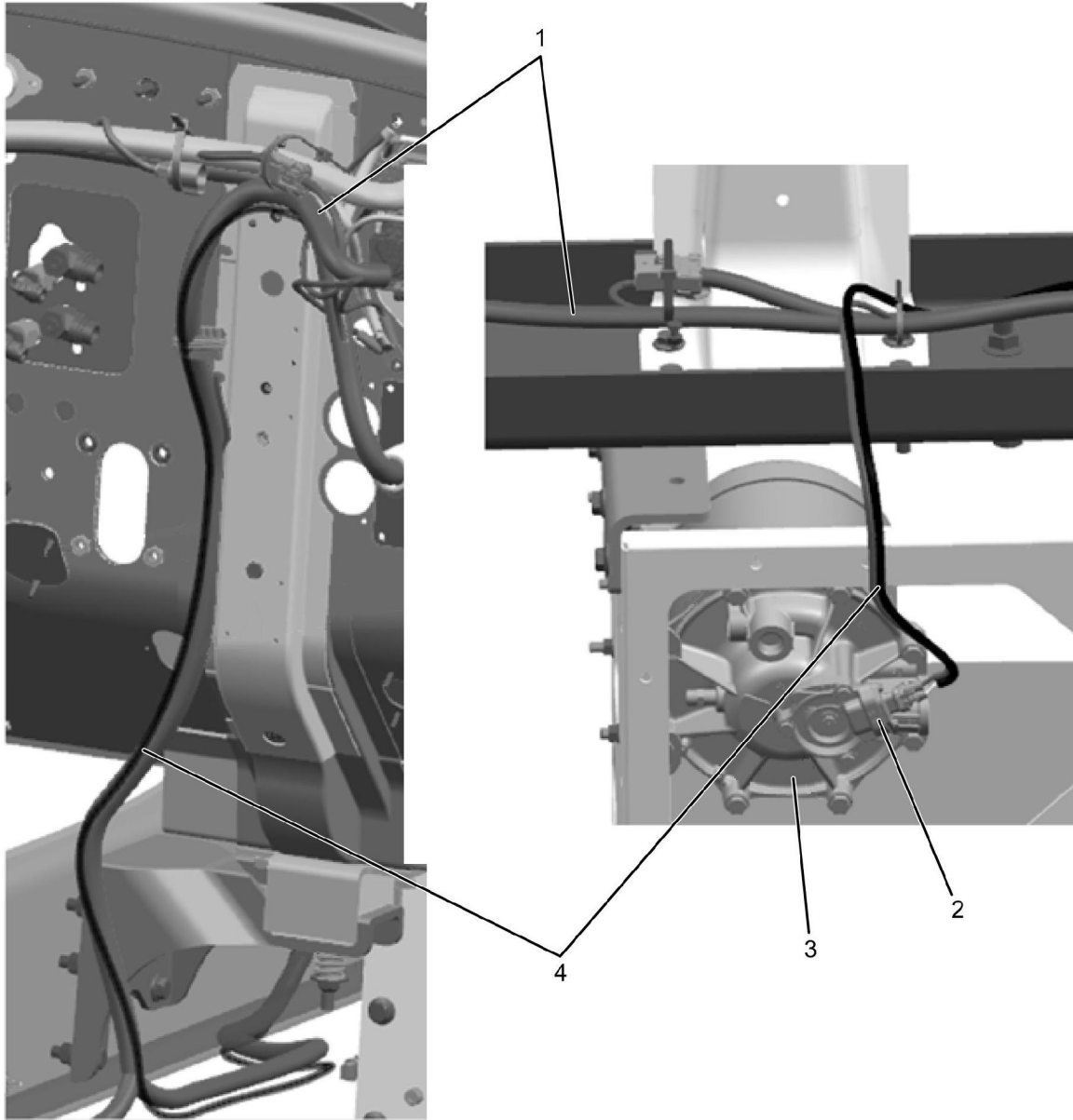
1. Cowl ground stud and nut

NOTE: Figure 2 is missing the shrink wrap that is normally present on the terminal.

9. Remove the nut from the cowl ground stud (Figure 2, Item 1) and save for reuse.
10. Install the 1/4-inch eyelet of the ground overlay harness.

SERVICE PROCEDURE (CONT.)

11. Install nut. Using a torque wrench, tighten to 25 to 35 in-lbs (2.9 to 3.9 N•m).
12. Apply electrical sealing coating to ground stud and nut.



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Figure 3. Air Dryer Electrical Harnesses

1. Forward chassis harness
2. Electrical connector
3. Air dryer
4. Ground overlay harness

SERVICE PROCEDURE (CONT.)

13. Route the ground overlay harness (Figure 3, Item 2) along the forward chassis harness (Figure 3, Item 1) to the air drier (Figure 3, Item 3) and secure with cable tie straps every 12 to 14 inches (30.5 to 35.5 cm).
14. Remove the electrical connector (Figure 3, Item 3) from the air dryer (Figure 3, Item 4).
15. Inspect terminal on drier side of connector for corrosion. If there is corrosion present, replace the purge valve heater BX800405.
16. Remove the terminal lock from the connector and save for reuse.
17. Insert the ground wire terminal into the open cavity of the connector.
18. Insert the Metri-Pack seal into position in the connector cavity and install the terminal lock.
19. Install the electrical connector (Figure 3, Item 3) to the air dryer (Figure 3, Item 4).
20. Connect negative cable to main battery.
21. Close and latch hood.
22. Remove wheel chocks.

LABOR INFORMATION

Operation number must appear on all claims.

Table 2. Labor Information

Operation No.	Description	Time
A40-20903-1	Inspect for ground circuit; no repair required	0.2 hrs
A40-20903-2	Inspect, create and install ground overlay	0.4 hrs

ADMINISTRATIVE PROCEDURE

Expense is to be charged to Warranty. Claims are to be submitted in the normal manner, making reference to Authorized Field Change Number 20903.

Section 7 of the Warranty Policy and Procedures Manual contains further information related to the submission and processing of AFC / Recall claims.

As with all claim submissions, items acquired locally must be submitted in the "Other Charges" tab. The cost of any bulk items (such as a bag of cable tie straps, roll of wire, barrel of oil, or tube of silicone) should be prorated for the cost of the individual pieces / amount used during each repair.

To ensure this important improvement is made in a timely manner, all claims for 20903 activity must be submitted by 22 January 2022 or within the normal warranty period for the component repaired, if after 22 January 2022.

GROUP	NOUN	C	WARR.	TP	PAD

GROUP — Enter number ←

NOUN — Leave blank ←

C (CAUSE) — Enter either 1, 2, 3. (See below)

- 1. Inspected (No repair required).
- 2. Inspected and repaired.
- 3. Defective part from parts stock.

WARRANTY — (Warranty Code) Enter 40. ←

TYPE PART — Enter P for type part causing failure. ←

PAD — Enter 100 ←

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