ISSUE DATE:	3-3-2022
SERVICE BULLETIN SUBJECT:	Brushless Battery Fan Bracket Retrofit
VINs or MODELS AFFECTED:	Service Specified Buses
COMPLETE BY:	Next Service Opportunity
SERVICE BULLETIN #:	SC-22-26
LABOR OPERATION CODE:	CC58Z

NOTICE! It is expected that this process will require six hour per bus. Please schedule appropriately to minimize vehicle downtime.

BRUSHLESS BATTERY FAN BRACKET RETROFIT

Retrofit Description:

This procedure describes the process of updating the Battery Pack Cooling Bracket to accommodate a new brushless fan design and installing new fans.

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East Coast Manufacturing: 1 Whitlee Court, Greenville, SC 29607
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Tools/Parts Required

Tools and Supplies Required:

- Wheel Lifts (4 EA)
- Jack Stands (4 EA)
- #2 Phillips Screwdriver
- Ratchet
- 8mm Socket
- #2 Phillips Screwdriver Socket
- Calibrated Torque Wrench
- Orange Torque Stripe Paint

Parts Required:

- 060110 Dallas Dart Fan Assy Replacement Retrofit Kit (Consisting of)
  - 140-3602 MOUNT, FAN, BE40 8 EA
  - 016470 CABLE TIE, 5 1/2 LENGTH 1" MAX DIA BLK 48 EA
  - 016476 CLIP, STANDOFF BUNDLING, .02-.07" PANEL" 24 EA
  - 060534 Brushless Fan Assy, Toshiba 8 EA
  - 005598-013 SCREW: MACHINE: M4-0.7X50X50 64 EA
  - 062287 Fan, Finger Guard, 120mm 16 EA

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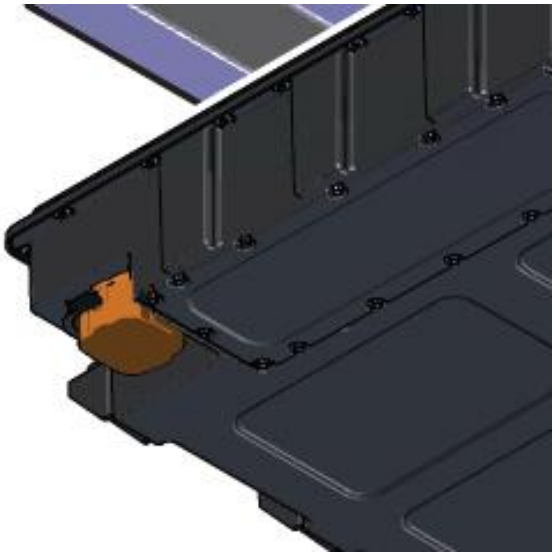
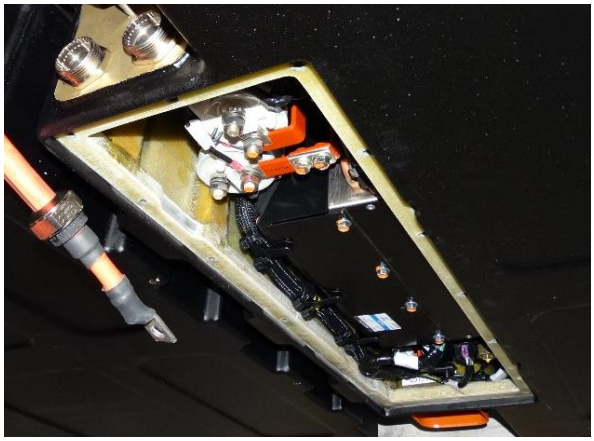
Procedure

1. Complete the Proterra approved Lockout/Tagout procedure to make the vehicle safe for work.
2. Using four Wheel Lifts, lift the bus to access the battery packs under the bus body.
3. Using four Jack Stands, support the bus for safety. The bus must be supported at eight points.
4. Carefully remove the orange manual service disconnect (MSD) plug from all battery packs on the bus.
   NOTE: This part has a two-stage latch.



5. Using a 6mm socket, remove the 16 hex head screws from one of the access panels. Then remove the access panel.
   NOTE: Do not remove this panel if the MSD is installed in the pack. Do not replace the MSD while this panel is removed.



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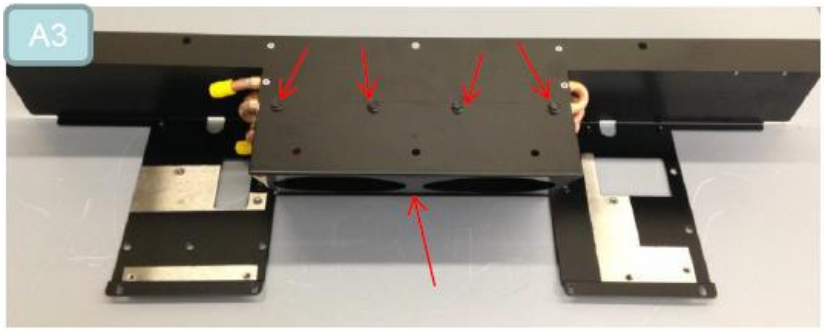
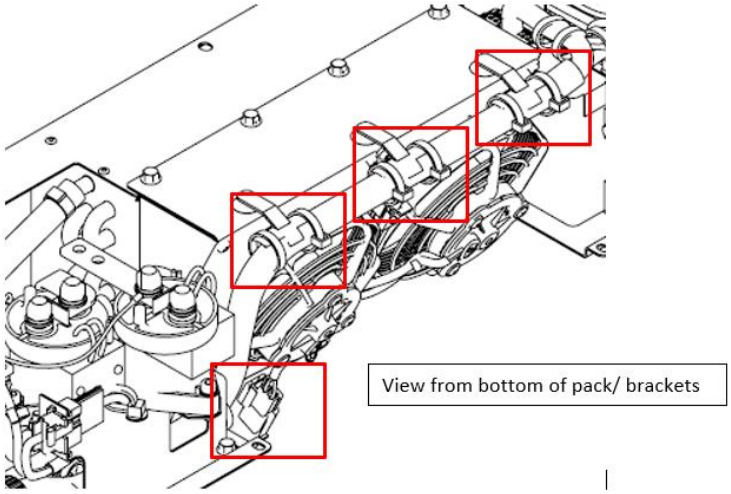
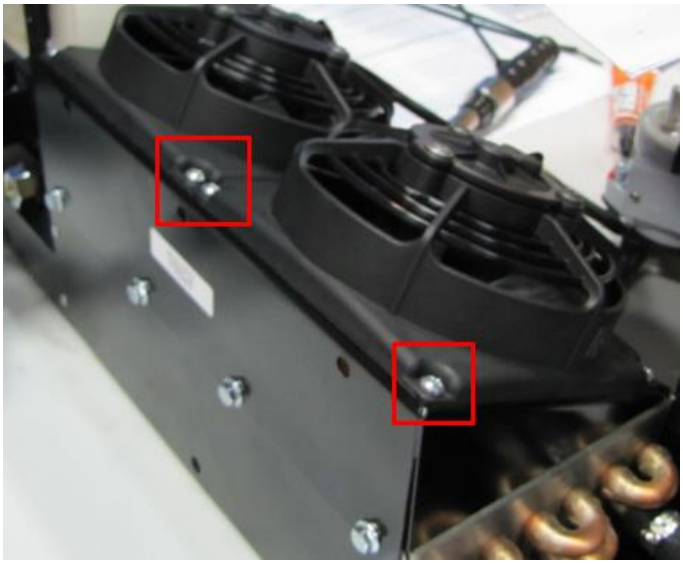
6. Using a 5mm socket, remove the four Hex Head Screws holding the fans and their bracket to the heat exchanger bracket in the pack.



7. Clip the Cable Ties securing the fan harness to the fan bracket and disconnect the fans from the harness. You should now be able to remove the fans and their bracket from the pack.



8. Using a #2 Phillips Screwdriver, remove the four machine screws from each fan and remove them from their bracket.



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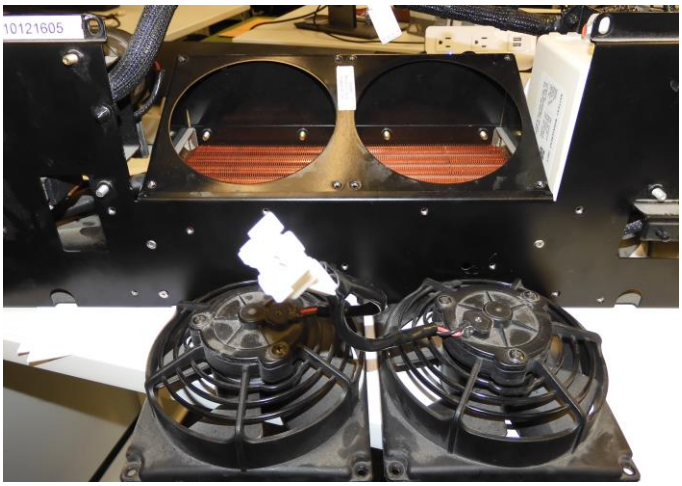
9. Discard the Fans. They will not be reused.



10. Using an 8mm Ratchet/Socket, remove the screws shown circled in red below.

11. Remove the Bracket and discard it. It will not be reused.

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12. Using a #2 Phillips Screwdriver, install the new Brushless Fans (060534) and Finger Guards (062287) into the new Fan Mount (140-3602). The screws will go through the Finger Guard first, then into the Fans to secure them from underneath the mount.

13. Using a Calibrated Torque Wrench with a #2 Phillips Socket, **torque the screws to 53 inch-pounds.**

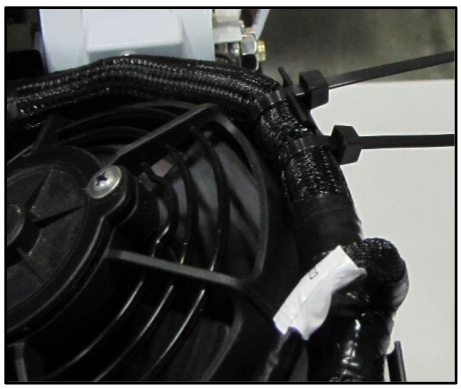
14. Using Orange Torque Stripe Paint, mark the properly torqued fasteners.

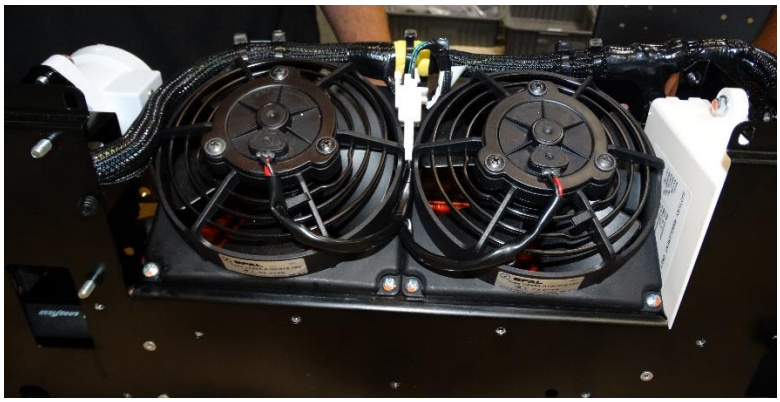
15. Using an 8mm Ratchet/Socket, install the new Fan Mount (140-3602) with the installed Fans onto the Bracket.

16. Using a Calibrated Torque Wrench with an 8mm Socket, **torque the fasteners to 53 inch-pounds.**

17. Using Orange Torque Stripe Paint, mark the properly torqued fasteners.

18. Route the main wiring harness up beside the first fan and over the top of both fans. Secure the first corner of the wiring harness over the fans using two Cable Ties (016470) secured to the Stand-off Clip (016476) nearest the contactor modules. Secure the center and other corner of the wiring harness using two Cable Ties per Stand-off Clip.





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19. Confirm all hardware is properly installed and secure, and that all tools are outside the access area of the battery pack.

20. Using a 6mm Ratchet/Socket, reinstall the Access Panel Lid using the original fasteners with Loctite 242.

21. Using a Calibrated Torque Wrench with a 6mm Socket, **torque the fasteners to 33 inch-pounds.**

22. Using Orange Torque Stripe Paint, mark the properly torqued fasteners.

23. Repeat the process to update the remaining battery packs on the bus.

24. Remove the Jack Stands and safely lower the bus using the Wheel Lifts.

25. Remove the Lockout/Tagout devices and return the vehicle to service**.**

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