BLUE BIRD

R25DL

IMPORTANT SAFETY RECALL

NHTSA Number: 25V-249 (School Bus)

DATE: **June 12, 2025**

TO: **U.S. DEALERS**

SUBJECT: **R25DL: Secondary Brake System Failure in Electric Vehicles with Hydraulic Brakes**

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

Blue Bird Body Company has decided a defect which relates to motor vehicle safety exists in certain:

- Model year 2022-2024 Blue Bird Vision Electric School Buses
    - Manufactured from June 28, 2022 through November 20, 2024

This notice applies to your bus(es) identified by both Blue Bird Body Number and Vehicle Identification Number (VIN) on the enclosed yellow cover sheet. If you no longer own the subject bus(es), please complete the appropriate section of the yellow cover sheet and return to Blue Bird in the enclosed pink postage prepaid envelope.

An operator alert system failure condition has been identified on Blue Bird Vision Buses equipped with the Accelera PowerDrive system and hydraulic brakes. If the vehicle experiences failure of primary hydraulic fluid power, the brake pedal may require increased effort to apply the service brakes, due to an undetected failure with the secondary brake assist system. This could result in excessive stopping distance and potential loss of vehicle control. It has been identified the secondary brake assist system may be inoperable and unable to provide braking assist to the driver if there is a primary system failure, which may increase the risk of a crash. Blue Bird shall conduct a safety recall to modify existing hardware and software to enhance operator detectability.

Corrective Action:

To correct this condition, Blue Bird has developed an improved diagnostic for the secondary brake assist system. The improvement involves a software update and modification to the wiring harness to the system. This software update and hardware modification increases detectability of a secondary brake assist system failure by 500%.

Blue Bird will reimburse the labor cost of the repair related to this recall at no cost to the Dealer or the vehicle owner.

Labor Reimbursement*:*

Blue Bird will reimburse the labor cost of the Repair related to this recall at no cost to the Dealer or the vehicle owner. The standard repair time (SRT) to accomplish the repairs in accordance with the R25DL remedy procedure(s) is outlined below.

R25DL Repair: Hardware Modification & Software Update - 1.5 Hours

Administering the Recall and Parts*:*

Recall R25DL should be repaired, per R25DL Recall Instructions. You may request parts at **campaignparts@blue-bird.com** **Parts are currently available.**

BLUE BIRD BODY COMPANY
3920 Arkwright Road, Suite 200, Macon, GA 31210 – (478) 825-2021

If Blue Bird's records indicate bus(es) subject to this recall were delivered in your service area, a list of affected bus(es) will be enclosed. The bus(es) will be identified by Blue Bird Body Number and Vehicle Identification Number (VIN) on the enclosed yellow cover sheet. **Dealers should verify correct owners and assure complete mailing and shipping addresses are provided for each listed owner.**

It is the dealer's responsibility to verify the correct owner's name, address, and telephone number is provided for each listed vehicle. Any corrections or updates should be made in ClaimsCenter. Addresses that cannot be updated should be forwarded to **campaignparts@blue-bird.com**

Federal law requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.

Dealers are reminded of their responsibilities under Section 154 of The National Traffic and Motor Vehicle Safety Act of 1991. Dealers are required to complete modifications on units in their inventory before delivering to the final owner. Reference Blue Bird Body Company Distributor Memo No. 42-92.

If you have in your possession or have sold a bus that was purchased from another dealer, that may be affected by this recall, please notify Lisa Hancock at 478-822-2242 or **lisa.hancock@blue-bird.com** Questions regarding this recall campaign should be directed to Lisa Hancock, as well.

Sincerely,

Lisa Hancock
Corporate Recall Administrator
Blue Bird Corporation
402 Blue Bird Blvd, Fort Valley, Georgia 31030
Phone 478.822.2242
lisa.hancock@blue-bird.com

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R25DL

IMPORTANT SAFETY RECALL

NHTSA Number: 25V-249 (School Bus)

DATE: **June 12, 2025**

SUBJECT: **R25DL: Secondary Brake System Failure in Electric Vehicles with Hydraulic Brakes**

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Labor Reimbursement*:*
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R25DL Repair: Hardware Modification & Software Update - 1.5 Hours

Administering the Recall and Parts*:*
Blue Bird recommends you contact your local or nearest Blue Bird Dealer to arrange for this recall to be performed. To locate an authorized dealer, search online at **www.blue-bird.com/find-a-dealer** The Dealer can perform the repairs, or arrange for repairs to be performed by a service repair facility authorized by the Dealer. Recall R25DL should be repaired, per R25DL Recall Instructions. **Parts are currently available and can be ordered through campaignparts@blue-bird.com**

BLUE BIRD BODY COMPANY
3920 Arkwright Road, Suite 200, Macon, GA 31210 – (478) 825-2021

Federal law requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.

If the modifications directed by this notification were performed on your bus prior to the receipt of this recall notification, attach a copy of the work order/invoice. Mail the documents in the pink self-addressed postage prepaid envelope included with the pink reply sheet to Blue Bird for warranty consideration. Reimbursements will be made in accordance with the requirements of the National Highway Transportation Safety Act, Title 49 Code of Federal Regulations, Parts 573 and 577.

Please contact your local Blue Bird Dealer with any questions regarding this recall campaign.

If Blue Bird Body Company should fail to or is unable to remedy this condition without charge to you, you may contact:

ADMINISTRATOR
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
1200 NEW JERSEY AVENUE, SE
WASHINGTON, D.C. 20590

Or, you may call The National Highway Traffic Safety Administration toll free at:
1-888-327-4236 TTY 1-800-275-9171 or go to: http:/www.safercar.gov

RECALL

R25DL – Secondary Brake System Failure in Electric Vehicles with Hydraulic Brakes

Models Effected:
Model year 2022 - 2024 Blue Bird Vision Electric School Buses
Manufactured from June 28, 2022 through November 20, 2024

Issue:
Hydraulic brake buses use power steering pressure as the primary source of energy for the brake assist system. In the event of loss of primary steering pressure, there exists an electric backup system to provide assist in application of the brake pedal. If this system were to become disabled, there currently exists limited warnings for the driver. The below enhances diagnostics for the electric backup system and alerts the driver when disabled.

Corrective Action:
Blue Bird has developed a soft/hardware solution that increases detectability for failures of the secondary assist system by 500%. Modify existing harness, update NEA software.

Component Code:
80-500-322 - Hydraulic Brake Assist, Secondary System Diagnostic Enhancement

SRTs:
1.5 Hours. ***NOTE 1: This Campaign requires modification of the harness/plug AND a software update**

WARNING: Always follow all Federal, State, Local and Shop safety standards and use proper safety equipment, and thoroughly read and understand all instructions before performing these procedures.

Park bus on level surface, apply parking brake, turn off ignition key, disconnect 12v battery and chock wheels.

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R25DL – Secondary Brake System Failure in Electric Vehicles with Hydraulic Brakes

Parts:

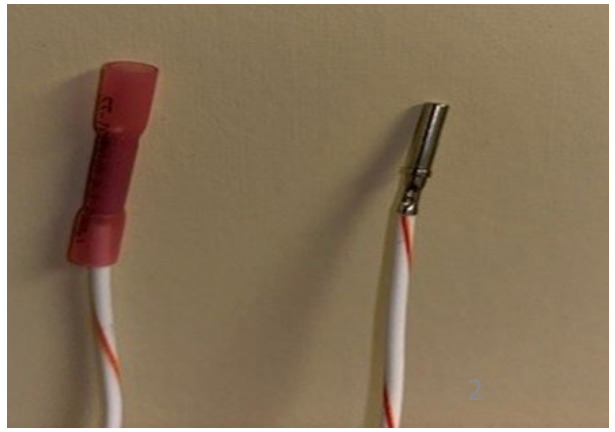
Part Number	Description	Quantity
Procure locally	ELECTRICAL WIRE, TXL/GXL, 18-20AWG	30"
00005840	TERMINAL, BUTT CONN, 18-22 GA, HEAT SEAL, INSL	2
00765859	TERMINAL, EYELET, 1/4, 14-16 GA, INSULATED	1
01941939	TERMINAL, SOC, 16-18 GA, HD30 SERIES, DEUTSCH	1
01891647	PLUG, SEALING, AEC SERIES, DEUTSCH	2
00029999	TIE, CABLE, 120LB 15.25L	5
10086250	GASKET ISOLATOR, MTG, HYDROMAX	2

Tools:

#2 Phillips bit screwdriver
Deutsch CT4-8 – Wire Care Crimping Tool - Deutsch closed barrel terminals, 14 -18AWG or equivalent
Side cut pliers
Wire striping and crimping tool for insulated terminals
¼” drive ratchet with a 3” extension and a 3/8” shallow socket
4MM allen wrench
Small flat blade screwdriver

Prep: (Prepare prior to beginning repair)

Strip both ends of the new white wire
Crimp the Deutsch solid socket on one end
Crimp an insulated butt connector on the other



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R25DL – Secondary Brake System Failure in Electric Vehicles with Hydraulic Brakes

Instructions:

1. Turn off battery disconnect or remove negative battery cable from terminal and secure
2. Inside the bus, remove the plastic doghouse cover exposing the A MUX module and wiring harness (Figure 1)
3. Remove the six (6) RH switch panel screws and panel (Figure 2)
4. Using the upper dash panel opening, locate the white wire labeled “BRAKE WARN GND”. The wire will be connected at the firewall to the C703 bulkhead connector immediately above and to the driver’s side of the body PCB. (Figure 3)
5. Cut the white wire labeled “BRAKE WARN GND”. Be certain to leave adequate length on the side leading to the firewall to allow you to strip and attach a new lead in a later step. (Figure 4)

Figure 1

Figure 2

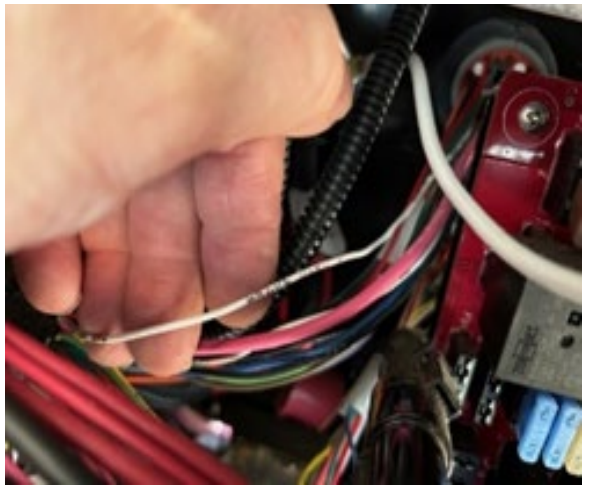

Figure 3

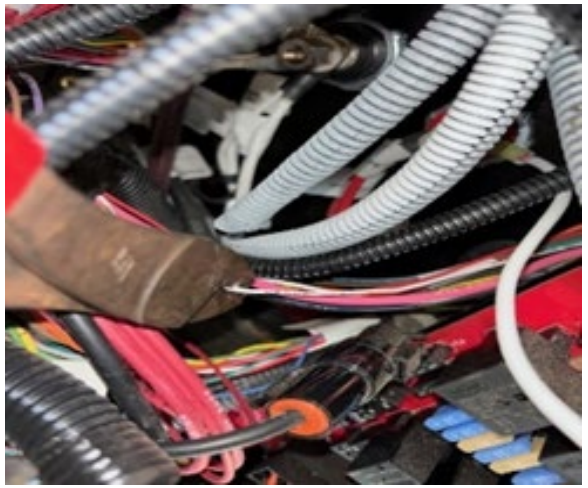

Figure 4

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R25DL – Secondary Brake System Failure in Electric Vehicles with Hydraulic Brakes

Instructions:

6. Fold the side of the cut white wire (harness side) back over on itself and secure with electrical tape. (Figure 5)
7. Strip the remaining end of the white wire labeled “BRAKE WARN GND” (firewall side) and attach the new wire you prepared earlier by crimping it to the white “BRAKE WARN GND” wire (firewall side) (Figure 6)
8. Route the new wire down along the harness to the “A” MUX module
9. At the A module, identify and remove plug E8 by loosening the M4 retaining bolt and gently wiggling the plug out of the module. (Figure 7)
10. Remove the white sealing plug in cavity 18 (Figure 8)

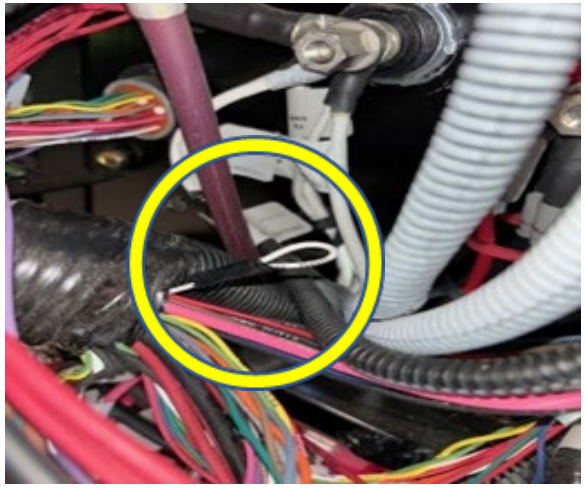

Figure 5

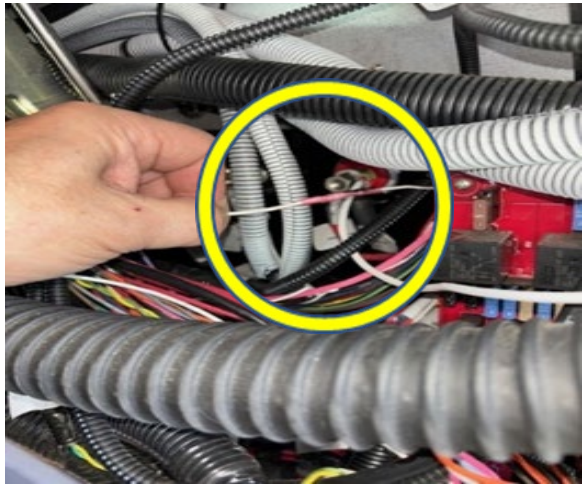

Figure 6

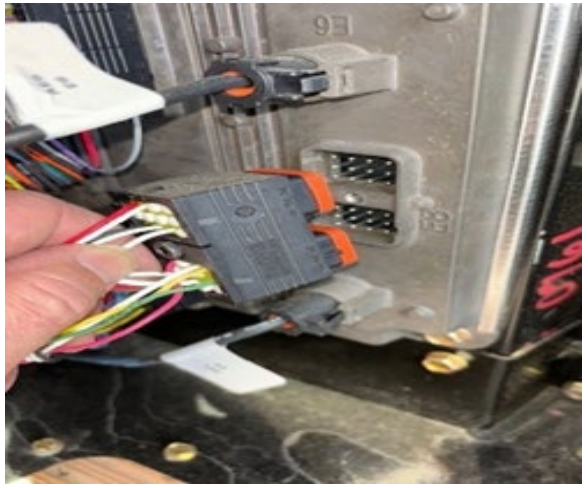

Figure 7

Figure 8

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R25DL – Secondary Brake System Failure in Electric Vehicles with Hydraulic Brakes

Instructions:

11. Verify the new wire you've run from the "BRAKE WARN GND" wire is routed correctly and secure with zip ties
12. Insert the Deutsch socket at the end of the new wire into the back side of the pin 18 cavity on plug E8 until you feel a click. (Figure 9)
13. Verify the socket is locked in the plug by gently tugging on the wire. If the socket pulls out, it must be reinserted
14. Reinstall plug E8 into the cavity on the A module and torque the retaining bolt to 25 inch pounds. (Figure 10)
15. Replace doghouse cover

Figure 9

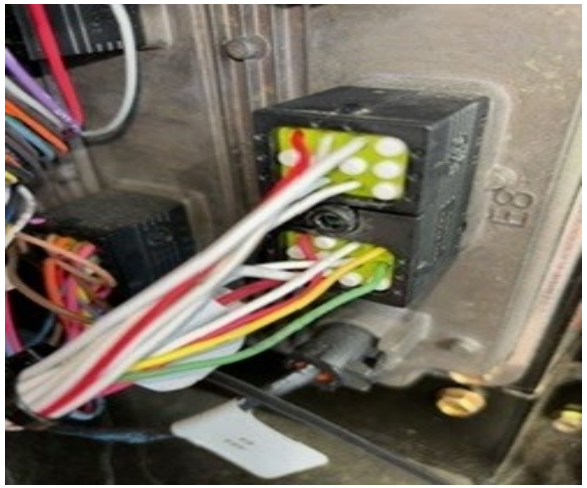

Figure 10

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R25DL – Secondary Brake System Failure in Electric Vehicles with Hydraulic Brakes

Instructions:

16. Open the hood and locate the gray brake module harness connection on the driver's side of the brake master cylinder (Figure 11)
17. Cut the zip tie securing the gray plug to the harness (Figure 12)
18. Disconnect the brake module from the harness by depressing the locking tab (Figure 13)
19. Remove the brake module for modification

Figure 11

Figure 12

Figure 13

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R25DL – Secondary Brake System Failure in Electric Vehicles with Hydraulic Brakes

Instructions:

20. Cut the brake module from the plug approximately 1” from the module (Figure 14). Discard module.
21. Remove the retaining clip from inside the plug (Figure 15)
22. With a small flat blade screwdriver, carefully pry back the retaining lock on pin 4 (red wire) to release the pin (Figure 16)
23. Slide the wire and pin out of the plug (Figure 17)
24. Repeat for the white wire on pin 1

Figure 14

Figure 15

Figure 16

Figure 17

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Instructions:

25. The modified plug cavity should look like (Figure 18)
26. Reinstall the retaining clip
27. Place sealing pins in cavity 1 and 4 (cavity 5 is unused and already sealed) (Figure 19)
28. Strip the blue wire (pin 2) and orange wire (pin 3)
29. Connect the blue wire (pin 2) to the orange wire (pin 3) using an insulated butt connector (Figure 20)
30. Strip the black wire (pin 6) and crimp a 5/16 insulated ring terminal (Figure 20)

Figure 18

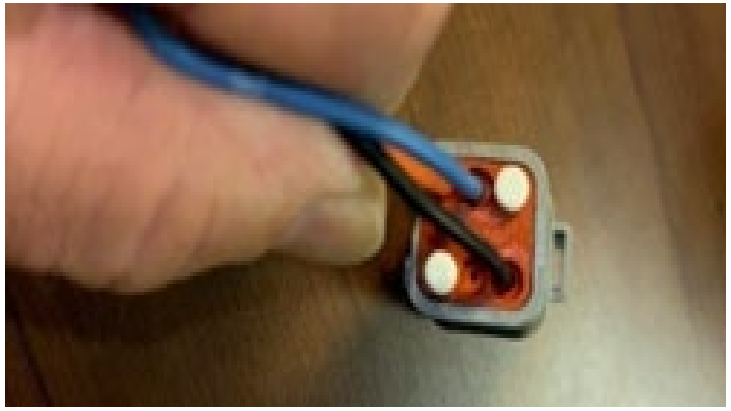

Figure 19

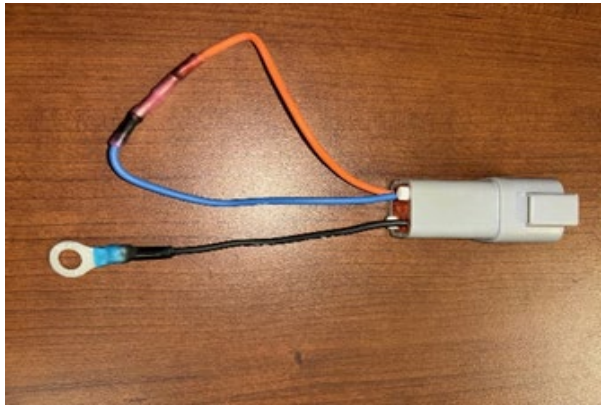

Figure 20

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R25DL – Secondary Brake System Failure in Electric Vehicles with Hydraulic Brakes

Instructions:

31. Under hood, locate the relay mounted on the master cylinder hydroboost power brake booster and remove the bolt securing the relay. (Figure 21)
32. Put the relay mounting both through the eyelet of the black wire on the modified module harness and relay mount
33. Tighten bolt
34. Snap modified module harness back into harness plug. (Figure 22)
35. Secure with zip ties

Figure 21

Figure 22

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R25DL – Secondary Brake System Failure in Electric Vehicles with Hydraulic Brakes

Both software files (Application & Simulink) in the A-zone, C-zone, and D-zone MUX/PMM modules need to be updated.

Description	Where to get it
AmeFlash Tool Software (Free download. Requires Vantage Log-in)	Blue Bird Vantage>>Parts & Service>>Technical Reference>>Software Downloads>>Ametek Software
RP1210 Communication Adapter Supported by the AmeFlash Tool Software (Dearborn DPA-5 USB Recommended)	
Blue Bird Bench Program Harness #10074768.	Blue Bird Service Parts
Application file 1.4 or newer. Not vehicle or module specific. Same for all.	Blue Bird Vantage>>Parts & Service>>Technical Reference>>Software Downloads>>Ametek Software
C-Zone Simulink file version 2-3-20 or newer. Not vehicle specific. Only for front body controller. Front right header	Blue Bird Vantage>>Parts & Service>>Technical Reference>>Software Downloads>>Ametek Software
D-Zone Simulink file, version 2-3-20 or newer. Not vehicle specific. Only for the rear body controller. Rear left header	Blue Bird Vantage>>Parts & Service>>Technical Reference>>Software Downloads>>Ametek Software
A-Zone Simulink file, version 2-3-20 or newer. Vehicle specific. Only for the chassis controller (PDU)	Unit Dashboard>>Service>>VEPS>>Program MUX A-ZONE PROGRAM FILES>>BODY_NUMBER.ver

IMPORTANT:

- Application file v1.4 (All modules) and Simulink file 2-3-22 for the C & D modules are downloaded from Blue Bird Vantage>>Parts & Service>>Technical Reference>>Software Downloads>>Ametek Software.
- The Simulink file for the A-zone/chassis controller **is vehicle specific** and is the ONLY file to be downloaded from VEPS.
  - Unit Dashboard>>Service>>VEPS>>Program MUX A-ZONE PROGRAM FILES>>BODY_NUMBER.ver

Instructions:

Step 1: Verify 12v battery is fully charged. Anything less than 12.50V, connect battery charger. Key off for entire procedure.

Step 2: Remove PDU cover (black plastic cover below dash) and front/C-zone & rear/D-zone PMM access plates.

Step 3: Disconnect the E8 connector off each PMM with 4mm Allen wrench.

Step 4: Connect RP1210A compliant In-Line adapter to bench harness part # 10074768.

- Optional: Bench harness power/ground jumpers can be fabricated.

Step 5: Connect bench harness to the E8 connector on the MUX/PMM to be programmed.

Step 6: Launch AmeFlash utility & Flash A-zone PMM application(app) file first, then Simulink/model file.

- Chassis Controller (A-zone) Simulink/model file is downloaded from VEPS. This will be the **only** file downloaded from the VEPS page on Vantage. All others will come from Ametek software download page.

Step 7: Move Bench harness to C-zone, and flash app file, then Simulink file.

Step 8: Move bench harness to D-zone, and flash app file, then Simulink file.

Step 9: Re-install all E8 connectors starting with A zone first, then C, then D. Torque fastener to 25-28 IN-LB (2.82-3.13 Nm).

- Note: **Do not** use power tools to install E8 connector. This securement bolt is sacrificial to prevent over torque and **will snap off**.

Step 10: Reference the production order & perform a full system check. If passes, re-install access plates and PDU cover. If not, contact Blue Bird for technical support.

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Function Test:

Condition	Failure Mode	Old Design Behavior	New Behavior
Key on, HV Disabled	None	Solid TT, constant beeper	No TT, beeper off
Key on, HV Disabled	Open F41 fuse	No warning	Flashing TT, 1 HZ beeper
Key on, HV Disabled	Open F6 fuse	No warning	Flashing TT, 1 HZ beeper
Key on, HV Disabled	Open Diag Circuit(AE8:18)	N/A	Flashing TT, 1 HZ beeper
Key on, HV Disabled	Open HydroMax input(AE2:30)	No warning	Flashing TT, 1 HZ beeper
Key on, HV Enabled	HydroMax input-Low	Solid TT, constant beeper	Solid TT, constant beeper
Key on, HV Enabled/Disabled	Failed electric motor	No warning	Flashing TT, 1 HZ beeper

Technical Methodology:

The new design moves away from the brake booster module p/n 10027647, and uses the chassis controller for intelligent monitoring. A diagnostic circuit is added between the body of the hydro-boost and populates an unused air pressure input on AE8:18. This input measures millivolts present as referenced to AE8:7. The amount of low side voltage on the booster is directly tied to failure modes such as weak/poor electric motor grounds, mechanically bound motors, and open circuits to name a few. This mV value is available to see within the cluster via COMPONENT TEST->A CHASSIS CONTROLLER->ANALOG INPUTS. It functions on a range of 10-600mV, wherein different conditions equal different acceptable ranges. If the diag voltage goes out of range for a given condition, the BRAKE WARNING TT(tale tell) will flash at 1 HZ, as will the audible beeper.

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Troubleshooting:

Symptom	Technical Rational	Potential Cause(s)	Diagnostics
No Brake Warning KOEO	Characteristic of new design	Characteristic of new design	N/A
Flashing Brake Warning, KOEO.	Diag voltage out of range	Blown fuse(s), open circuit, Abraded mounting gasket	1. If booster motor is running, and diag voltage is <10mV, install isolation gasket p/n 10086250. 2. If booter motor is not running, T/S circuit
KOEO, no warning. However, once HV is enabled, brake warning is on solid	HydroMax input did not go inactive once HV was enabled. The MUX is expecting the power steering pump to come online and deliver pressure.	Power steering fluid flow <1.0 GPM, failed flow switch.	Connect PSSA to steering system, system requires >3.2 GPM at all times.
Brief or intermittent brake warning messages while driving	HydroMax switch input going active when HV is enabled	Mechanical condition effecting PS flow. Circuit condition(s) effecting HydroMax or Diag voltage inputs	Verify pressure/flow with PSSA. Monitor AE8:18 & AE2:30 with DVOM(mV)while driving.