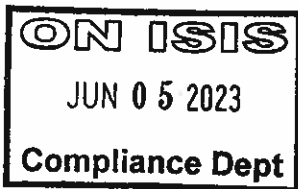


SERVICE PROCEDURE

23510
June, 2023

SUBJECT: SAFETY RECALL

Blower Motor Wire Terminal And Fuse Block on certain 2017 thru 2020 International® DuraStar® and WorkStar® model trucks built 01/19/2016 thru 12/20/2019, 2016 and 2017 International® TranStar® model trucks built 12/14/2015 thru 04/12/2016, 2017 thru 2019 International® LoneStar® model trucks built 01/12/2016 thru 02/08/2018, 2017 thru 2020 International® ProStar® model trucks built 01/13/2016 thru 10/12/2021, and 2018 and 2019 IC Bus® HC commercial buses built 08/07/2016 thru 10/25/2018.



CUSTOMER LETTER

Print ready (PDF file) copy of the [Customer Letter](#)

DEFECT DESCRIPTION

The Heating, Ventilating, and Air Conditioning (HVAC) system blower motor circuit may have been built with a wire terminal that does not meet the electrical current requirements for the blower motor circuit. This can cause overheating that may melt the plastic material of the fuse block for the HVAC circuit and subsequent damage of the surrounding area of the Power Distribution Module (PDM) and/or dash panels. A wire terminal that overheats may cause a fire that could result in property damage to the vehicle and/or personal injury or death to the vehicle operator.

MODELS INVOLVED

This safety recall involves certain 2017 thru 2020 International® DuraStar® and WorkStar® model trucks built 01/19/2016 thru 12/20/2019, 2016 and 2017 International® TranStar® model trucks built 12/14/2015 thru 04/12/2016, 2017 thru 2019 International® LoneStar® model trucks built 01/12/2016 thru 02/08/2018, 2017 thru 2020 International® ProStar® model trucks built 01/13/2016 thru 10/12/2021, and 2018 and 2019 IC Bus® HC commercial buses built 08/07/2016 thru 10/25/2018.

ELIGIBILITY

This procedure applies ONLY to vehicles marked in the International Service PortalSM with Safety Recall 23510. Also complete any other open campaigns listed on the Service Portal at this time.

PARTS INFORMATION

Part Number	Part Description	Quantity
8900328R91	Kit; Blower Motor Circuit Terminal	1
8900327R91	Kit; Blower Motor Circuit Breaker T-Block All vehicles EXCLUDING US & Canada International® LoneStar® and ProStar®	As Needed
8900329R91	Kit; Blower Motor Circuit Breaker Fuse Block ONLY for US & Canada International® LoneStar® and ProStar® ONLY	As Needed
NANO2133005	Dielectric Grease Coating (BLUE)	As Needed
476074C1	Nut, Battery Terminal 3/8" UNC	1

NOTE: Parts marked with an * are an assembled unit.

8900328R91 contains the following parts:

Part Description	Quantity
Light Green 12 AWG*	1
Splice, Solis Butt 14-12 TIN*	1
Terminal, MP 280 Tangles*	1

8900327R91 contains the following parts:

Part Description	Quantity
Block, Fuse, Mini Fuse Holder	1
Lock, Secondary Connector Body (Terminal Lock)	1
30 Amp Fuse	1
Dual Wall Heat Shrink	1

VEHICLE RECALL 23510

8900329R91 contains the following parts:

Part Description	Quantity
Block, Fuse, Mini Fuse Holder	1
Lock, Secondary Connector Body (Terminal Lock)	1
30 Amp Fuse	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 either direction.

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, 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 the ground cable from the negative terminal of the battery box before disconnecting any electrical components. Always connect the ground cable last.

1. Park vehicle on flat surface.
2. Shift transmission to Park or Neutral and set parking brake.
3. Turn vehicle ignition to Key OFF position.
4. Install wheel chocks.
5. Access main vehicle battery. For detailed instructions, refer to appropriate service manual.
6. Disconnect and isolate battery cable from main vehicle battery. Discard battery terminal nut.

NOTE: Steps 7 through 34 are for all vehicles excluding US and Canada International® ProStar® and LoneStar® models. Steps 35 through 62 are for US and Canada International® ProStar® and LoneStar® models.

All Vehicles Terminal Replacement EXCLUDING US and Canada International® ProStar® and LoneStar® models.

7. Locate interior PDM cover on passenger side of instrument panel and remove cover. Save for reuse.

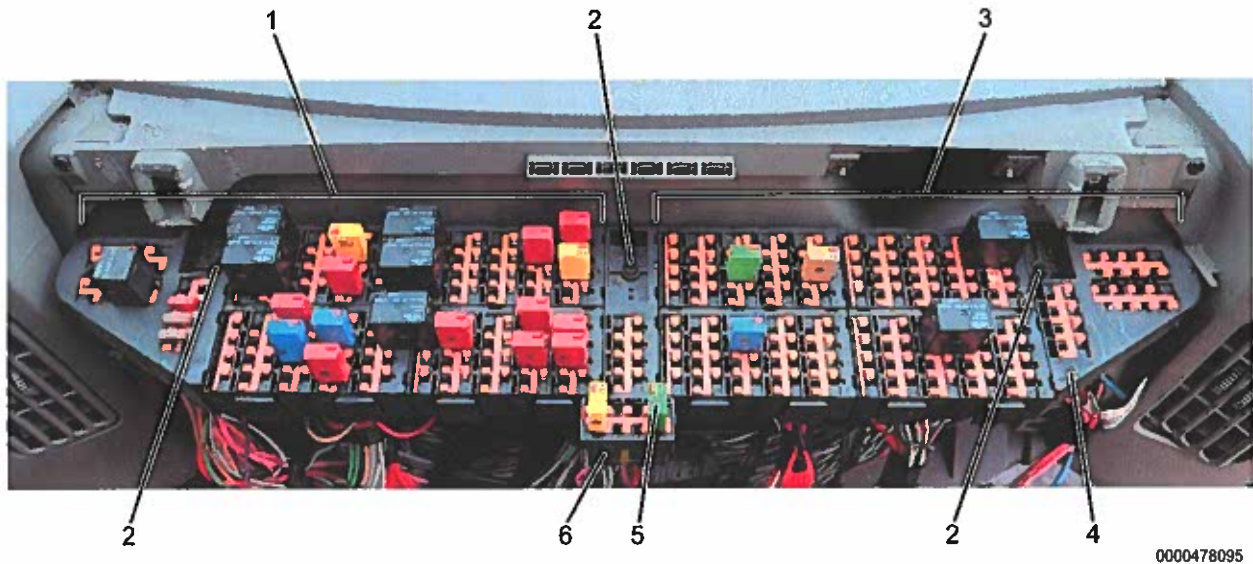


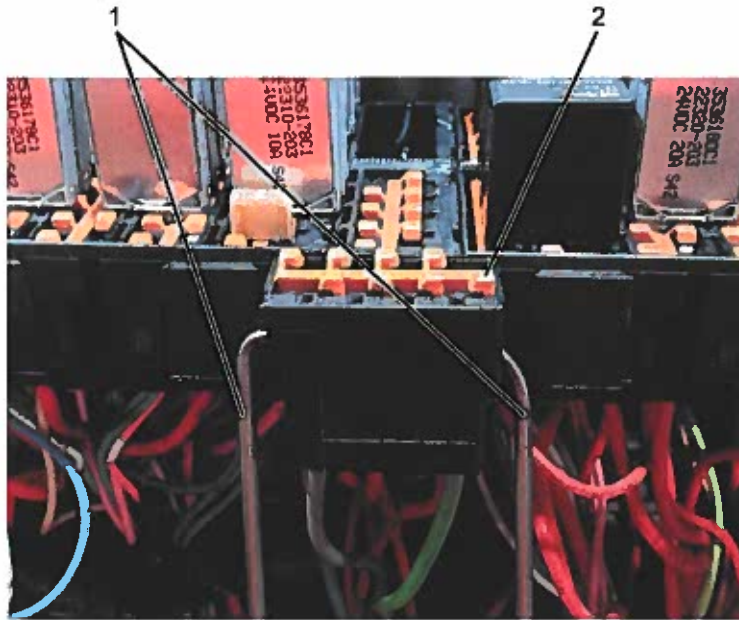
Figure 2. Interior PDM

1. Interior PDM left side half
 2. Interior PDM mounting screw (3)
 3. Interior PDM right side half
 4. Interior PDM
 5. 30-amp blower motor circuit breaker
 6. T-block
8. Locate 30-amp blower motor circuit breaker (Figure 2, Item 5) on interior PDM (Figure 2, Item 4).

NOTE: Record circuit breaker locations and rating prior to removing any circuit breaker.

CAUTION! To prevent damage to property, store disconnected or removed components on clean surface and properly cover exposed connections. Failure to do so can lead to contamination and damage to component.

9. Remove 30-amp blower motor circuit breaker (Figure 2, Item 5) from cavities A4 and B4 as well as any other circuit breaker on the T-block (Figure 2, Item 6). Save circuit breakers.

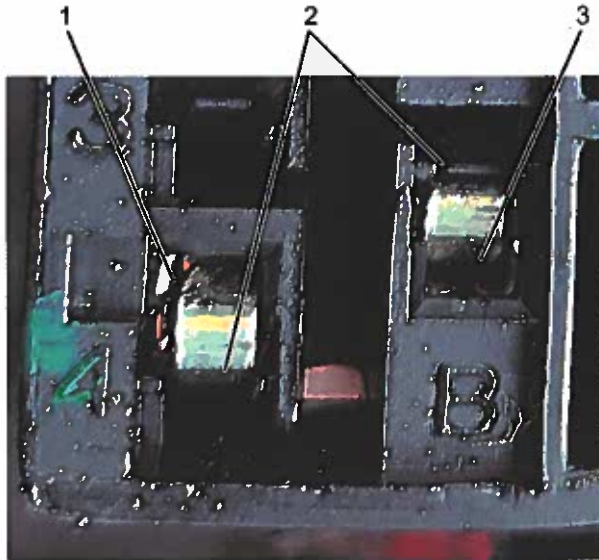


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Figure 3. Terminal Lock Retaining Tab

1. Pick tool (2)
2. ORANGE terminal lock

10. Using two pick tools (Figure 3, Item 1), simultaneously push in retaining tabs of ORANGE terminal lock. (Figure 3, Item 2). Remove ORANGE terminal lock (Figure 3, Item 2) once tabs are released.

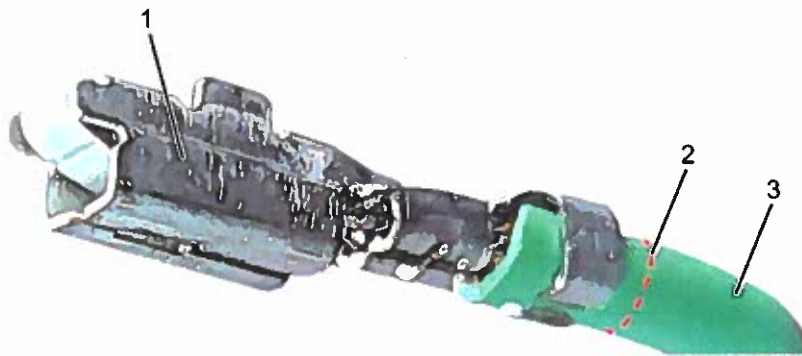


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Figure 4. Terminal Cavity

1. A4 terminal cavity
2. Terminal retention finger
3. B4 terminal cavity

11. Using a 5/64 inch or 2 mm flat blade screwdriver, remove terminal in cavity A4 (Figure 4, Item 1) by lifting the terminal retention finger (Figure 4, Item 2) and remove terminal by pulling on the wire.



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Figure 5. Wire Terminal

1. Wire terminal
2. Cut point
3. Wire

12. Using side cutter pliers, cut the wire terminal (Figure 5, Item 1) from the wire (Figure 5, Item 3)
13. Slide a piece of dual wall heat shrink tubing onto the wire.

14. Using a pair of wire strippers, remove 10 mm of insulation from cut wire.

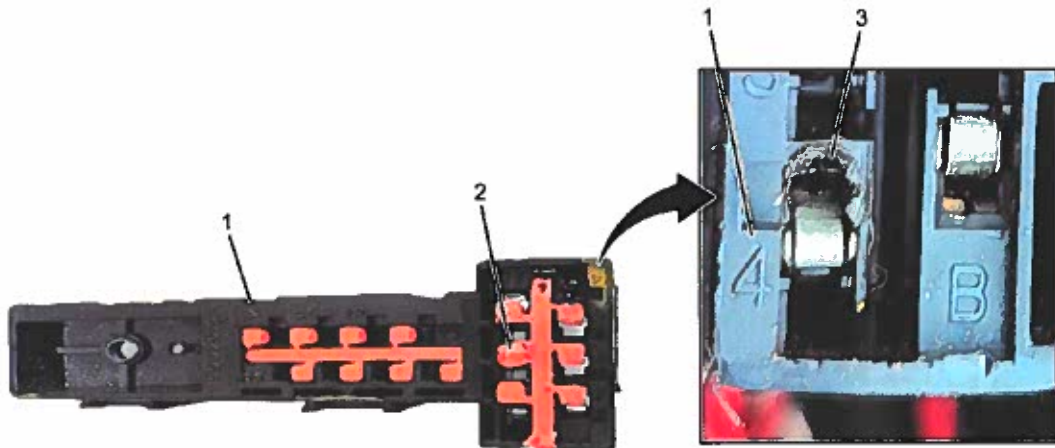


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Figure 6. Terminal Lead Pigtail

1. Butt splice
2. Terminal lead pigtail

15. Place butt splice (Figure 6, Item 1) of new terminal lead pigtail (Figure 6, Item 2) onto stripped end of wire from Step 14.
16. Using a crimping tool, crimp butt splice.
17. Position dual wall heat shrink over butt splice (Figure 6, Item 1) and using a heat gun, seal heat shrink to the splice.
18. Repeat Step 11 through Step 17 for cavity B4 (Figure 4, Item 3).



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Figure 7. T-Block

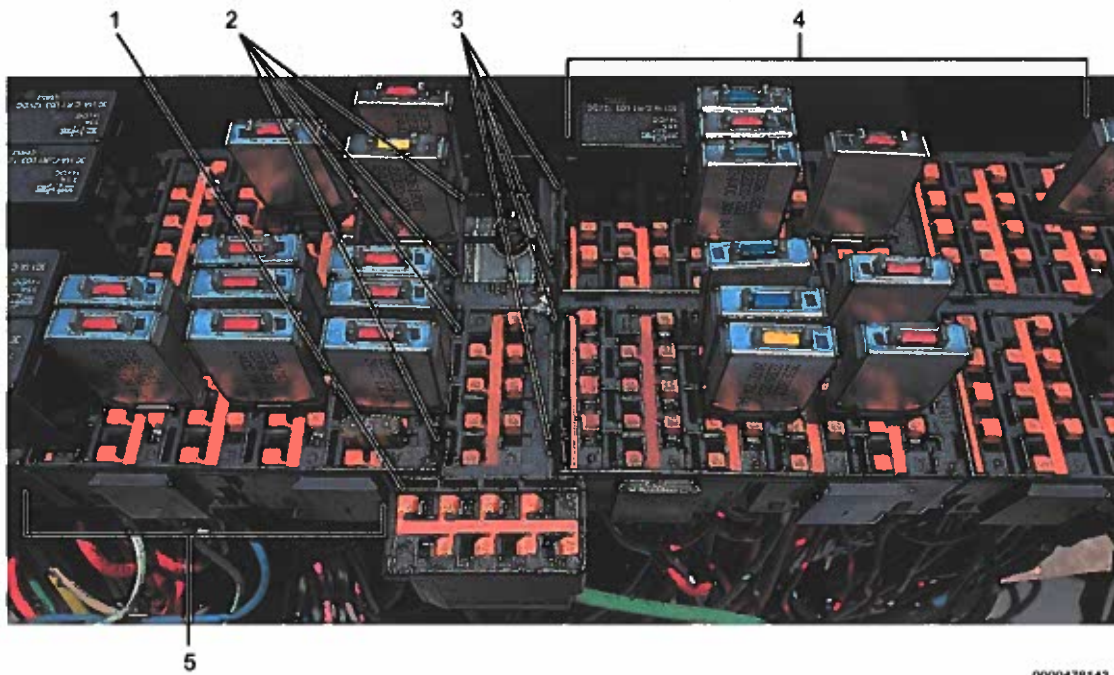
1. T-block
2. Heat-damaged terminal lock
3. Heat-damaged T-block terminal cavity

19. Inspect blower motor T-block (Figure 7, Item 1) terminal lock (Figure 7, Item 2) and T-block terminal cavity (Figure 7, Item 3) for signs of heat damage or melting.
 - a. If terminal lock (Figure 7, Item 2) and / or T-block terminal cavity (Figure 7, Item 3) are NOT heat damaged, insert new terminal assembly into cavity A4 (Figure 4, Item 1, and cavity B4 (Figure 4, Item 3); perform Step 29 and Step 30, and then Step 34.
 - b. If terminal lock (Figure 7, Item 2) and / or T-block terminal cavity (Figure 7, Item 3) ARE heat damaged (Figure 7, Item 3), the T-block will need to be replaced. Perform Steps 20 through 34.

All Vehicles T-Block Replacement EXCLUDING US and Canada International® Prostar® and LoneStar® models.

NOTE: There is no set time to replace T-block. Technician must record time punches and attach claim comments for replacement of T-block.

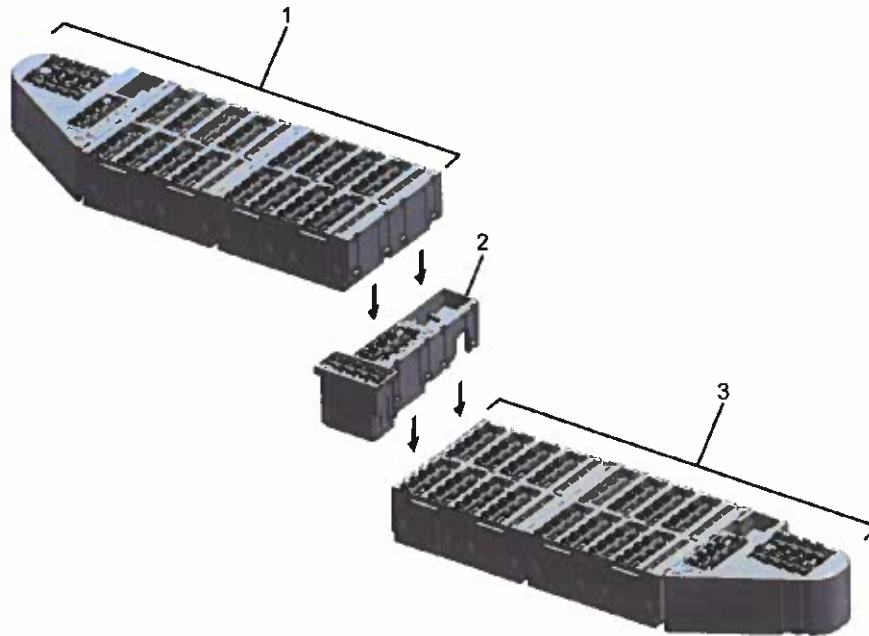
20. Remove three interior PDM mounting screws (Figure 2, Item 2) and save for reuse.



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Figure 8. Interior PDM T-Block Connections

1. T-block
2. Interior PDM left side alignment slot (4)
3. Interior PDM right side alignment slot (4)
4. Interior PDM right side half
5. Interior PDM left side half



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Figure 9. Interior PDM Assembly

1. Interior PDM left side half
2. T-block
3. Interior PDM right side half

21. Locate four interior PDM right side alignment slots (Figure 8, Item 3) between the interior PDM right side half (Figure 8, Item 4) and T-block (Figure 8, Item 1).
22. Insert a 5/64 inch / 2mm flat blade screwdriver or pick tool into each interior PDM right side alignment slot (Figure 8, Item 3) and apply downward force on inserted tools to take pressure off of four locking tabs holding interior PDM right side half (Figure 8, Item 4) and T-block (Figure 8, Item 1) together.

CAUTION! To prevent damage to property, securely reposition disassembled PDM components and harness. Failure to do so can result in property damage.

23. Hold interior PDM and push down on the right side PDM half (Figure 8, Item 4) to separate components.
24. Locate four interior PDM left side alignment slots (Figure 8, Item 2) between the interior PDM left side half (Figure 8, Item 5) and T-block (Figure 8, Item 1).

25. Insert a 5/64 inch / 2mm flat blade screwdriver or pick tool into each alignment slot (Figure 8, Item 2) and apply downward force on inserted tools to take pressure off of the four locking tabs holding interior PDM left side half (Figure 8, Item 5) and T-block (Figure 8, Item 1) together.
26. Hold interior PDM left side half (Figure 8, Item 5) and push down on T-block (Figure 8, Item 1) to separate components.
27. Once T-block (Figure 8, Item 1) is separated, record harness wire and terminal location and routing into component.
28. Remove wire terminals connected to T-block (Figure 8, Item 1).

CAUTION! To prevent damage to property, ensure wire terminals are properly seated in terminal cavities. Failure to do so can lead to property damage.

29. Utilizing previously recorded wire location and routing, insert terminals into correct locations in new T-block as noted in Step 26.

CAUTION! To prevent damage to property, ensure ORANGE terminal lock is flush to terminal seat and both ORANGE terminal lock retaining tabs seat correctly after installation. Failure to do so can lead to property damage.

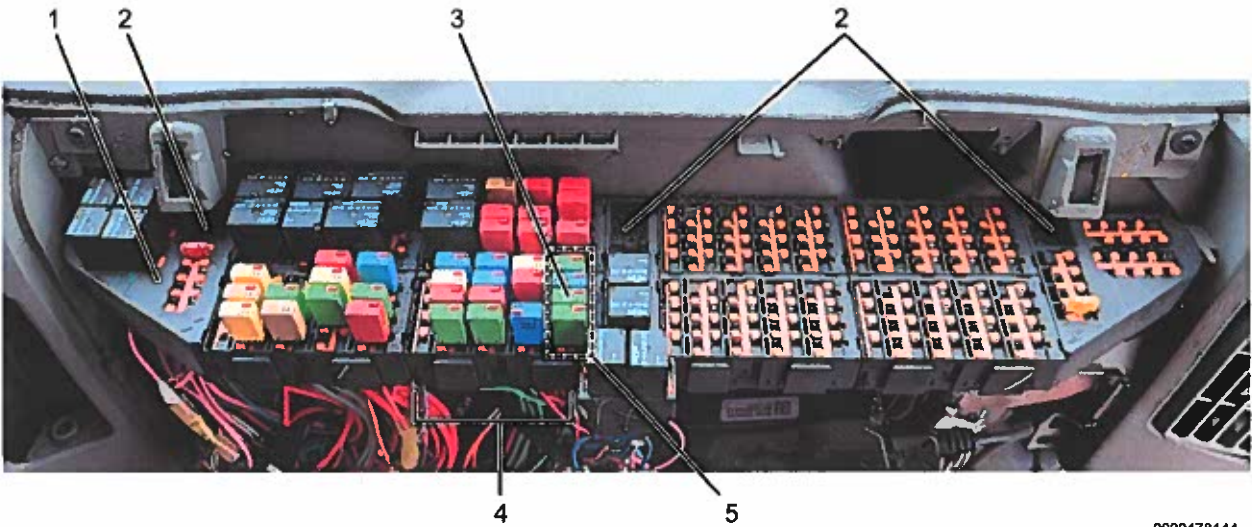
30. Install new ORANGE terminal lock into T-block.
31. Align T-block (Figure 9, Item 2) with interior PDM left side half (Figure 9, Item 1) and firmly reconnect.
32. Align opposite side of T-block (Figure 9, Item 2) with interior PDM right side half (Figure 9, Item 3) and firmly reconnect.
33. Return interior PDM (Figure 2, Item 4) to mount and install three interior PDM mounting screws (Figure 2, Item 2) removed in Step 20 and secure tightly

NOTE: Install new circuit breaker if fuse block is replaced. If fuse blocks were not replaced, reuse previously removed circuit breakers.

34. Install 30-amp circuit breaker into cavities A4 and B4 and any other circuit breakers removed. Proceed to Step 65.

US and Canada International® Prostar® and LoneStar® Terminal Replacement

35. Locate interior PDM cover on passenger side of instrument panel and remove interior PDM cover. Save for reuse.



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Figure 10. Interior PDM

1. Interior PDM
2. Interior PDM mounting screw (3)
3. Blower motor circuit breaker
4. Blower motor circuit breaker PDM block
5. Blower motor circuit breaker row

36. Locate blower motor circuit breaker (Figure 10, Item 3).

37. Record circuit breaker ratings and locations.

CAUTION! To prevent damage to property, store disconnected or removed components on clean surface and properly cover exposed connections. Failure to do so can lead to contamination and damage to component.

38. Remove blower motor circuit breaker (Figure 10, Item 2) and other breakers on the same row in the PDM block (Figure 10, Item 5). Save circuit breakers.

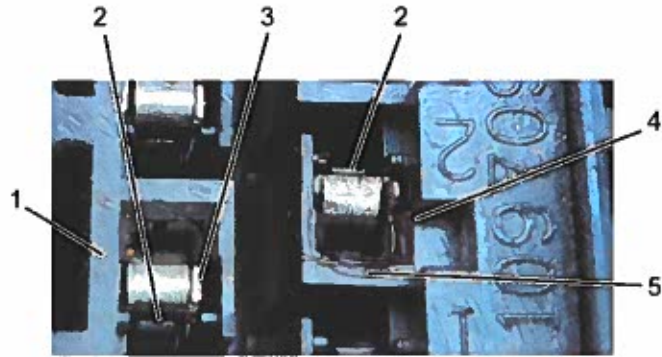


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Figure 11. Interior PDM Bottom (Left) / Front (Right)

1. PDM blower motor block
2. ORANGE terminal lock
3. Pick tool (2)

39. Using two pick tools (Figure 11, Item 3), simultaneously push in front and bottom retaining tabs of ORANGE terminal lock on the blower motor circuit breaker PDM block (Figure 10, Item 4). Remove ORANGE terminal lock (Figure 11, Item 2) once tabs are released.

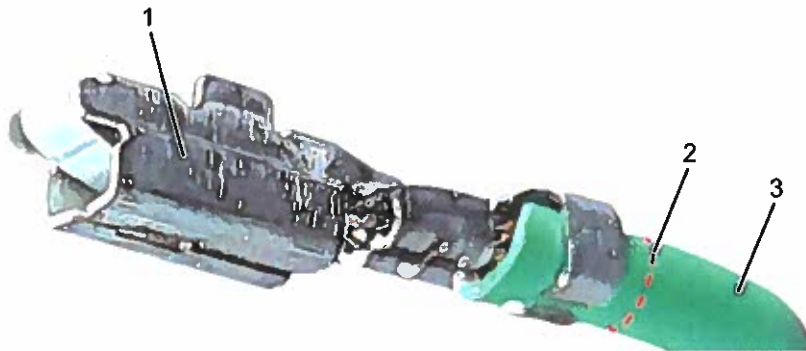


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Figure 12. Fuse Block

1. Fuse block
2. Terminal lock
3. Good fuse block cavity
4. Cavity B2 terminal
5. Melted fuse block cavity

40. Using a 5/64 inch or 2mm flat blade screwdriver, remove terminal in cavity B2 (Figure 12, Item 4) by lifting terminal lock (Figure 12, Item 2) and remove terminal by pulling on wire.



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Figure 13. Wire Terminal

1. Wire terminal
2. Cut point
3. Wire

41. Using side cut pliers, cut wire terminal (Figure 13, Item 1) from the wire (Figure 13, Item 3).

42. Slide a piece of dual wall heat shrink tubing onto wire.

43. Using a pair of wire strippers, remove 10mm of insulation from cut wire.



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Figure 14. Terminal Lead Pigtail

1. Butt splice
2. Terminal lead pigtail

44. Place butt splice (Figure 14, Item 1) of new terminal lead pigtail (Figure 14, Item 2) onto stripped end of wire from Step 43.
45. Using a crimping tool, crimp butt splice.
46. Position dual wall heat shrink over butt splice and using a heat gun, seal heat shrink to the splice.
47. Repeat Step 40 through Step 46 for cavity A2.
48. Inspect blower motor fuse block (Figure 11, Item 1) terminal lock (Figure 11, Item 2) and the fuse block terminal cavity (Figure 12, Item 5) for signs of heat damage or melting.
 - a. If terminal lock (Figure 11, Item 2) and / or fuse block terminal cavity (Figure 11, Item 3) are NOT heat damaged, perform Step 57 through Step 59.
 - b. If terminal lock (Figure 11, Item 2) and / or fuse block terminal cavity (Figure 11, Item 5) ARE heat damaged (Figure 11, Item 5), the fuse block will also need to be replaced. Perform Steps 49 through 62.

US and Canada International® Prostar® and LoneStar® Fuse Block Replacement

NOTE: There is no set time to replace fuse block. Technician must record time punches and attach claim comments for replacement of fuse block.

49. Record harness wire and terminal location and routing into the blower motor circuit breaker PDM block (Figure 10, Item 4).
50. Remove three interior PDM mounting screws (Figure 10, Item 2) and save for reuse.

51. Locate four interior PDM left side alignment slots (Figure 8, Item 2) between the interior PDM left side half (Figure 8, Item 5) and T-block (Figure 8, Item 1).
52. Insert a 5/64 inch / 2mm flat blade screwdriver or pick tool into each alignment slot (Figure 8, Item 2) and apply downward force on inserted tools to take pressure off of four locking tabs holding interior PDM left side half (Figure 8, Item 5) and T-block (Figure 8, Item 1) together.

CAUTION! To prevent damage to property, securely reposition disassembled PDM components and harness. Failure to do so can result in property damage.

53. Hold interior PDM left side half (Figure 8, Item 5) and push down on T-block (Figure 8, Item 1) to separate components.

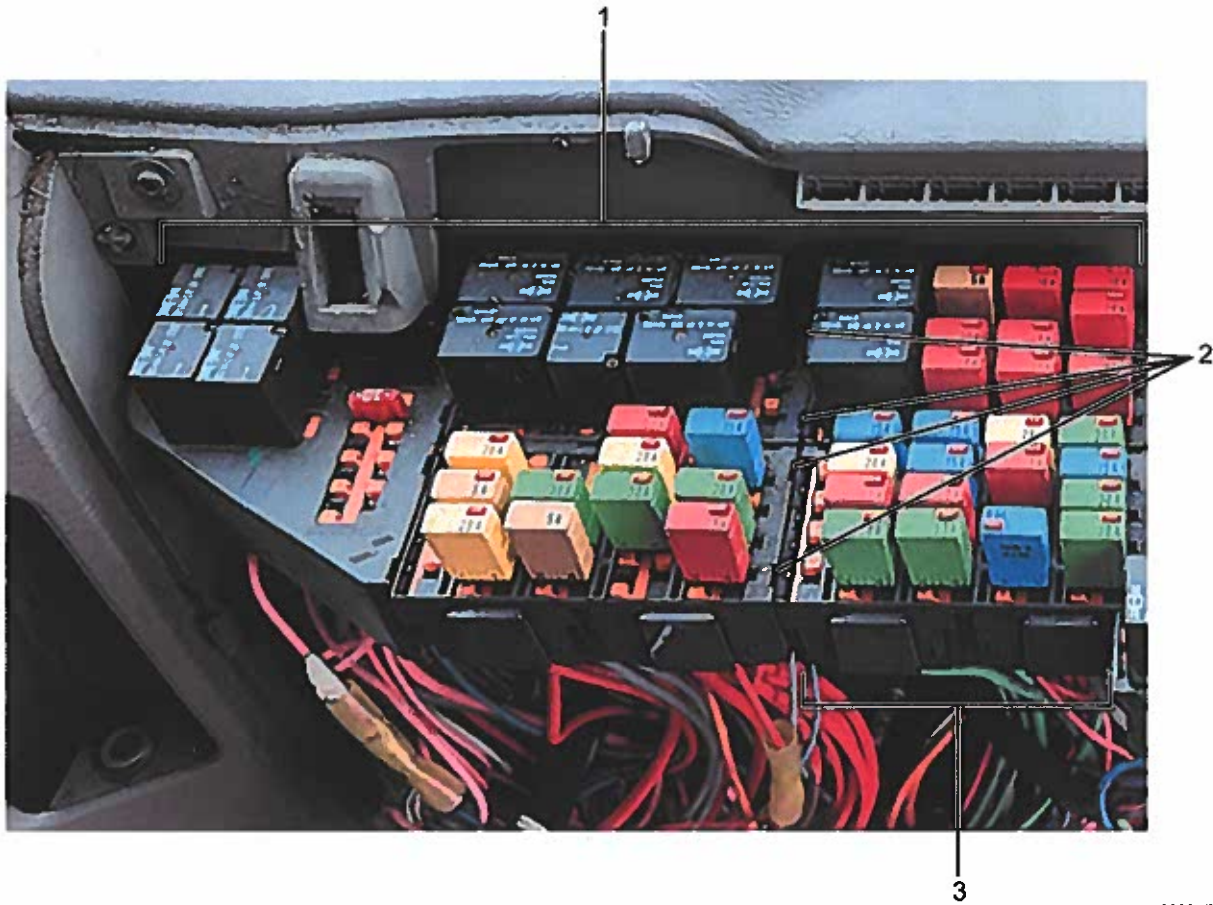
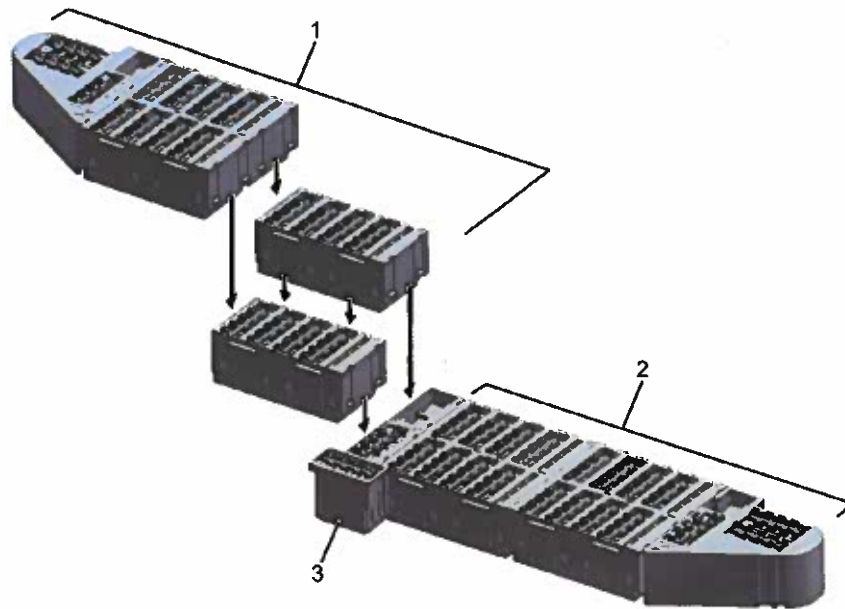


Figure 15. Interior PDM T-Block Connections

1. Interior PDM left side half
2. Interior PDM alignment slot (4)
3. Blower motor circuit breaker PDM block

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Figure 16. Interior PDM Assembly

1. Interior PDM left side half
2. T-block
3. Interior PDM right side half

54. Locate four interior PDM left side alignment slots (Figure 15, Item 2) on interior PDM left side half (Figure 15, Item 1).
55. Insert a 5/64 inch / 2mm flat blade screwdriver or pick tool into each interior PDM alignment slot (Figure 15, Item 2) and apply downward force on inserted tools to take pressure off of four locking tabs holding interior PDM blocks together.
56. Separate blower motor circuit breaker PDM block (Figure 15, Item 3) from the rest of interior PDM left side half (Figure 15, Item 1).
57. Once blower motor circuit breaker PDM block (Figure 15, Item 3) is separated, record circuit breakers, harness wires, and terminal locations and routing into component.
58. Remove orange terminal locks and wire terminals connected to blower motor circuit breaker PDM block (Figure 15, Item 3).

CAUTION! To prevent damage to property, ensure wire terminals are properly seated in terminal cavities. Failure to do so can lead to property damage.

59. Utilizing previously recorded wire location and routing, insert terminals into correct locations in new blower motor circuit breaker PDM block as noted in Step 57.

CAUTION! To prevent damage to property, ensure ORANGE terminal lock is flush to terminal seat and both ORANGE terminal lock retaining tabs seat correctly after installation. Failure to do so can lead to property damage.

60. Install new ORANGE terminal lock into blower motor circuit breaker PDM block (Figure 15, Item 3) and the other ORANGE terminal locks removed in Step 58.

NOTE: Install new circuit breaker for blower motor if fuse block is replaced and the circuit breakers were removed in Step 57. If fuse blocks were not replaced, reuse the circuit breakers previously removed.

61. Install 30-amp circuit breaker into cavities A2, B2, and any other circuit breakers removed.
62. Align separated interior PDM left side half (Figure 16, Item 1) blocks and firmly reconnect.
63. Align reassembled interior PDM left side half (Figure 16, Item 1) with T-block (Figure 16, Item 2) and firmly reconnect.
64. Return interior PDM to mount and install three interior PDM mounting screws (Figure 10, Item 2) removed in Step 48 and securely tighten.
65. Reinstall interior PDM cover.
66. Using a wire brush, electronic contact cleaner, and compressed shop air, clean negative battery terminal components.
67. Apply BLUE dielectric grease to battery terminal stud, negative battery cable ring terminal, and threads of new battery stud nut.
68. Using new battery stud nut, reconnect negative battery cable to negative terminal on main vehicle battery and install terminal nut.
69. Using a torque wrench, tighten battery stud nut to 12 - 15 lb-ft (16 - 20 N·m).

- 70. Turn ignition key to ON position, engine OFF.
- 71. Turn blower motor ON and verify blower motor operates correctly.
- 72. Turn ignition key to OFF position.
- 73. Remove wheel chocks.

END OF SERVICE PROCEDURE

LABOR INFORMATION

NOTE: There is no set time to replace T-block or fuse block. Technician time punches and claim comments must be attached to support the time for replacement of T-block or fuse block.

Operation Number	Description	Time
A40-23510-1	Replace Terminals with Terminal Wire Pigtails	0.3 Hrs.
A40-T1	Add on Replace T-Block of Fuse Block	Enter T-time

CAMPAIGN IDENTIFICATION LABEL

Each vehicle corrected in accordance with this campaign must be marked with a CTS-1075 Campaign Identification Label.

Complete the label and attach on a clean surface next to the vehicle identification number (VIN) plate.



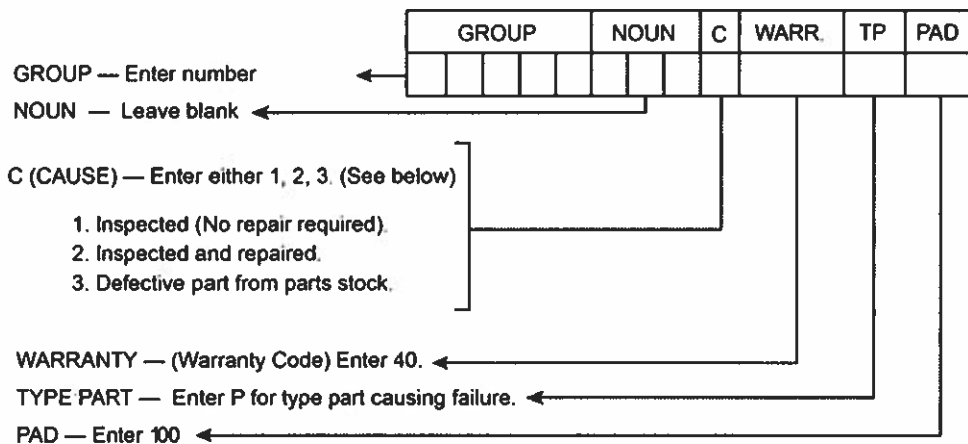
ADMINISTRATIVE / DEALER RESPONSIBILITIES

WARRANTY CLAIMS

Warranty claim expense is to be charged to Warranty. Claims are to be submitted in the normal manner, making reference to Safety Recall 23510.

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.



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UNITED STATES AND POSSESSIONS

The National Traffic and Motor Vehicle Safety Act, as amended, provides that each vehicle that is subject to a vehicle recall campaign must be adequately repaired within a reasonable time after the owner has tendered it for repair. A failure to adequately repair within 60 days after a tender of a vehicle is prima facie evidence of failure to repair within a reasonable time. If the condition is not adequately repaired within 60 days, the owner may be entitled to replacement with an identical or reasonable equivalent vehicle at no charge, or to a refund of the purchase price less a reasonable allowance for depreciation.

Dealers must correct all vehicles subject to this campaign at no charge to the owner, regardless of mileage, age of vehicle, or ownership, from this time forward.

Dealers should proceed immediately to make necessary correction to units in inventory. Federal law prohibits a dealer from delivering under a sale or lease, a new motor vehicle or any new or used item of motor vehicle equipment (including a tire) covered by the notification of a recall until the defect or noncompliance is remedied.

Dealers must make every effort to promptly schedule an appointment with each owner to repair his or her vehicle as soon as possible. However, consistent with the customer notification, dealers are expected to complete the repairs on the mutually agreed upon service date.

Dealers involved in the recall process will be furnished a listing of owner names and addresses to enable them to follow up with owners and have the vehicles corrected. Use of this listing must be limited to this campaign because the list may contain information obtained from state motor vehicle registration records, and the use of such motor vehicle registration data for purposes other than this campaign is a violation of law in several states.

CANADA

Dealers must correct all vehicles subject to this campaign at no charge to the owner, regardless of mileage, age of vehicle, or ownership, from this time forward.

Dealers should proceed immediately to make necessary correction to units in inventory. All inventory vehicles subject to this recall campaign must be corrected prior to sale, transfer or delivery. If vehicles have been sold or transferred and you are in receipt of Customer Notification Letters and Authorization for Recall Service cards for those vehicles, the transfer location or customer must be notified immediately from your dealer location.

Dealers must make every effort to promptly schedule an appointment with each owner to repair his or her vehicle as soon as possible. However, consistent with the customer notification, dealers are expected to complete the repairs on the mutually agreed upon service date.

Dealers involved in the recall process will be furnished a listing of owner names and addresses to enable them to follow up with owners and have the vehicles corrected. Use of this listing must be limited to this campaign because the list may contain information obtained from state motor vehicle registration records, and the use of such motor vehicle registration data for purposes other than this campaign is a violation of law in several states.

EXPORT

Export Distributors should proceed immediately to make necessary correction to units in inventory. All inventory vehicles subject to this recall campaign must be corrected prior to sale, transfer or delivery. If vehicles have been sold or transferred and you are in receipt of Customer Notification Letters and Authorization for Recall Service cards for those vehicles, the transfer location or customer must be notified immediately from your distributor location.

Export Distributors are to submit warranty claims in the usual manner making reference to this recall number.

Export Distributors are expected to provide full cooperation and follow-up with respect to this important subject matter. If you have any questions or need further assistance, please contact the Regional Service Manager at your regional office.

NAVISTAR, INC.

