## Navistar Recall 23510 Updated Chronology of Events 06/01/2013

- 01/12/2022 Navistar Product Integrity Group ("PIG") inspects a vehicle that experienced a fire that consumed most of the passenger side fuse panel and HVAC area. Due to extensive damage, cause could not be determined. Focus was placed on HVAC blower motor as a potential cause at the time.
- 03/03/2022 Navistar PIG receives communication of a second vehicle at same customer with an HVAC blower motor fuse that melted the PDC at the blower motor load circuit.
- 04/08/2022 thru 06/13/2022 Navistar Engineering, Navistar Field Service and dealer develop a repair plan for this second vehicle that was reported. This included replacing the damaged section for the PDM, installing new terminals for terminals that showed sign of being damaged and taking an amp draw on the blower motor and report the results to Navistar Engineering. At this time, this was considered an isolated event due to the single customer application.
- 06/14/2022 Navistar PIG is notified by a dealer of a third vehicle from same customer.
- 06/18/2022 Navistar completes warranty review and found 65 claims on 12 years of production received between 07/02/2015 thru 08/30/2021 for the blower motor load side wire terminal in the PDM. 30 of the claims mentioned melting at the A4 cavity for the blower motor and 35 claims stated that the terminal had a spread terminal. No thermal events were found. Focus was now placed on understanding cause of spread terminals.
- 07/27/2022 Navistar Engineering and Navistar Field Service performs field inspections
  of vehicles where this single customer's third vehicle was located. This third vehicle had a
  small thermal event that melted the PDM at the blower motor circuit and caused some
  damage to the Instrument Panel above the PDM. Two additional customer vehicles were
  inspected at this time, including extensive testing measuring voltage and amperage of the
  blower motor and measuring temperature of the terminal in question for at least one hour.
  No performance anomalies were found.
- 08/01/2022 Navistar Engineering receives the PDM blower motor fuse block from the third vehicle from the customer for review.
- 09/26/2022 Navistar Compliance receives communication from the field of two additional vehicles from the same customer that had PDMs with thermal damage at the blower motor fuse block area. All thermal events as of this date were with one customer.
- 09/26/2022 Navistar Compliance, Engineering and Field support meet to review data collected from field investigations.
- 08/01/2022 thru 11/11/2022 Navistar Engineering examines and analyzes the PDM from the third vehicle and arranges to send this PDM to a third-party for analysis.
- 02/01/2023 Navistar receives CT scan results from the third-party for the third vehicle's PDM that determined the overheated terminal was of low-current thin material and not capable of meeting the continuous electrical current load requirement of the blower motor load side circuit.
- 02/01/2023 Navistar Field Service reports that the customer's trucks have been repaired and parts are available for analysis. Navistar Engineering requests the PDM blower motor fuse block area parts from the 4<sup>th</sup> and 5<sup>th</sup> vehicles that had a thermal event be returned to Navistar for analysis.

- 02/23/2023 Navistar Engineering investigates to determine if any deviations were written allowing a different terminal to be used and found that Navistar did not authorize any deviations.
- 02/28/2023 Navistar Engineering sends the two additional PDM blower motor fuse blocks from the 4<sup>th</sup> and 5<sup>th</sup> vehicles that had a thermal event to third-party for CT Scan analysis.
- 02/28/2023 Navistar completes a second warranty review and found 3 additional warranty claims for a total of 68 claims received between 07/02/2015 thru 02/03/2023 for the blower motor load side wire terminal in the PDM. 30 of the claims mentioned melting at the A4 cavity for the blower motor and 38 claims stated that the terminal had a spread terminal. No thermal events were found.
- 03/01/2023 Navistar Engineering and Compliance review engineering specifications for its terminal ratings.
- 03/06/2023 Navistar Engineering and Compliance meet to share the results of the CT scan analyses performed on the three PDM blower motor fuse blocks that had a thermal event. The team continues to work with the supplier of the assembled PDM to determine if they were built with the incorrect terminal.
- 03/08/2023 Navistar Engineering requests the Supplier to provide data for terminal usage on PN 3599501C1.
- 03/10/2023 Navistar Engineering investigates vehicles at the Chicago Used Truck Center and finds 5 out of 19 potential suspect trucks to have low current terminal (1 with evidence of melting).
- 03/14/2023 Navistar Engineering and supplier meet to review initial data of terminal usage and requests that the Supplier investigate how the incorrect terminal was installed.
- 03/15/2023 through 3/17/2023 Navistar Supplier Quality visits supplier facilities and reviews investigation results, blower motor circuit details, containment, and control practices.
- 03/17/2023 Navistar Supplier Quality performs on-site review at supplier of Supplier's process and controls for wire terminal selection.
- 03/17/2023 Supplier provides preliminary potential suspect population of PDMs that may have been assembled with the low current terminal.
- 3/24/2023 Supplier provides complete traceability of vehicles that received PDMs with low current terminals in the HVAC fuse block.
- 03/30/2023 Navistar finalizes the suspect population and declares a Safety Recall.
- 03/31/2023 Navistar Compliance reviews the suspect population and identifies certain vehicles verified to be built with the incorrect terminal and communicates the finding to Navistar Engineering.
- 04/03/2023 Navistar Engineering reviews additional PDM designs and identify two additional PDM designs that use a different cavity for the blower motor circuit.
- 04/12/2023 Navistar Supplier Quality meets on-site with supplier to review supplier's investigation data to identify other potential designs that may use the incorrect terminal.
- 04/18/2023 Navistar Engineering, Supplier Quality and the supplier meet to review the new data. The supplier requests additional parts be returned for continued investigation.

- 04/19/2023 Navistar collects three PDM components from three vehicles and sends them to the supplier for evaluation. A fourth PDM with damage was found on 04/21/2023 and was shipped to the supplier for evaluation.
- 04/21/2023 Navistar Engineering and supplier meet at Navistar's Chicago used truck center to inspect additional vehicles that were not previously inspected. Of 20 vehicles inspected, six, not in the original suspect population, were found to have the low current terminal and it was verified that one model does have the blower motor circuit in different cavities.
- 04/25/2023 Navistar Engineering, Supplier Quality and the supplier meet to review the findings from the 04/21/2023 inspections and determined that all affected vehicles were not included in the suspect population. It was also confirmed that for certain models, the blower motor circuit breaker can be in different cavities within the PDM.
- 04/27/2023 Navistar receives a PDM found on 04/18/2023 with damage. Inspection verified damage to the blower motor circuit cavity.
- 04/28/2023 through 05/09/2023 Supplier reviews their database to refine the suspect population with the additional blower motor cavities found in the onsite inspections.
- 05/10/2023 Navistar reviews the supplier's production data and determines the data was missing two of the vehicles found with damage from the onsite inspections performed on 04/21/2023.
- 05/10/2023 through 05/18/2023 Supplier reviews Build of Material (BOM) for suspect build population supplied to Navistar and determines the list was correct. The supplier reviews the database of the machine used to make the harness and were able to identify additional manufacturing production data that was missed using the BOM search and sends updated list to Navistar.
- 05/19/2023 Navistar reviews the third manufacturing production data from the supplier and finds discrepancies between the three lists.
- 05/23/2023 After further analysis by the supplier, Navistar receives a fourth iteration of manufacturing production data from the supplier.
- 05/24/2023 Navistar updates the final suspect population.
- 05/25/2023 Navistar Compliance Committee approves an adjustment to the suspect population for Navistar recall 23510 (23V248).