

- 09/11/2018 –NHTSA sends communication to Navistar advising that a VOQ had been submitted the agency regarding passenger two-point lap style seat belts in their CE buses.
- 09/12/2018 – Navistar starts the investigation on this issue; and contacts the customer to get the detailed information about the VOQ that was submitted to NHTSA.
- 10/3/2018 – Interim review of test findings to date which found multiple fractures observed around the radius of the plastic fingers. And that there was a lack of deformation at any of the fracture locations, which indicate a brittle fracture.
- 10/10/2018 – Navistar updates NHTSA on the investigation regarding the total potential suspect population that were built with the finger design on the tongue side of the belt.
- 10/17/2018 – Navistar performed a local inspection at the Naperville school district in Illinois and inspected 7 buses with approximately 30 belts per bus. Each bus had at least one or more plastic fingers missing on one of the belts, up to 7 belts with one or more broken plastic fingers.
- 10/18/2018 – Shield provided a third-party lab report from 2014 which indicated environmental stress cracking caused the plastic finger failures, because of a likely school district cleaning chemical which was not identified in the report. The conclusion in that time frame was that the plastic finger failures on the tongue were maintenance related
- 10/31/2018 – Navistar received VIN information from State of New Jersey customer through a local dealer indicating they had 13 buses where several belts had broken plastic fingers on each bus.
- 11/16/2018 – Received report from third-party lab on request from Navistar to do environmental testing for root cause. The microscopic examination of the fracture surface features indicate that the ABS material failure is resulting from exposure to high mechanical loads experienced in service both from cyclic fatigue and assembly.
- 1/9/2019 – Navistar runs a seat belt tongue durability test. Seat belt buckles tested at 1 and 2 mm displacement passed the minimum cycle count requirement established by Navistar as 50,000 cycles without failure, buckles tested at 3 mm displacement did not meet the required cycle count.
- 1/14/2019 – Navistar performs a seat belt strain verses force test. The force and displacement required to achieve the proper strain was much higher than the force and displacement during durability testing. The conclusion was that these force and displacement numbers will not last the required number of cycles (50,000), since we observed failures at an average of 5,586 cycles with a 3 mm oscillating displacement.
- 02/19/2019 – Navistar receives PE18-015 from NHTSA
- 02/20/2019 – Navistar performs a fit evaluation study with students ranging in age from 6 to 14. Peak strains were also measured.
- 02/20/2019 - 04/01/19 Navistar gathers data and documents to respond to the inquiry.
- 04/02/2019 – Navistar submits PE18-015 response to NHTSA indicating that Navistar believes the issue with broken plastic fingers on the seat belt tongue cover for the applicable IC school buses does not pose an unreasonable risk of injury to the seat occupant in a vehicle crash on large school buses because the seating is designed for compartmentalization and is not dependent on the function of a seat belt. Therefore, reported incidents would be handled as a customer satisfaction issue.
- 04/02/2019 – Received a test report from Shield after Navistar submitted the PE response. First, they ran a test with a late suspect buckle (C3 version) at typical FMVSS 209

requirements. Then they ran an abuse scenario that applied forces to the tongue without the buckle to allow excessive movement of the fingers at 100% (30lbf), 133% (40lbf) and 200% (60lbf) of the FMVSS 209 force requirement. They indicated that all parts passed 200 cycles of preconditioning [S5.2 (g)] and post-performance testing [S4.2 (g)].

- 04/24/2019 – Shield ran a similar test to above with an earlier suspect buckle (C2 version) with similar results to the 4/2/19 test.
- 05/01/2019 – Navistar asked NHTSA on status of the investigation and NHTSA indicated they were analyzing the data.
- 05/14/2019 – Met with NHTSA ODI. NHTSA disagreed with Navistar’s conclusions in response to PE18-015. They did share their analysis of the warranty and service part data. NHTSA recommended Navistar consider recalling certain buses.
- 05/20/2019 – Navistar met to review NHTSA data analysis. Actions included looking at the warranty failure data from a statistical basis and also reviewing the data from a per belt failure rate basis.
- 05/28/2019 – Navistar and NHTSA ODI met again to review the per belt data. There was no change in NHTSA direction because of the high service part usage even with low per belt warranty.
- 06/03/2019 – Navistar completed statistical study and discussed NHTSA rationale for performing a recall. Concluded that the 2011 model year buses were statistically different than the other model years.
- 06/10/2019 – Navistar and NHTSA reviewed proposal to recall 2011 model year IC buses based on the higher warranty failure rate.
- 06/12/2019 – Navistar meets to review the above events. Because the seats in this application meet the compartmentalization requirements of FMVSS 222 without seat belts, agreement was reached to the above proposal pending finalizing the suspect population for the recall and the extending warranty for other model years.
- 06/17/2019 – Navistar declares a Safety Recall for 2011 model year IC buses.