

FCA US LLC Chronology
Steering Wheel Back Cover Wire Rub Through
Submitted on June 13, 2017

- On October 13, 2014, FCA US Special Investigations (“SI”) notified the Vehicle Safety and Regulatory Compliance (“VSRC”) organization of a 2012 MY Dodge Grand Caravan vehicle that experienced Driver Airbag (“DAB”) inadvertent airbag deployment (“IAD”). These incidents, and related information, prompted the VSRC to begin part return analysis to better understand the issue and monitor occurrence. Initial VSRC part return analysis related to the 2012 MY Dodge Grand Caravan suggested internally failed steering column clockspring conductor tape, which prompted further investigation.
- On January 30, 2015, Change Notification (“CN”) 50130-S00 was drafted to remove a plastic tab feature in the steering wheel back cover as a continuous improvement.
- On March 25, 2015, FCA US engineering concluded that root cause was a shorted steering wheel wire harness from contact against the back edge of the metal horn plate. FCA US believed that the plastic tab feature, referenced above, may have contributed to the failure. It was also noted that I/P circuit protection was implemented on the Dodge Grand Caravan at the start of 2013 MY production.
- On March 31, 2015, as a result of engineering input and occurrence research for DAB IAD incidents for Dodge Grand Caravan and Chrysler Town and Country vehicles, the VSRC found a total of 14 incidents of DAB IAD on 2011-2012 MY Grand Caravan vehicles.
- On April 20, 2015, the VSRC opened an internal investigation to continue monitoring and documenting any additional incidents of DAB IAD.
- On September 24, 2015, a corporate vehicle request was submitted to conduct Dodge Grand Caravan and Chrysler Town and Country vehicle steering wheel wiring inspections, which yielded 17 vehicle respondents.
- On October 1, 2015, the VSRC learned that the steering wheel back cover tab only exists on Dodge design Grand Caravan back covers and not on Chrysler Town and Country design back covers. This information reduced the suspect vehicle inspection eligible respondents to three vehicles.
- On October 7, 2015, the VSRC conducted three company vehicle evaluations to review steering wheel wiring and enlisted the help of the FCA US Quality Engineering Center (“QEC”) to conduct a field engineering study to inspect any 2011 and 2012 MY Dodge Grand Caravan steering wheel wiring for early indications of tape and wire wear or degradation.
- On November 9, 2015, the VSRC extended the Dodge Grand Caravan field engineering study inspections through the end of November due to the small sample size gathered.
- On December 18, 2015, the inspection results from the QEC Field Engineering Study on Dodge Grand Caravan vehicles were compiled with six of ten vehicles having indentation or witness marking on steering wheel wiring tape.
- On January 5, 2016, the VSRC confirmed with FCA US engineering and Volkswagen (“VW”) engineering that the VW Routan (“RM”) has a different back cover design with no tab
- On June 13, 2016, FCA US engineering advised that laboratory mechanical vibration testing was started. This included eight samples total; four samples with a back cover tab to duplicate the suspect vehicle configuration and four samples with the back cover tab removed.
- On July 27, 2016, FCA US engineering provided a test summary of the samples reviewed. FCA US engineering observed witness marking and tape degradation while testing both sample types.
- On August 30, 2016, FCA US engineering provided a summary of undocumented test result observations. It was noted that only tape rub through occurred, while wiring remained undamaged.

- On October 6, 2016, laboratory mechanical vibration testing was repeated to produce documented testing and ensure repeatable results.
- On November 3, 2016, the VSRC continued monitoring the investigation and expedited testing for end of year completion.
- On January 4, 2017, further analysis of returned parts indicated some IAD instances were attributed to other failure modes than the wire rub-through condition that was the subject of this investigation.
- On February 1, 2017, and the VSRC confirmed that four of the returned parts had wire rub-through. Engineering analysis of suspect production representative parts indicated that this issue was limited in scope. FCA US closed the investigation and continued to monitor field data for 90 days.
- On February 13, 2017, an incident search update found one new potential instance for DAB IAD created on February 9, 2017.
- On February 14, 2017, the VSRC notified SI to request an inspection on the new potential instance.
- On February 21, 2017, the VSRC contacted the Canadian Vehicle Safety Office (“VSO”) to further understand the number and failure mode of parts obtained by the Canadian VSO for DAB inadvertent deployments.
- On February 22, 2017, the Canadian VSO provided a photographic analysis of all parts obtained to understand root cause and failure mode in which five instances of wire rub through were confirmed.
- On February 27, 2017, the VSRC confirmed DAB-only deployment through vehicle inspection report and photos, which prompted a part return request for failure mode analysis on the new potential instance of DAB IAD created February 9, 2017.
- On March 29, 2017, the failure mode was confirmed as wire rub through on the new potential instance created February 9, 2017 using the returned parts.
- The VSRC continued monitoring of this investigation with frequent incident search updates (February 27, 2017, March, 10, 2017, March 15, 2017, March 17, 2017, March 31, 2017, April 10, 2017, April 20, 2017, April 24, 017, May 1, 2017 and May 2, 2017 which yielded no new occurrences.
- On May 5, 2017, the investigation was re-opened to provide an investigation update to management.
- On May 17, 2017, part return was requested for the new potential instance created May 6, 2017 and is currently pending part arrival and failure mode analysis.
- The scope was determined to be Dodge Grand Caravan vehicles built from April 16, 2010 to July 25, 2012 (the date on which 2012 MY Dodge Grand Caravan production without instrument panel wiring circuit protection ended at Windsor Assembly Plant).
- As of June 2, 2017, FCA US identified approximately 24 CAIRs, 2 VOQs and 0 field reports related to this issue.
- As of June 2, 2017, total warranty is 0 at 0c/1000.
- As of June 2, 2017, FCA US is aware of 8 injuries potentially related to this issue.
- On June 6, 2017, FCA US determined, through the Vehicle Regulations Committee, to conduct a voluntary safety recall of the affected Dodge Grand Caravan vehicles.