

FCA US LLC Chronology  
2011-2016 RHD Clockspring  
Submitted on May 10, 2016

- On December 21, 2011, Chrysler Group LLC (“Chrysler”) released Extended Warranty X41 for all 2007 MY Jeep Wrangler (“JK”) vehicles to cover clockspring replacement for 10 years / 150,000 miles.
- On March 9, 2012, Chrysler released Recall L37 for 2008-2012 MY right hand drive (“RHD”) JK vehicles built to U.S. market specifications for the clockspring, notifying customers of a potential issue with dust ingestion into the clockspring in their vehicle. Recall L37 was in response to National Highway Traffic Safety Administration (“NHTSA”) investigation PE11-019, aimed to better understand reported failures of clocksprings in JK vehicles designated for rural mail routes. It included like-for-like replacement of the clockspring until a design change could be implemented.
- On May 7, 2013, Chrysler released recall M31 for 2008-2012 MY RHD JK vehicles built to U.S. market specifications. This recall replaced L37 and was issued as the permanent remedy for this issue. Any affected JK owners who received parts under L37 were instructed to come back to have M31 performed.
- On March 31, 2015, the FCA US LLC (f/k/a Chrysler Group LLC) (“FCA US”) Vehicle Safety and Regulatory Compliance (“VSRC”) organization opened an investigation as a result of informal discussions with NHTSA.
- On April 1, 2015, NHTSA requested information regarding complaints related to airbag warning lamp (“ABWL”) illumination on left hand drive (“LHD”) JK vehicles.
- On April 1, 2015, the FCA US Vehicle Safety and Regulatory Compliance (“VSRC”) organization placed 100% part retention for LHD and RHD JK vehicles at the FCA US Quality Engineering Center (“QEC”). Data obtained from this analysis has shown that airbag circuit failures internal to the clockspring were caused by dirt/dust intrusion. Dirt and dust interaction with the grease on the circuit ribbon causes the conductors in the clockspring tape to eventually tear or fracture. When this occurs, the customer is notified of the condition by continuous illumination of the air bag warning lamp in the cluster.
- On April 15, 2015, the FCA US VSRC assembled a team of engineers from the FCA US steering column control module, steering column, and steering wheel groups to further investigate the issue.
- On June 2, 2015, FCA US engineering started a design study to optimize the wheel back cover, column shroud, and clockspring design to minimize ingress of dirt/dust into the clockspring.
- Part return analysis completed as part of the investigation showed that of all parts returned and analyzed only 20% of those diagnosed would have turned on the ABWL as a result of dust intrusion leading to a compromised airbag circuit. 62% of parts tested and analyzed at the time, exhibited no abnormalities and were deemed fully functional in testing (i.e., no trouble found (“NTF”).
- To date, 59% of JK parts returned to QEC were tested, analyzed and identified as “no trouble found (“NTF”).
- On June 8, 2015, the FCA US VSRC and FCA US engineering started installing NTF warranty returned clocksprings into JK vehicles for evaluation. At the end of the testing, 37 NTF clocksprings were installed and driven. None of the vehicles exhibited any of the issues reported by the customer at the time of the warranty claim.
- On June 10, 2015, the FCA US VSRC reviewed the results of requested Vehicle Owner Questionnaire (“VOQ”) and Customer Assistance Inquiry Requests (“CAIR”) reports regarding ABWL illumination with NHTSA.

- On July 7, 2015, NHTSA issued FCA US Information Request PE15-025 alleging clockspring failure relating to 2007-2012 MY JK vehicles, including replacements installed as part of Recall M31.
- On July 10, 2015, FCA US engineering began testing several configurations of clocksprings, wheel back cover, and column shrouds for susceptibility to dust ingestion. This testing showed that the 2011-Present MY design configuration survived 2.2x longer in the Extreme Dust Test as compared to the 2007-2010 MY design configuration. It also showed the proposed production design lasted 2.1x (for 2007-2010 MY configuration) and 0.8x (for 2011-Present MY configuration) longer than each respective stock configuration.
- On July 22, 2015, FCA US initiated 100% part retention for all vehicles that used the same clockspring as JK.
- On August 17, 2015, FCA US engineering compared the clocksprings failed as a result of the extreme dust test to clocksprings that had failed in the field as the result of dirt/dust contamination. The results show that the extreme dust test accurately and consistently replicates the failures seen in the field, thus validating the extreme dust test as an accurate method of measuring improvement of certain configurations of wheel back cover, column shrouds, and clockspring over other configurations.
- On August 26, 2015, the FCA US VSRC presented analysis of JK clockspring warranty part returns to NHTSA at a meeting held in Washington D.C.
- On September 16, 2015, FCA US responded to NHTSA's information request for PE15-025. The response outlined how dirt and/or dust intrusion to the clockspring may compromise the circuit tape potentially resulting in intermittent or fully open driver airbag circuit(s). Survey results show correlation of dust induced clockspring failures are exacerbated by other contributing factors such as removable doors and roof, gap between the steering wheel and column shroud and the off-road usage profile of the JK vehicle. Data also detailed that the failure rate of clocksprings due to dust intrusion on the JK vehicle line are higher than on other vehicles equipped with the same clockspring.
- On September 30, 2015, the FCA US VSRC presented a plan to NHTSA to survey JK owners who had a clockspring replaced. The objective of this survey was to better understand the vehicle configurations (of doors and/or roof off) and driving habits that lead to clockspring failures.
- From September through November 2015, the FCA US VSRC continued to collect and analyze clocksprings from the field.
- On November 20, 2015, the FCA US VSRC reviewed the detailed survey plans with NHTSA.
- On December 4, 2015, NHTSA upgraded PE15-025 to EA15-007. To date FCA US has not received a formal information request for EA15-007.
- On January 13, 2016, the FCA US VSRC reviewed the updated results of the clockspring retention and testing with NHTSA.
- On February 11, 2016, the FCA US VSRC reviewed the results of the customer survey with NHTSA.
- On February 18, 2016 FCA US VSRC reviewed the results of the analysis of the non-JK clocksprings warrantied and returned at QEC with NHTSA. The results show that of non-JK clocksprings analyzed, 79% were NTF.
- On February 19, 2016, the FCA US VSRC and Service departments conducted an exercise to test the capability of the dealership diagnostic tools. A clockspring with a known compromised airbag squib #2 circuit was installed in a JK without disclosing the known failure to the service technician. Vehicle was properly diagnosed at FCA Dealership.

- On March 3, 2016, the FCA US VSRC reviewed the results of resistance readings recorded from warranted clocksprings with NHTSA. At this time NHTSA agreed to allow FCA US to stop 100% retention of non-JK clocksprings.
- On March 17, 2016, the FCA US VSRC reviewed the latest status of the investigation with NHTSA in Washington D.C. as part of the monthly Consent Order meeting.
- On April 8, 2016, the FCA US VSRC analysis of JK clockspring warranty data showed a correlation between a steering wheel change made for 2011MY greatly reduced the number of warranty claims for clocksprings for 2011-Present MY JK vehicles. This change added material to the back of the steering wheel which decreased the gap between the steering wheel and column shrouds.
- On April 11, 2016, in a continued attempt to better understand the significant number of NTF clockspring returns, FCA US initiated a notification system utilizing wiADVISOR, a tool used at some dealerships to expedite the processing of incoming vehicles. WiADVISOR is currently being used to flag JK vehicles coming in for service that contained Diagnostic Trouble Codes (“DTCs”) that could justifiably or erroneously result in replacement of the clockspring. This work is ongoing.
- On April 12, 2016, the FCA US VSRC reviewed the latest status of the investigation with NHTSA.
- On April 18, 2016, the FCA US VSRC reviewed a proposed plan for corrective action with NHTSA.
- On April 19, 2016, third-party engineers submitted a report on four JK clocksprings returned under warranty for the ABWL on. Testing at QEC and the supplier concluded the clocksprings were fully functional. These samples were sent to the third-party for analysis of the airbag connectors to see if there were any coating anomalies, corrosion, or crimp/solder irregularities. All four samples were determined to be well within all specifications and exhibited no abnormal resistances, coating irregularities, or improper soldering joints.
- The suspect period was established as all 2011 MY - 2016 RHD JK vehicles built through 05/02/2016 produced at Toledo South Assembly Plant (“TSAP”).
- FCA US identified approximately 31 CAIRs and 2 field reports related to this issue from the suspect vehicles as responded to in PE15-025.
- As of May 10, 2016, total warranty is 417 claims.
- On May 3, 2016, FCA US determined, through the Vehicle Regulations Committee, to conduct a voluntary safety recall of the affected vehicles.