



Chronology submitted to NHTSA on August 21, 2014, for: NHTSA Notification Campaign No. 14V-488 N140171

2012

In July 2012, GM Korea, which is responsible for the engineering on the Gamma platform SUVs -- Buick Encore, Opel Mokka, and Chevrolet Trax -- conducted a 56 kph Offset Deformable Barrier (ODB) frontal Economic Commission for Europe (ECE) R94 test on a 2013 model year (MY) Opel Mokka. The data generated by that test indicated that the lap belt pretensioner's cable and seat belt webbing slipped out after being retracted on the passenger side. GM Korea opened Problem Resolution Tracking System (PRTS) No. 1291331 on August 13, 2012. On September 25, 2012, Engineering Work Order (EWO) 1795269 was initiated to make the lap belt pretensioner used on Gamma platform SUVs, including the Buick Encore, more robust by changing the rivet position on the pretensioner bracket and the design of the pretensioner's mounting bolt. Assembly Part Numbers (P/Ns) 95093404 and 95093405 were replaced by Assembly P/Ns 95363794 and 95363795, respectively. This change was made after Start of Regular Production (SORP) of the 2013 MY Buick Encore. The break point for the rivet change was January 8, 2013, and the break point for the bolt change was February 28, 2013. The new Assembly P/Ns are being used on the 2014 MY Buick Encore.

In October 2012, GM conducted a 56 kph frontal barrier test on a pre-production 2014 MY Cadillac CTS. The test and subsequent tear down and analysis by the supplier, Takata Corporation, indicated that the driver side front seat belt anchor pretensioner cables retracted upon deployment to pull in the lap belt webbing, as intended, but did not lock in that position, allowing the retracted webbing to return ("pay out") to its original position under loading, which was not intended. GM opened PRTS No. 1305953 on November 2, 2012. On November 13, 2012, EWO 1818959 was initiated to modify the design of the lap belt pretensioner for the Cadillac CTS, Cadillac ATS, and Cadillac ELR vehicles to include a modified bolt, relocation of a rivet in the cam housing to preposition the locking cam, and a change in torque of the lap belt pretensioner bolt to seat. Assembly P/Ns 20837133 and 20837135 were replaced by Assembly P/Ns 23152089 and 23152092, respectively. In addition, GM established P/N 11547156 for the modified bolt. These changes were made before the SORP of the 2014 MY Cadillac CTS and Cadillac ELR. These changes were made after the SORP of the 2013 MY Cadillac ATS. For the Cadillac ATS, the break point for the rivet change was November 1, 2012, the break point for the torque change was February 5, 2013, and the break point for the bolt change was March 25, 2013. The new Assembly P/Ns and the bolt P/N are being used on the 2014 MY Cadillac ATS, Cadillac CTS, and Cadillac ELR.

Engineering analysis suggested that the pay out condition modestly increased the femur loads, but that the loads remained within an adequate level of margin.

2013-2014

In mid-April 2013, Product Investigations initiated a Field Performance Evaluation investigation to confirm further the performance of the lap belt pretensioners used on the 2013 MY Buick Encore and Cadillac ATS. During 2013, an investigator worked with GM subject matter and safety experts and with the supplier to gather and analyze data relating to the root cause of the pay out of the pretensioner cable, the break points for the redesigned lap belt pretensioners, and the likely prevalence of the pay out condition in the population of 2013 MY Buick Encore and Cadillac ATS vehicles in which the pre-redesigned lap belt pretensioners were used. GM also collected and reviewed information from GM's TREAD database and NHTSA's Vehicle Owners' Questionnaire (VOQ) database relating to vehicles using the lap belt pretensioners under review. Review of that data found no field reports, TREAD data or other information potentially relating to pay out of the lap belt pretensioners or suggesting any field concerns.

The investigation remained open and was reassigned in April 2014 with the implementation of GM's more recent processes. Field data was reviewed again, and no issues potentially relating to the pay out of the lap belt pretensioners were found. On May 13, 2014, an investigator presented the matter to the Investigation Status Review committee. After further analysis by the investigator, the investigator presented the matter at Open Investigations Review meetings on June 21, 2014 and July 21, 2014.

On July 31, 2014, the investigator made a presentation to the SFADA, which decided to conduct a Safety Recall of certain 2013 MY Buick Encore and Cadillac ATS 4 door vehicles to apply the production changes to all vehicles in the field that have pre-redesigned lap belt pretensioners.

On August 19, 2014, General Motors determined that 55 additional vehicles were serviced with parts at issue in this recall, increasing the population from 48,059 to 48,114 involved vehicles.