

Chronology of Defect / Noncompliance Determination

Provide the chronology of events leading up to the defect decision or test data for the noncompliance:

October 17, 2019 – Subaru submitted voluntary safety recall 19V743.

November 18, 2019 – Subaru received the first technical report from a foreign market alleging a misfire occurring shortly after completion of the recall remedy. Subaru collected the part for further evaluation.

November 2019 – March 2021 – Subaru conducted an investigation in cooperation with a third-party company. In March 2020, it was confirmed that the ignition coil mold resin condition was a contributing factor. In July 2020, as a result of analyzing the residual strain characteristics in the mold resin, Subaru confirmed that residual strain is generated by repeated heat cycling of the mold resin, and that the resin residual strain does not increase if the temperature remains low enough. In December 2020, as a result of investigating the correlation between semiconductor strain and heat generation, Subaru confirmed that if the semiconductor is strained, the current and temperature increases. In March 2021, simulation showed that residual strain in the mold resin and semiconductor created prior to ECM reprogramming could continue to accumulate, even under normal-duration ignition coil energization timing. The results also showed that mass-produced ignition coils that were never exposed to energization for longer than expected durations would not accumulate strain.

April 8, 2021 – In certain foreign markets, the subject vehicle population is equipped with an automatic start/stop feature. Field data in these markets serves as an early warning indicator for markets that do not offer an automatic start/stop feature, such as the U.S. market. There have been no additional VOQs and 18 additional non-dealer field reports in the U.S. market. Based on the results of the investigation and out of an abundance of caution, Subaru decided to conduct a voluntary safety recall to equip potentially affected vehicles with new ignition coils after the updated ECM programming has been applied.

Subaru is not aware of any reported accidents or injuries related to this condition.