

Chronology of Defect / Noncompliance Determination

① EV-ECU

In May 2011, Mitsubishi Motors Corporation (MMC) received a customer report in Japan where the brake warning light was illuminated, an audible warning was heard, and there was difficulty operating the brake system. MMC immediately investigated the vehicle, but was unable to determine the root cause.

From September to November 2012, MMC investigated an additional report with similar symptoms. Since no abnormalities were observed during this investigation, MMC decided to monitor for any further occurrences.

In November 2013, MMC tried to reproduce this phenomenon based on Fault Tree Analysis, but was unsuccessful. MMC continued its investigation.

In January 2014, although MMC could not reproduce this phenomenon, MMC estimated that abrasion debris generated by the ON-OFF movement in the power relay's contact point could lead the EV-ECU to falsely judge the contact point was stuck, resulting in vacuum pump inoperability. MMC continued its investigation.

In March 2014, MMC confirmed the abrasion debris generated by the ON-OFF movement at the contact point was the cause of this problem and the EV-ECU software was reprogrammed to remedy this condition in April 2014.

② Vacuum pump

In March 2012, MMC received a customer complaint from Norway that the effort required to depress the brake pedal was increased. MMC immediately began an investigation.

In June 2012, MMC determined this condition was due to brake vacuum pump inoperability and estimated the problem was caused by corrosion of the aluminum in the vacuum pump due to road salt.

From November 2012 to March 2013, MMC received a second claim and conducted a sampling and scramble investigation in Norway. MMC found that if mud or sand containing water or de-icing agent enters and adheres to the brake vacuum pump exhaust hole, it can result in the exhaust hole being blocked from corrosion of the aluminum portion.

From May 2013 to March 2014, MMC conducted reproduction tests to evaluate the risk this condition had on motor vehicle safety.

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From March 2014 to August 2014, MMC conducted a future occurrence analysis and concluded the brake vacuum pump was susceptible to inoperability due to either or both of the conditions above. On August 22, 2014, MMC decided that field action was necessary as a safety recall and advised MMNA to conduct a safety recall in the US.