## BMW 573 REPORT MODEL YEAR 2015 M5 / M6 DRIVESHAFT CHRONOLOGY 14 JULY 2016

In August and September 2015, two drives haft failures occurred on Model Year 2015 M5 Sedans. At that time, a root cause was yet to be identified. The field continued to be monitored to identify possible new incidents.

On January 13, 2016, a driveshaft failure was identified on a Model Year 2015 M5 Sedan. As a result, a review was initiated to understand, address, and resolve this issue. Two other incidents were identified, also on 2015 M5 Sedans, which had occurred outside of the US. The field continued to be monitored and driveshafts were requested to be returned for analysis.

Between February and April 2016, engineering analyses and testing was performed on several driveshafts obtained from the field. Analyses including the use of stereo-microscopy and scanning electron microscopy, as well as metallurgical and material analyses, were performed. Tests including strength, bending and bulging, and hardness, were conducted. In February, one case in Japan was identified. In March, two additional cases from the US were identified, one on a Model Year 2015 M6 Gran Coupe.

In late April, 2016, testing concluded. The analyses and testing conducted by BMW and the supplier indicated that a specific damage pattern could be identified consisting of an incipient crack in a longitudinal weld, and lead to a circumferential crack adjacent to the weld. However, the root cause was not yet known.

In May, additional analyses were performed. These analyses suggested that the failures may have occurred between vehicle speeds of approximately 35mph to 50mph possibly in connection with a transmission shift change from 2<sup>nd</sup> to 3<sup>rd</sup> gear, and the corresponding load peaks. Also in May, the supplier suggested that a possible manufacturing error occurred at a welding station. One additional incident from the US was also reported.

On May 25, 2016, the supplier was able to confirm the manufacturing error that had occurred.

In June, the supplier was able to determine the specific driveshafts that may not have been produced to specification. In addition, the supplier was able to determine the specific driveshafts that were provided to BMW for vehicle assembly.

Production and manufacturing records were examined in order to determine the quantity and production date range of potentially affected vehicles.

On July 11, 2016, BMW decided to conduct a voluntary safety recall.

BMW has not received any reports, nor is BMW otherwise aware, of any accidents or injuries related to this issue.