

Chronology of Defect / Noncompliance Determination**573.6 (c) (6) (7)**

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

(2000)

Isuzu received two field reports – one dated November 18, 2020 and the other dated December 7, 2020 – indicating that the trucks were found to have loose or missing rear U-bolts. In one case, which was reported at 3432 miles of service, the driver noticed that the rear axle had moved out of place. In the other case, which was reported at 559 miles of service, the propeller shaft disengaged. Both vehicles were towed to the dealership. Isuzu has not received any other reports of this condition either from the U.S. or other markets.

A review of production records at the Fujisawa plant found that, with regard to both vehicles, the U-bolt nut tightening process for the front axles had been completed near the close of business on a Friday and the multi-nut runner had been turned off for the weekend. When restarted the next week, the multi-nut runner should have displayed a “1,” signaling that more of the U-bolt nuts required tightening, but instead showed a “0,” indicating that no more tightening was needed. As a result, the vehicles were shipped without the rear U-bolt nuts having been properly tightened.

Isuzu determined that the issue does not affect the front U-bolt nuts because those nuts are installed differently than the rear U-bolt nuts. The U-bolt nuts for the front axle are temporarily installed by hand and left loose. If not subsequently tightened, there would be a large gap noticeable by the line worker and/or the quality inspector. In contrast, the U-bolt nuts for the rear axles are preliminarily installed by an impact wrench to the point where the nuts are seated. As a result, there is not a noticeable difference at the factory between a properly tightened and a potentially loose U-bolt nut on the rear axle.

On December 14, 2020, Isuzu implemented an interim countermeasure at the plant to preclude line workers from turning off the multi-nut runner and thus preventing the tool from providing misleading information to the workers at the next morning shift. On December 18, 2020, Isuzu changed the program coding on the tool to ensure that the instructions provided to the line workers are saved.

Isuzu then undertook a detailed review of past production records to determine whether or not there were, or may have been, additional vehicles shipped with loose rear U-bolt nuts. Isuzu reviewed records starting with the date upon which the current multi-nut runner was used at the plant (May 7, 2015) until December 14, 2020. Isuzu identified a number of vehicles for which no records affirmatively confirming the proper tightening of the rear U-bolt nuts could be found – 258 of which were shipped to the US market. Many of the affected vehicles have been in service for a significant amount of time, and the service manual specifies periodic inspection and retorquing of the U-bolt nuts; therefore, it is likely that the U-bolt nuts on the rear axles of the subject vehicles will be found to be properly tightened. But since Isuzu could not confirm through production records that the rear axle U-bolt nuts were, in fact, properly tightened at the production plant, it determined on March 12, 2021 to conduct a safety recall to inspect and, if needed, tighten the rear axle U-bolt nuts.