Chronology of Defect Determination

August - October 2022

On August 9, 2022, Hino received a field technical report indicating that a customer has a truck where both U bolts on the driver side have fallen out of the front axle and were missing. The customer complained of steering drift. Hino inspected the collected parts but observed no obvious abnormalities. It also reviewed its front axle production process on its line at its WV plant for the dates of manufacture, but those records also did not show any inappropriate front axle torque values for any inspected vehicle. Hino began a detailed investigation.

November 2022

By November 21, Hino had identified a total of 7 field cases involving loose or missing U bolts. Hino issued a stop ship order at its WV assembly plant to inspect the tightening torque of U bolts and nuts for all inventory vehicles. In total, 1,136 units were inspected. Hino identified 14 vehicles that had front axle torque values below the inspection limit.[1] From November 29, Hino started to confirm all vehicles meet the torque design specification before shipment.

December 2022 - March 2023

The inspection revealed 14 vehicles with torque below design specification, but no apparent root cause. Accordingly, Hino continued its investigation. During the investigation, By the end of December, a total of eight similar field cases had occurred. Hino confirmed that all field events involved vehicles containing one 9 mm spacer between the driver side front leaf spring and front axle. Maintenance records of all the vehicles above were confirmed and there was no history of U bolt maintenance performed as instructed in the owner's manual.

During vehicle inspection conducted in February 2023, Hino identified a small dent near the guide hole on the front axle upper surface and presumed the dent was generated by interference between the axle upper surface and tip of the center bolt. Hino started planning for bench testing to duplicate the interference and evaluate the effect to axial force of the U bolts.

April – June 2023

Based on detailed analysis of inventory vehicle torque inspection result, taking torque variation into consideration, the tightening torque could possibly reach the lowest limit in certain period of production. Bench testing confirmed duplication of the small dent on the axle and decrease of axial force of U bolt.
On June 23, 2023, based on the above investigation result, if a vehicle continues to be operated with above mentioned condition, Hino considered there was possibility that the U bolt(s) and nut(s) could come off during vehicle operation. Hino determined to conduct a voluntary safety recall campaign for certain vehicles equipped with 12,000 lbs weight-rating front axle and suspension assembly containing one 9 mm spacer.

As of June 22, 2023, Hino is aware of 10 cases of driver side front U bolt(s) looseness or missing received from August 2022 to March 2023. Hino has also investigated warranty claims for similar cases. However, Hino is not aware of any warranty claims other than the vehicles mentioned above. To date, Hino is not aware of any reports of accidents or injuries resulting from driver side U bolt(s) looseness or missing.

[1] Hino separately identified roughly 228 vehicles with front axle torque values *above* the rated specification. This issue will be discussed in a separate report filed contemporaneously with this one.