



In recent years, incidents of wheel separation have become a more frequent cause of Commercial Motor Vehicle accidents. These incidents have the potential to inflict serious injury or death to anyone operating a vehicle in close proximity. Once a wheel leaves a vehicle in motion, there is nothing to dictate where the wheel will go, or what it may strike. Case in point:

Miami, Florida - On October 14, 1991, a 1986 Mack two-axle cargo van was traveling eastbound in heavy traffic on State Route 836 when the left front wheel, hub intact, disengaged. The loose wheel angled left across the highway, bounced over the 32 inch high concrete barrier, and struck an on-coming, occupied school bus. The wheel entered the front of the bus, killing two children and injuring a chaperon, who died 10 days later.

It has been determined that wheel separation incidents most commonly result from improper tightening of wheel fasteners and wheel bearing failure—both are the result of improper maintenance practices. Inadequate tightening of wheel fasteners usually results from failure to follow the manufacturer's recommended wheel maintenance practices, for example: (1) the use of a torque wrench; (2) following proper tightening procedures; (3) using compatible components; and (4) removing paint buildup, debris, oil or rust between wheel fasteners, threads and mating surfaces. Wheel bearing failure may result from inadequate lubrication, bearing misalignment, improper bearing nut adjustment, or bearing overload.

It is strongly recommended that drivers pay close attention to their wheels during their required daily pre-trip and post trip inspections. Drivers should be observant of signs of excessive grease build up around hubs, loose wheel fasteners, and cracked wheels. Subsequently, these practices may prevent these incidents from happening. Additionally, maintenance personnel should pay greater attention to these items during regular preventative maintenance and annual inspection.

Information from:NTSB report on Wheel SeparationsFHWA On Guard publicationState of Maryland Wheel Run-off Study



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