

Safety Technologies for Buses

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Abstracts

Buses carry approximately 4,400 million people a year and play an important role for public transport next to the railroad in Japan. On the other hand, in spite of many efforts to improve the safety of bus transportation by bus companies, administrations, vehicle manufacturers, a few serious accidents still occur annually.

Active and passive safety systems for the buses have been developed to reduce of the serious accidents. Hino Motors' Pre-Crash Safety (PCS) system helps drivers reduce the risk of collision damage by detecting the threat of a collision with the vehicle ahead and alerting the driver to brake. If a collision is detected to be imminent, the system automatically applies the brake to decrease vehicle speed. Hino Motors' Driver Monitor function alerts the driver with a warning buzzer if he or she does not appear to be facing forward, by utilizing a camera to track the position of the driver's face and determine whether his or her eyes are open or closed during vehicle operation. The function activates the PCS system well in advance if the risk level is deemed high. Lane Departure Warning System detects the traffic lane being driven on with a camera and sounds a warning if the vehicle deviates irregularly from the lane. SRS airbag and energy absorbing steering column are equipped to reduce the impact to the driver during crash. Body structure is designed to reduce the deformation during the frontal collision and rollover accident.

Biography



Mr. Akiyama is a head at vehicle research department of technical research center, Hino Motors, Ltd. in Japan. He graduated from Waseda University, Tokyo, with a diploma from Mechanical Engineering. His main research interests are active and passive safety of trucks and buses. He is the Leader of Working Group for Study of Driver Sovereignty, Advanced Safety Vehicle project

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