



Dynamic Axle Load Redistribution Systems for Commercial Heavy Goods Vehicle (HGV) Semitrailers with Multiple Axle Bogie



For some time now, air spring pressure redistribution options have been available for HGV Semitrailer electronic braking systems (EBS) that can produce a specific change to the axle load distribution within a semitrailer multiple axle Bogie whilst driving. The purpose is to reduce the load on the rear semitrailer axle – resulting in a redistribution of the payload to the axles that are located further forward – to improve the maneuverability of HGV Truck and Trailer combinations. Such systems are provided under various trade names by manufacturers of HGV trailer EBS systems.

Unfortunately, our ongoing market research activities have revealed that – despite recommendations from EBS manufacturers to the contrary – there have been actual cases where system parameters have been set incorrectly. These have been related to the programming of EBS pressure settings that do not correspond to manufacturer recommendations and that may lead to a non-permissible overload of the first and/or center trailer axle when the load distribution function is activated during cornering.¹

¹ A clear distinction is to be made between such cases and cases in which the permissible Trailer axle loads are exceeded for the purposes of traction start off assistance on slippery road surfaces, as explicitly described by type and scope in Directive 97/27/EC and Section 34 of the German Construction and Use Regulations (“StVZO”).

Apart from being formally illegal (i.e. potential withdrawal of the general operating license), such incorrect programming may cause critical dynamic vehicle handling conditions and, in extreme cases, result in damage to, or failure of, axle, suspension and/or chassis safety critical components.

For the reasons stated above, we strongly advise drivers using dynamic axle load redistribution systems in conjunction with Mercedes-Benz trailer axles to fully comply with the manufacturer’s recommendations regarding programming and, in particular, not to make out any settings that may result in non-permissible excessive Trailer axle loads during vehicle operation.

Please inform the departments responsible for EBS system programming within your company and/or introduce appropriate corrective action as required.

Thank you for your cooperation!

Mercedes-Benz TrailerAxleSystems
November 2011