POSTER SUMMARY

PAYLOAD DETERMINATION FOR VEHICLE COMBINATIONS

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Abstract

The South African National Road Traffic Act (93/1996) contains a number of regulations governing loading criteria for goods transport vehicles. An understanding of these rules will help guide optimal vehicle or vehicle combination choices. These rules are viewed individually and in combination with the most restrictive rule(s) applied to determine the legal payload for a given vehicle combination. The loading criteria relate to tyre ratings, type and number of axles, engine power, load distribution requirements for traction, steering and bridge safety and mass load limits of the vehicle or vehicle combination. This poster aims to highlight these rules in a concise and methodical approach, and provides a quick reference on what criteria are used to limit maximum legal payload. Examples of some typical combinations are provided to assist with practical application of the rules. By following the same principles, one is able to apply the principles for alternative vehicle combinations. The relevant regulations are referenced should further details or clarity be required. Examples of estimating payload distributions for particular vehicle dimensions are also provided. Applying the same principles and methodology, a theoretical appreciation on how to best load a vehicle to prevent both overloading and under-loading from occurring can be determined.

Keywords: loading, regulations, transport