
# WEIGH IN MOTION:

# THE LEGAL FRAMEWORK IN SOUTH AFRICA

# Introduction

- The current legal position on the requirements for mass measuring.
- A quick history on the Trade Metrology Act, 77 of 1973 and the scope of the legislation.
- The provisions of the Legal Metrology Act, 9 of 2014 and how it impacts on the equipment and measurements used for weigh in motion.
- The requirements in the National Road Traffic Act, 93 of 1996 controlling overloading of vehicles.
- The presumptions on the accuracy of weigh equipment and the calculations for permissible maximum masses.
- The challenges to use weigh in motion measurements to prosecute operators and drivers criminally or administratively.


# The Current Legal Position

# The Current Legal Position

The following acts and guidelines impact on the weighing of vehicles -

- National Regulator for Compulsory Specifications Act, 2008 (NRCS)
- Legal Metrology Act, 2014
- Measurement Units and Measurement Standards Act, 2006 - National Metrology Institute of South Africa (NMISA)
- Accreditation for Conformity and Good Laboratory Practice Act, 2006 (SANAS)
- National Road Traffic Act, 1996
  - Regulations
  - Presumptions on accuracy
  - Consignors and Consignees
- TCSP guidelines


# The Trade Metrology Act, 77 of 1973

# The Trade Metrology Act, 1973

- Controlled weighing equipment before the legal metrology act
- Only applicable to trade use of equipment
- Specific exclusions for law enforcement equipment


# The Legal Metrology Act, 9 of 2014

# The Legal Metrology Act, 2014

- Replaced the Trade Metrology Act
- Extended the definition of ***trade*** to include ***fines***
- Impact of amendment is that the act applies to all measurements relating to fine calculations since August 2014
- Interim provisions for equipment that do not have technical regulations
- NRCS may set requirements for use of equipment until technical regulations are in place to control equipment
- Rules on –
  - Type approval
  - Repair
  - Maintenance
  - Accuracy
  - Verification


# The National Road Traffic Act, 93 of 1996

# National Road Traffic Act

- Load control legislation
- Load safety for tyres and vehicle specifications
- Protection of roads and bridges
- Control of operators, consignors and consignees

# Calculation – single axle with double wheels

- *Tyres – Reg 238*

  22  12.5R = 3000kg

  4 tyres x 3000 = 12 000kg

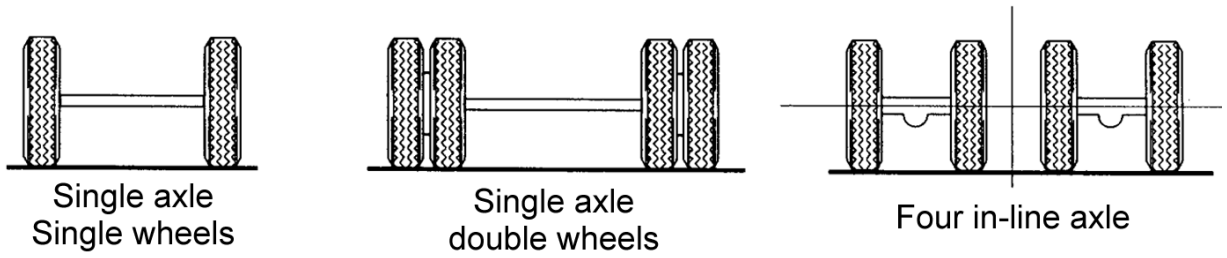
- *Manufacturer's specs – Reg 239 + 245*

  GA 10 000kg

- *Road limit – Reg 240*

  9 000kg

- Least of masses
- 9 000 kg



# Calculation – single axle with single wheels

- *Tyres – Reg 238*

  22  12.5R = 3000kg

  2 tyres x 3000 = 6 000kg

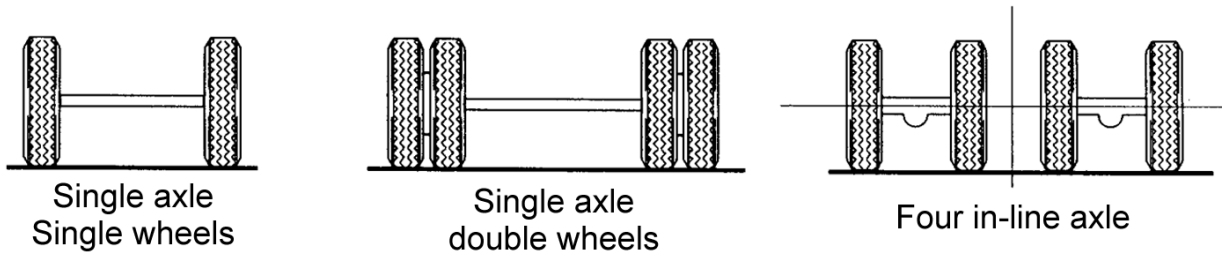
- *Manufacturer's specs – Reg 239 + 245*

  GA 5 000kg

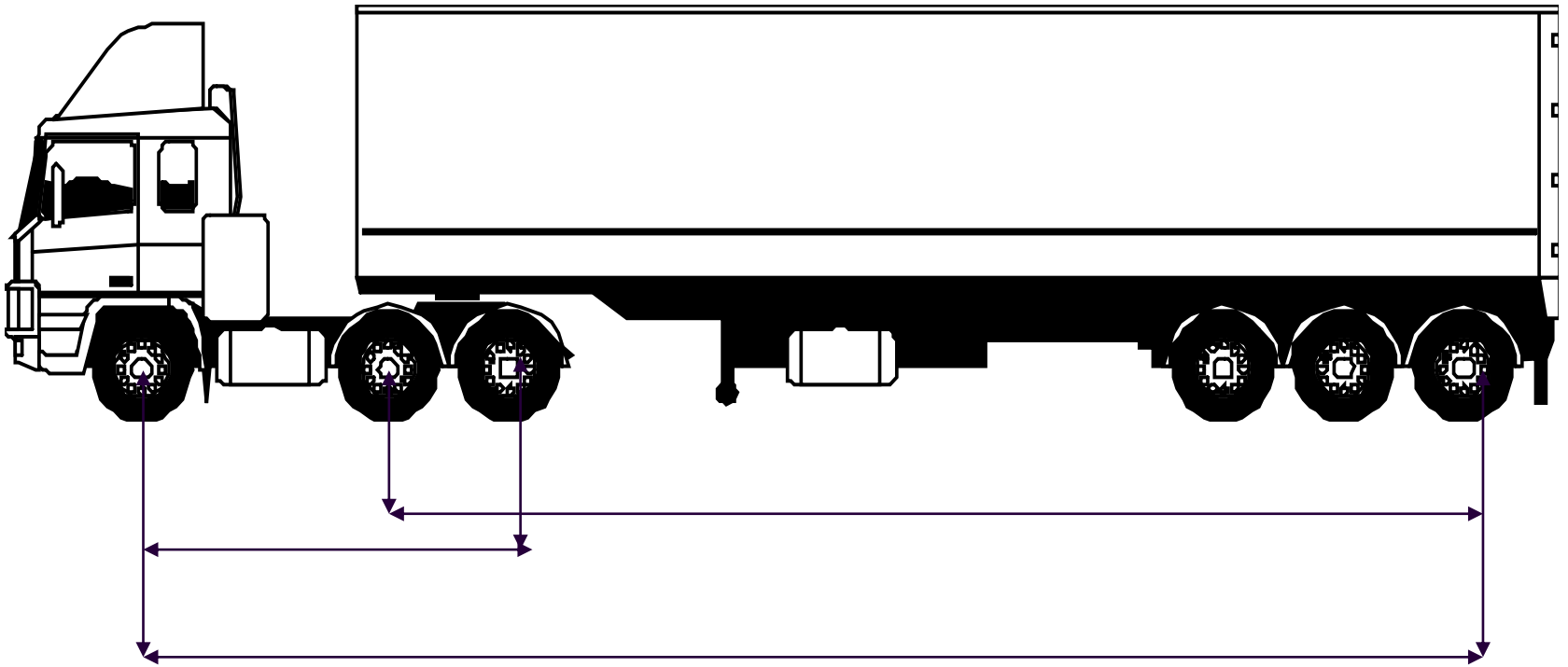
- *Road limit – Reg 240*

  8 000kg

- Least of masses
- <u>5 000kg</u>



# Calculations for combination of vehicles



# Vehicles and combinations Reg 236 and 237

- Sum of axles and axle-units
- GVM or GCM
- P/D x 240 (400 – tractor)
- 5 x *actual* mass of driving axle/s
- Bridge formula: (L) x 2100 + 18 000kg
- Proviso: 56 000kg

# Combination Calculation

- Sum of axles and units
  6 500kg + 18 000kg + 24 000 kg = 48 500 kg
- GCM = 72 000 kg
- P/D 310 x 240 = 74 400 kg
- 5 x 18 000 kg = 90 000 kg
  - *(under load - 7 000 kg x 5= 35 000 kg)*
  - Bridge formula
  - 14.60 x 2100 + 18 000 kg = 48 600 kg
- Proviso not applicable = 56 000 kg

- Permissible Maximum Combination Mass = <u>48 500 kg</u>

# Tolerances – Part 29 NPA Manual

- All vehicles are limited to a 2% tolerance or grace:
  - 56 000 kg Permissible Maximum Combination Mass (PMCM) - 57 120 kg
  - 30 000 kg PMCM - 30 600 kg
  - 10 000 kg PMVM - 10 200 kg
  - 2 500 kg PMVM - 2 550 kg

- Axles and axle-units are limited to a 5 % tolerance or grace:
  - 9 000 kg Permissible Maximum Axle Massload (PMAM) - 9 450 kg
  - 18 000 kg PMAUM(Permissible Maximum Axle-Unit Massload) - 18 900 kg
  - 24 000 kg PMAUM - 25 200 kg

# CHARGES FOR CONSIGNORS/ CONSIGNEES

- Consignors/consignees responsible for offences and infringements for dispatching or receiving overloaded vehicles in terms of regulations 330A to D
- Consignors/consignees can be charged even if drivers and operators are charged


# Presumptions on the accuracy of weigh equipment and the calculations

# Presumptions

- Several presumptions relating to weighing of vehicles
- Sec 70 - Accuracy of mass measuring bridge
- Sec 71 – Accuracy of GVM/GCM
- Reg 248 – accuracy of axle and wheel mass load calculations
- Constitutional issues with presumptions
- Weigh in motion devices may pose a challenge


# The challenges to use weigh in motion measurements

# Challenges to introduce WIM

- Technical regulation must be developed in terms of the Legal Metrology Act by NRCS
- Accreditation in terms of SANAS
- Tolerance discussions required with NPA
- Various provisions cannot be controlled via WIM
- Consignor prosecutions will be a challenge
- Possible amendments to TCSP Guideline on weighing
- Consideration of amendments to the presumptions on accuracy of equipment

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