



# UNECE regulation 58 rev. 3

Improving safety – by stricter rules for the transportation industry



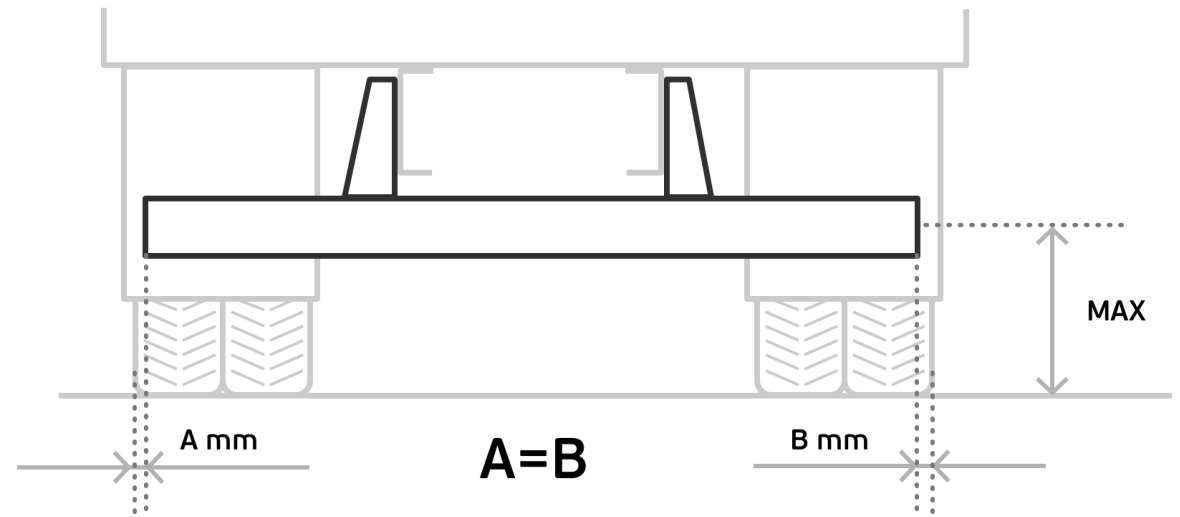
## UNECE R58 applies to

1. RUPDs to be fitted to vehicles categories M, N and O
2. The installation on vehicles (M, N, O) of RUPDs which have been type approved
3. Vehicles (M, N, O) equipped with an RUPD which has not been separately approved or so designed and/or equipped that its component parts can be regarded as totally or partially fulfilling the function of the RUPD

# General requirements

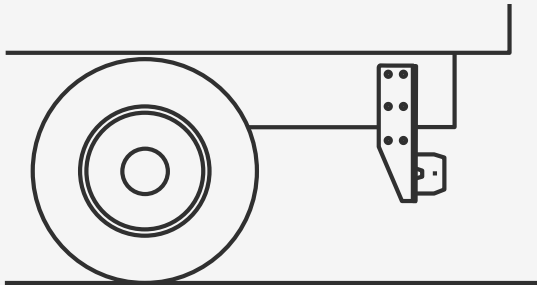
“...constructed and/or equipped as to offer effective protection over their whole width against under-running of vehicles...”

## Measures according to R58.02

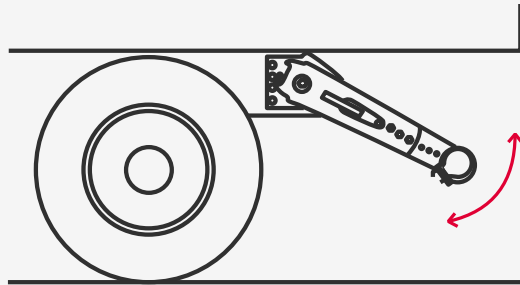


# 3 main types of RUPDs

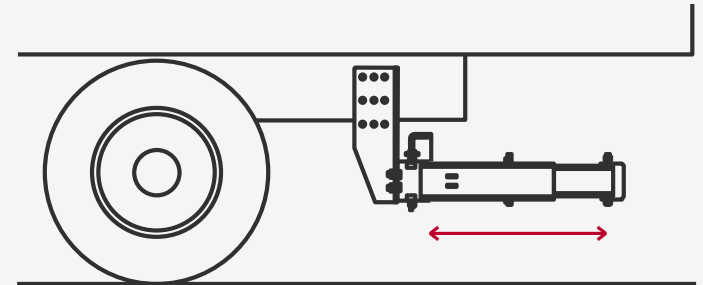
FIXED / DETACHABLE



FOLDABLE



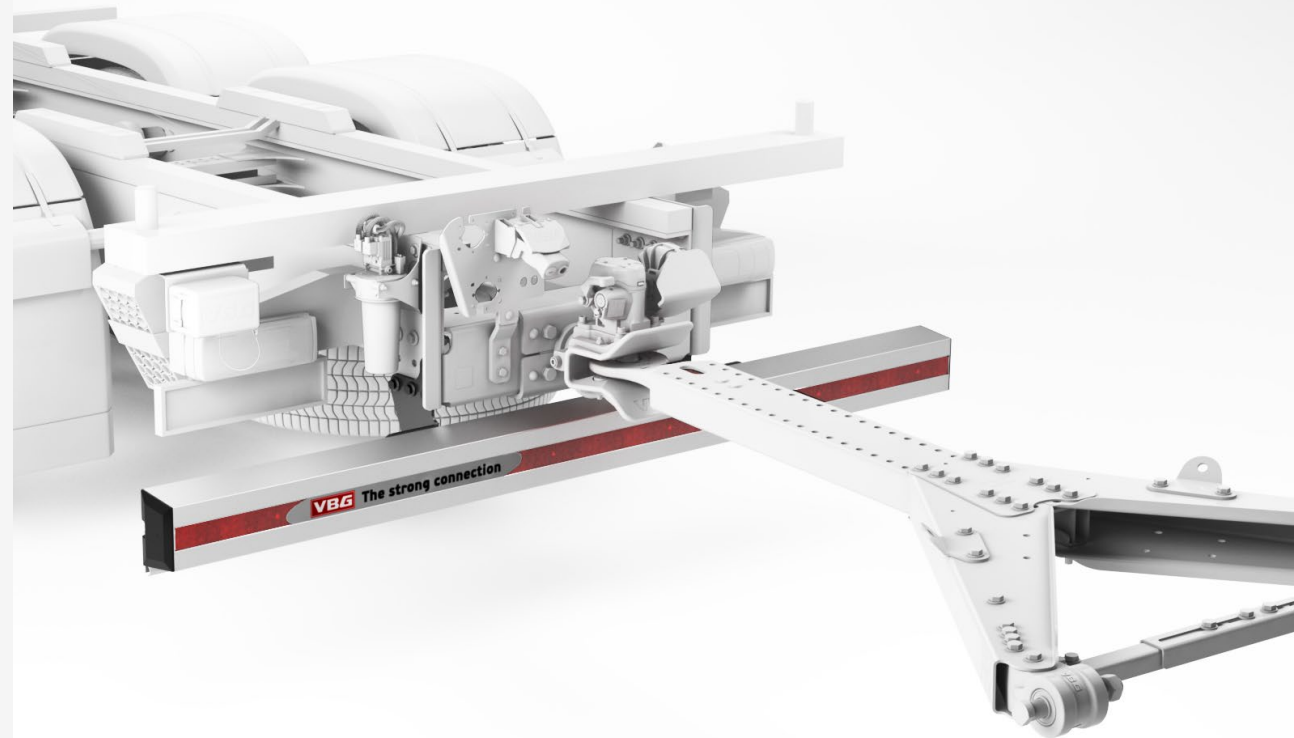
SLIDING / ADJUSTABLE

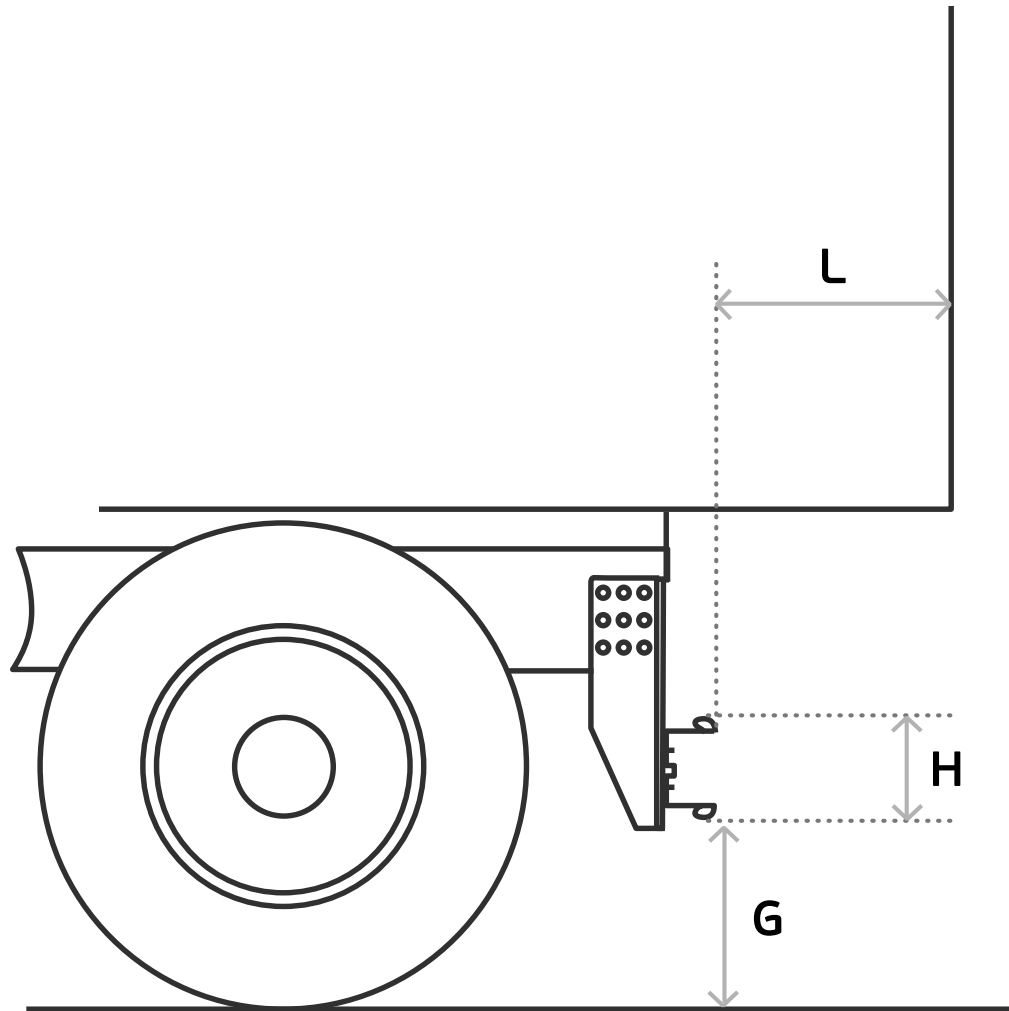


# New rules apply from 2019

## What does it mean for:

- The transportation industry?
- The bodybuilders / fitters?
- The fleet owners / managers?
- RUPD manufacturers?





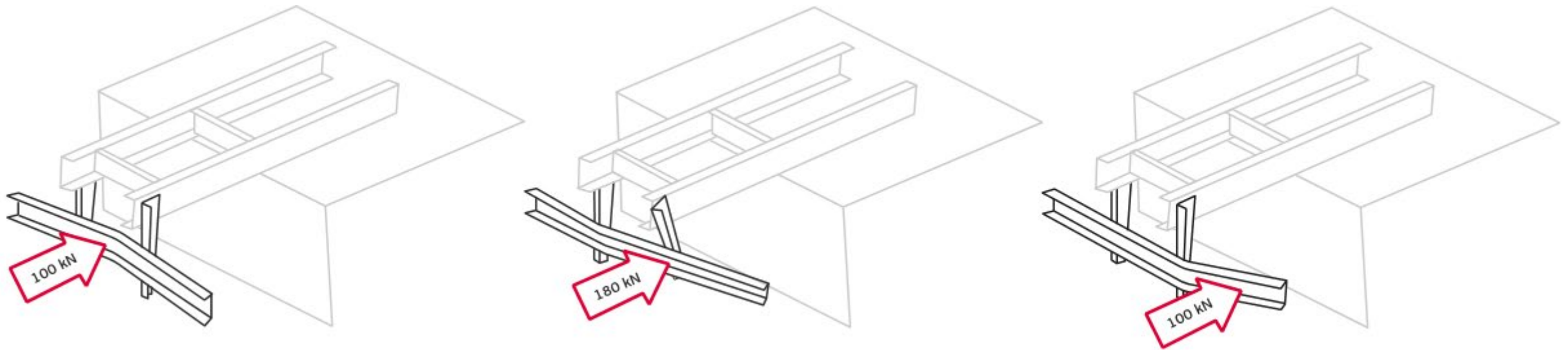
## The changes

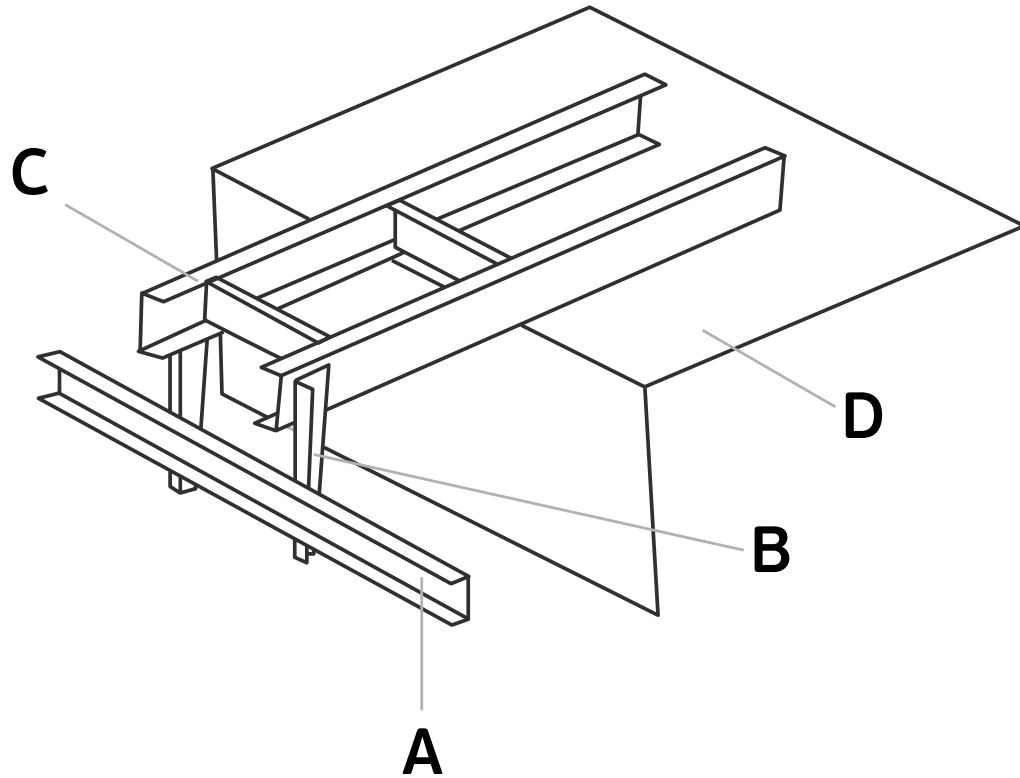
- Lower ground clearance
- Shorter rear overhang
- Increased test forces
- Heavier structural dimensions
- Stricter and more fair test set-up

# Withstanding increased impact forces

## Applies to:

- Construction design
- Structural dimensions
- Testing and validation





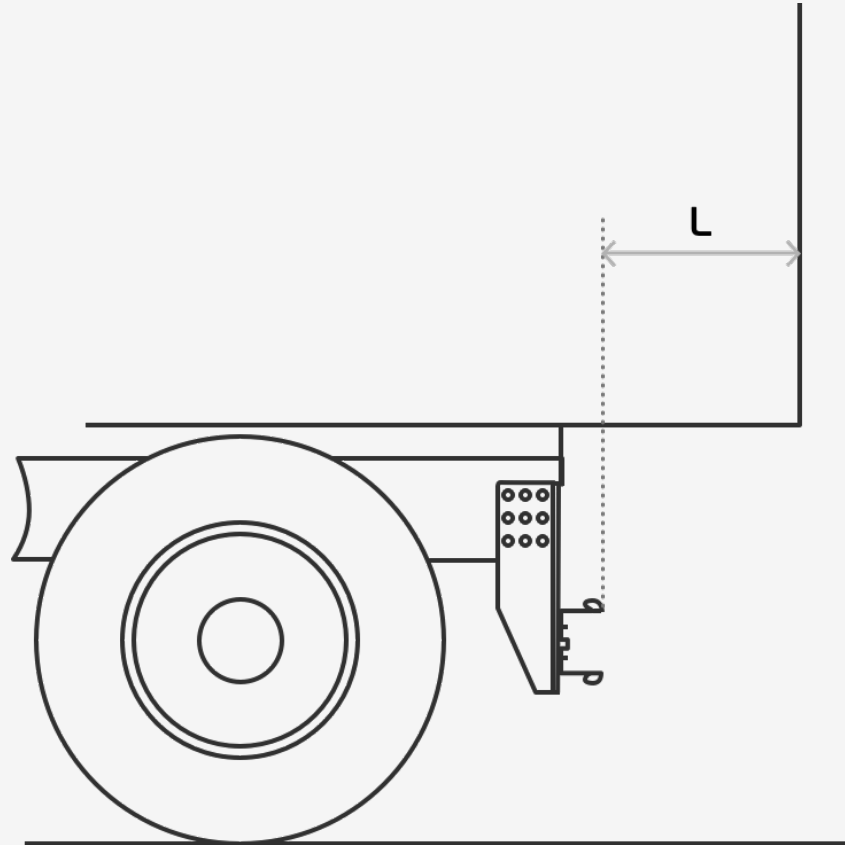
- A. RUP beam under test
- B. RUP support brackets under test
- C. Frame, part of test bench
- D. Rigid foundation, part of the test bench

## Stricter and more fair test set-up

- More stringent requirements on calculation based approval
- Calculation shall be validated against physical tests
- Clearer text to force all manufacturers to account for the total maximum deformation



# Longitudinal position – new rules



## OVERHANG MAX

300 mm / 400 mm\*

200 mm / 300 mm\*

400 mm\*

## VEHICLE CATEGORY

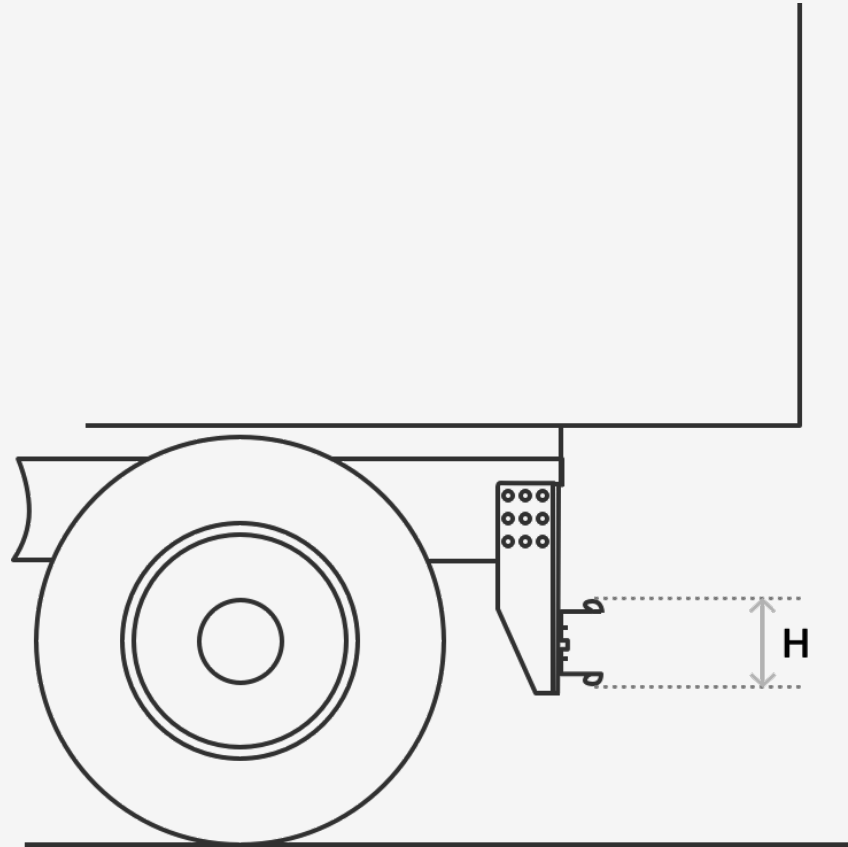
N2 (>8 tonnes), N3 and O3, O4 with platform lift or designed as tipper trailer

O3, O4 without platform lift and not designed as tipper trailers

M, N1, N2 (< 8 tonnes), O1, O2

\*) Diminished by the maximum **total** deformation under the test force (whichever is less)

# Profile height – new rules

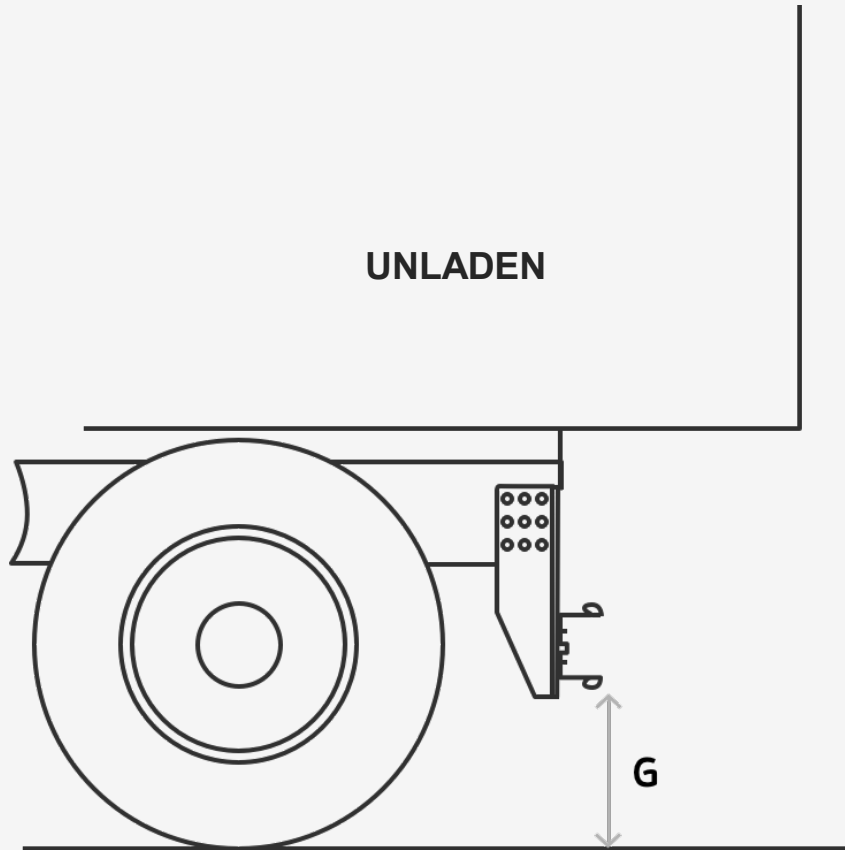


$\geq 120$  mm

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$\geq 100$  mm (M, N1, N2 below 8 tonnes)

# Ground clearance – new rules



## GROUND CLEARANCE MAX

## VEHICLE CATEGORY

450 mm

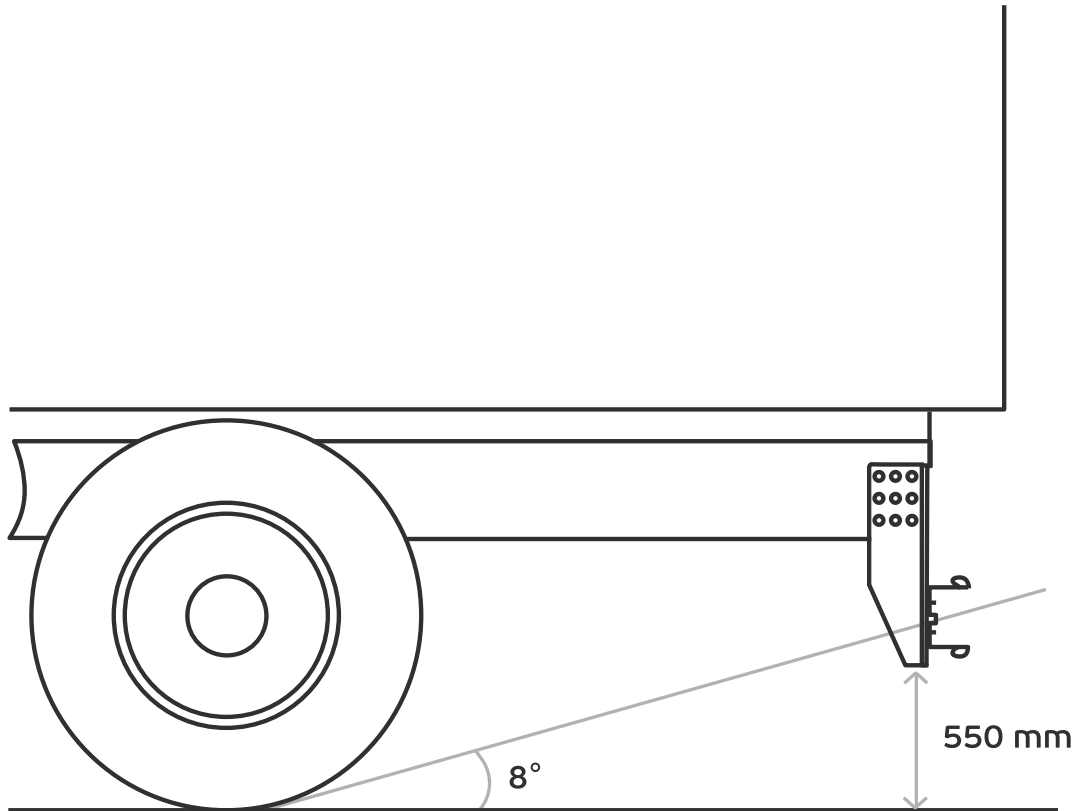
N2 (>8 tonnes), N3, O3, O4  
With pneumatic/hydro-pneumatic  
suspension

500 mm

N2 (>8 tonnes), N3, O3, O4  
With other suspension

550 mm

M, N1, N2 (< 8 tonnes), O1, O2



## Ground clearance – exemption

If a departure angle of 8 degrees can not be reached a ground clearance of up to 550 mm can be accepted.

# Two critical dates

The new rules are coming into force by:

**2019**

**Sept 01**

for new type-approved vehicles

**2021**

**Sept 01**

for newly registered vehicles

# Industry impact

## **BODYBUILDER / FITTER**

- Fewer suppliers
- Increased vehicle weight
- New certifications required

## **FLEET OWNER / MANAGER**

- Increased vehicle cost
- Increased vehicle weight
- Fewer suppliers
- Varied fleet due to non-compliance
- Strategy for fleet replacement

## **MECHANIC / TECHNICIAN**

- New mounting routines
- Risk of greater damage to vehicle chassis (from impact)

**Thank you!**