



OECD meeting SWG tractors categorisation 28 November 2018

**Masses definitions according to the EU
type-approval legislation**



facebook.com/EU.Growth
facebook.com/MrSmeForEurope



[@EU_Growth](https://twitter.com/EU_Growth)



youtube.com/c/EUGrowth

Web sites:

ec.europa.eu/growth

ec.europa.eu/bienkowska

*Internal market,
Industry,
Entrepreneurship
and SMEs*

Definitions related to mass

RVFSR: based on the road safety features

Art. 2 - definitions

- '**Unladen** mass in running order' of a vehicle means the mass of the **unladen vehicle ready for normal use** and including the standard equipment in accordance with the manufacturer's specifications, coolant, lubricants, fuel, tools and driver (considered equal to 75 kg) and excluding optional accessories;

Used in vehicles categorisation, together with masses defined below

Definitions related to mass

RVFSR: based on the road safety features

Annex XXII - masses

- '**Technically permissible maximum laden mass**' means the maximum mass allocated to a vehicle on the basis of its **construction features and its design performances** irrespective from the load capacity of the tyres or tracks.

- '**Technically permissible maximum mass per axle**' means the mass corresponding to the **maximum permissible static vertical load transmitted to the ground by the wheels of the axle or track undercarriages, on the basis of the construction features of the axle and of the vehicle and their design performances** irrespective from the load capacity of the tyres or tracks.

Definitions related to mass

RVFSR: based on the road safety features, tyres taken into account

Annex XXX – tyres

- '**Maximum load rating**' means the **mass which a tyre can carry** when operated in conformity with requirements governing utilisation specified by the tyre manufacturer;
- '**Maximum permissible mass per axle according to tyre specification**' means the mass corresponding to the **maximum permissible static vertical load that can be transmitted to the ground by the wheels** of the axle **as restricted by the maximum load rating of tyre types** that can be fitted to the vehicle as listed in the information document.

Definitions related to mass

RVFSR: based on the road safety features, specific for towed vehicles

Annex XXI – dimensions and towable mass

- '**Technically permissible towable mass(es)**' means one of the following:

- (a) **unbraked** towable mass;
- (b) towable mass with **inertia braking**;
- (c) towable mass fitted with **hydraulic or pneumatic braking**.

All above used for mass limits, requirements on tyres, tracks and mechanical couplings

Definitions related to mass

RVCR: based on the occupational safety features, ROPS
Annex VIII – ROPS

- **Maximum Permissible Mass**

The **maximum mass** of the tractor **stated by the manufacturer to be technically permissible** and declared on the vehicle's identification plate and/or in the Operator's Handbook;

- **Reference Mass**

The mass **selected by the manufacturer** for calculation of the energy inputs and crushing forces **to be used in the tests**. Must not be less than the unballasted mass and must be sufficient to ensure the Mass Ratio does not exceed 1,75

Definitions related to mass

RVCR: based on the occupational safety features, ROPS

Annex X – rear mounted ROPS

In addition to the masses definitions in Annex VIII

- **Unballasted/Unladen Mass**

The mass of the tractor **excluding optional accessories** but including coolant, oils, fuel, tools plus the protective structure. Not included are optional front or rear weights, tyre ballast, mounted implements, mounted equipment or any specialised components;

Definitions related to mass

RVBR: based on the braking features

Annex VII – alternative tests

- 'actual test mass' means the mass measured by the Technical Service prior to the test;
- G'A : towed vehicle's 'maximum mass' capable of being braked by the control device, as declared by the manufacturer;
- GB : towed vehicle's 'maximum mass' capable of being braked by joint operation of all of the towed vehicle's brakes
- GB₀ : fraction of towed vehicle's permissible maximum mass capable of being braked by one brake, as declared by the manufacturer;

Used in braking tests

Definitions related to mass

Aims:

- Use coherently the definitions for masses throughout all the tractors' type-approval legislation***
- If possible, use the same definitions throughout that legislation***



Thank you for your attention

DG GROW – Unit C4

Further information:

http://ec.europa.eu/growth/sectors/automotive/index_en.htm



facebook.com/EU.Growth
facebook.com/MrSmeForEurope



@EU_Growth



youtube.com/c/EUGrowth

Web sites:

ec.europa.eu/growth

ec.europa.eu/bienkowska

*Internal market,
Industry,
Entrepreneurship
and SMEs*