



## VO (EU) no. 2015/208 Anx. XIV

Requirements for the exterior and for accessories of the vehicle

- Overview
- Scope
- Requirements
- Special features
- Practical implementation

# Overview



All vehicle classes acc. to CR (EU) no. 167/2013 have to meet the requirements!



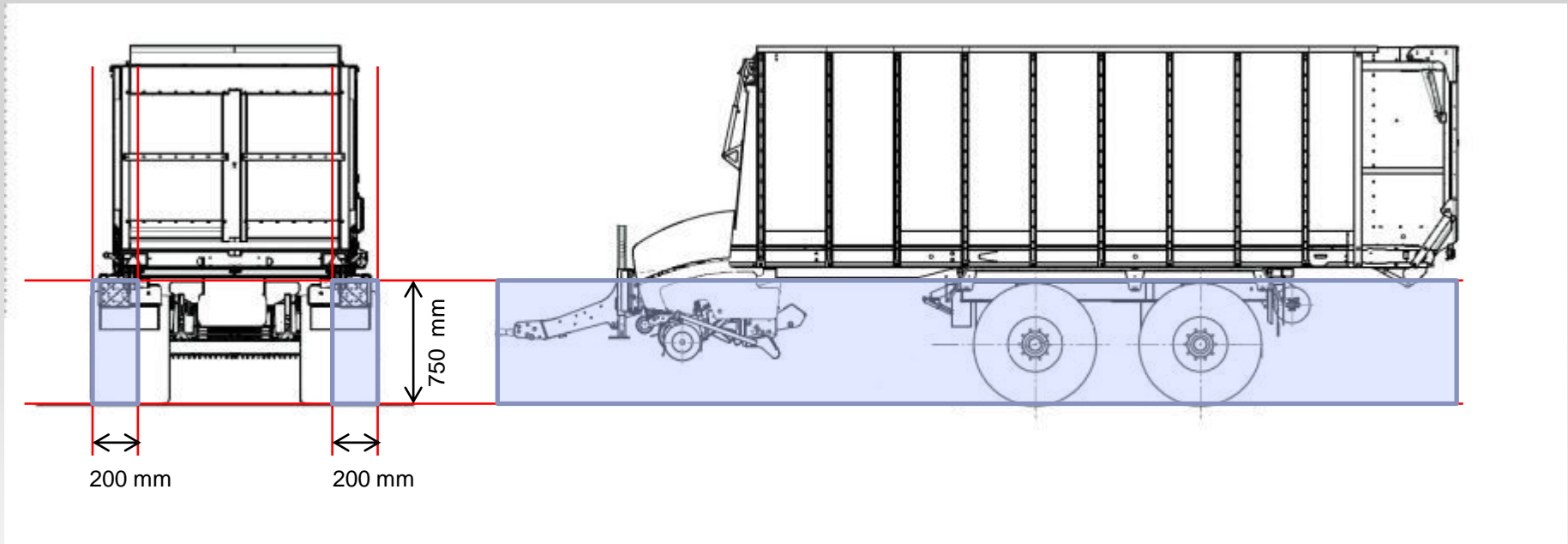
- Exemptions are defined for certain tools on vehicles of the classes R and S.
- Different areas of application depending on the outer edge of the vehicle

## Scope (1)

...concerns the following parts of the outer surface:

- „...those parts including the entire wheel and track... on **the sides** and in a height of **less than 0.75 m** which form the outer edge for each **vertical plane perpendicular to the longitudinal axle**....“.
- „...apart of those parts which are **further than 200 mm** away from the right and left outer edge in relation to the longitudinal axle ...“.

# Scope (1)

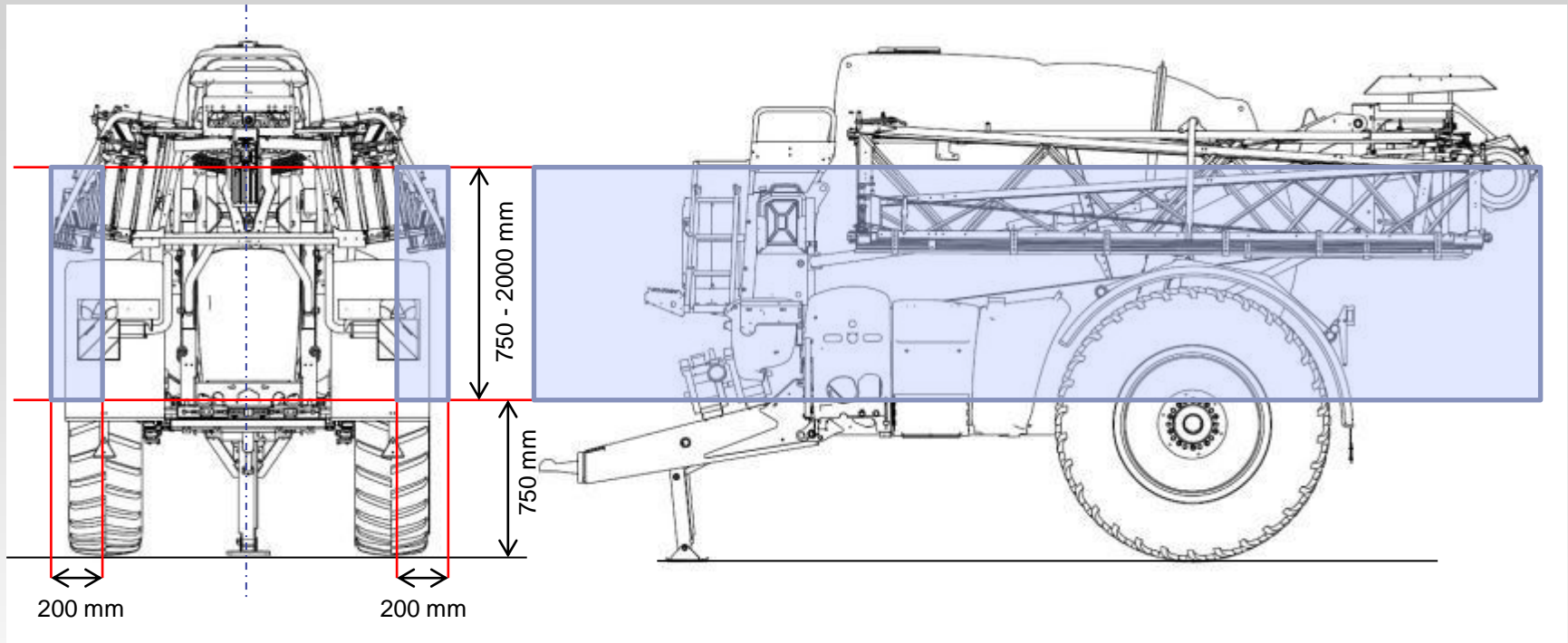


- Define outer edge
- Define height range
- Tyres, wheels and rims, axles etc. are assessed

## Scope (2)

- All parts on the sides in a height between 0.75 m and 2 m without:
- „...those parts which **cannot be touched with a ball** of a diameter of 100 mm when approaching horizontally in any plane perpendicular to the longitudinal axle; the **deferment** must not exceed **200 mm** ...“.
- „...the entire **wheels and tracks**...“.

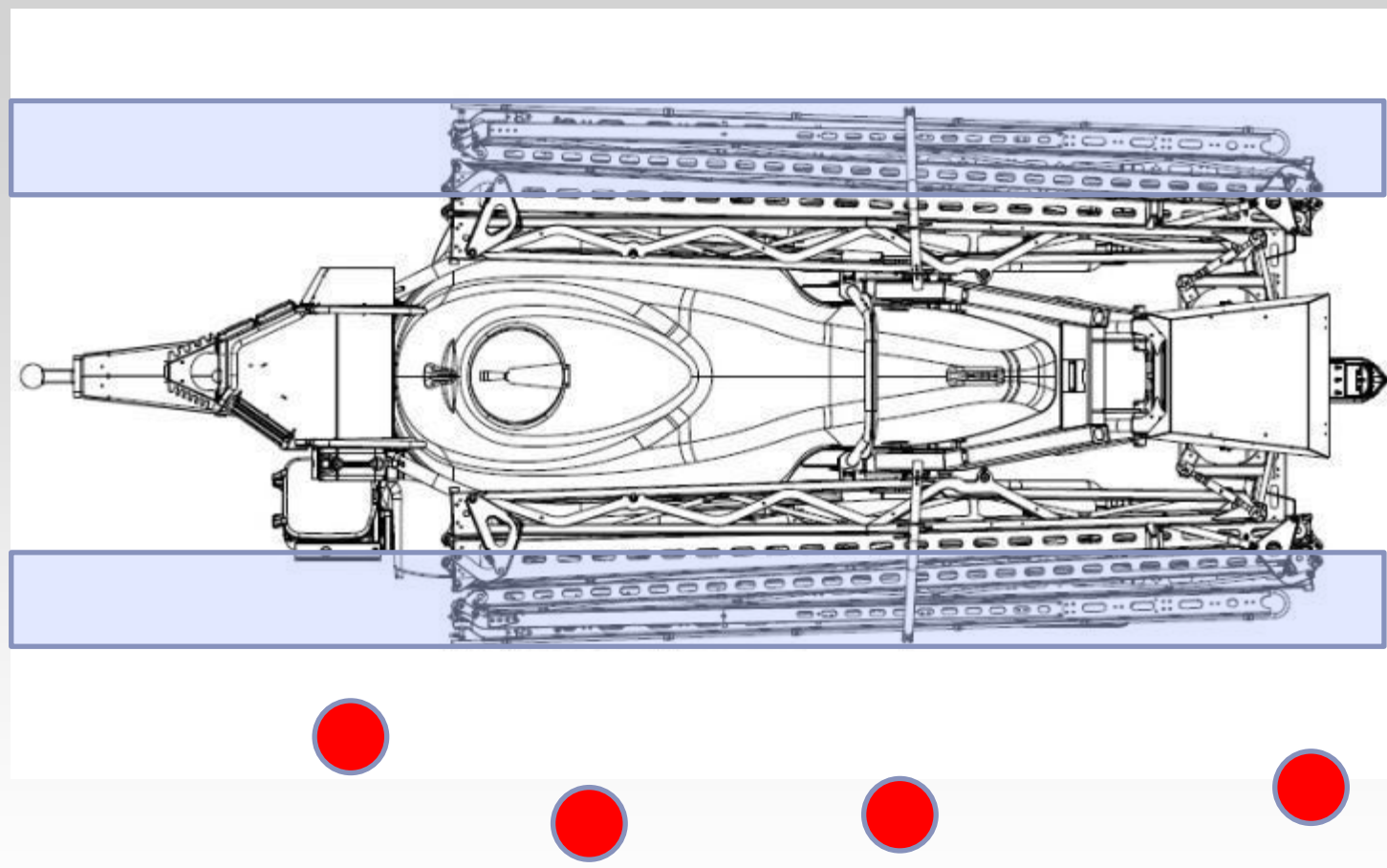
## Scope (2)



- Define outer edge
- Define height range
- Deferment of ball max. 200 mm
- Tyres, rims, axles, etc. are not assessed



# Scope (2)



- No protruding part of the outer area must have a rounding radius of less than 2.5 mm.
  
- This does not apply to parts which:
  - Protrude less than 5 mm. The outer edges of these parts must be chamfered.
  - Protrude less than 1.5 mm.
  - Have outer areas made of material of a hardness of less than 60 Shore A.

# Requirements

- The outer areas of the vehicle must not have pointy or sharp parts facing outwards, rough surfaces or parts protruding outwards.
- No outwards pointing parts must be on the outer areas of the vehicle in which pedestrians, bicyclists or motor bike drivers could be caught.

## Special features

- Selection of test vehicle:
  - largest tyre diameter
  - narrowest track
  - loaden vehicle
  - worst case for vehicles with leveling suspension, etc.

- The following parts are exempt:
  - Tyre pressure tester
  - Anti-slip device which can be attached to the wheels
  - Rear-view mirrors
  - Direction indicators on the side
  - End-outline marker lamp
  - Position lamp and tail light
  - Parking lights

# Special features

- Exemption for unprotected tools on vehicles of classes R and S, if they are folded shut for street transport and if they are assigned to directive 2006/42/EC.



# Practical implementation

- Problem: wheel bolts / wheel nuts



# Practical implementation

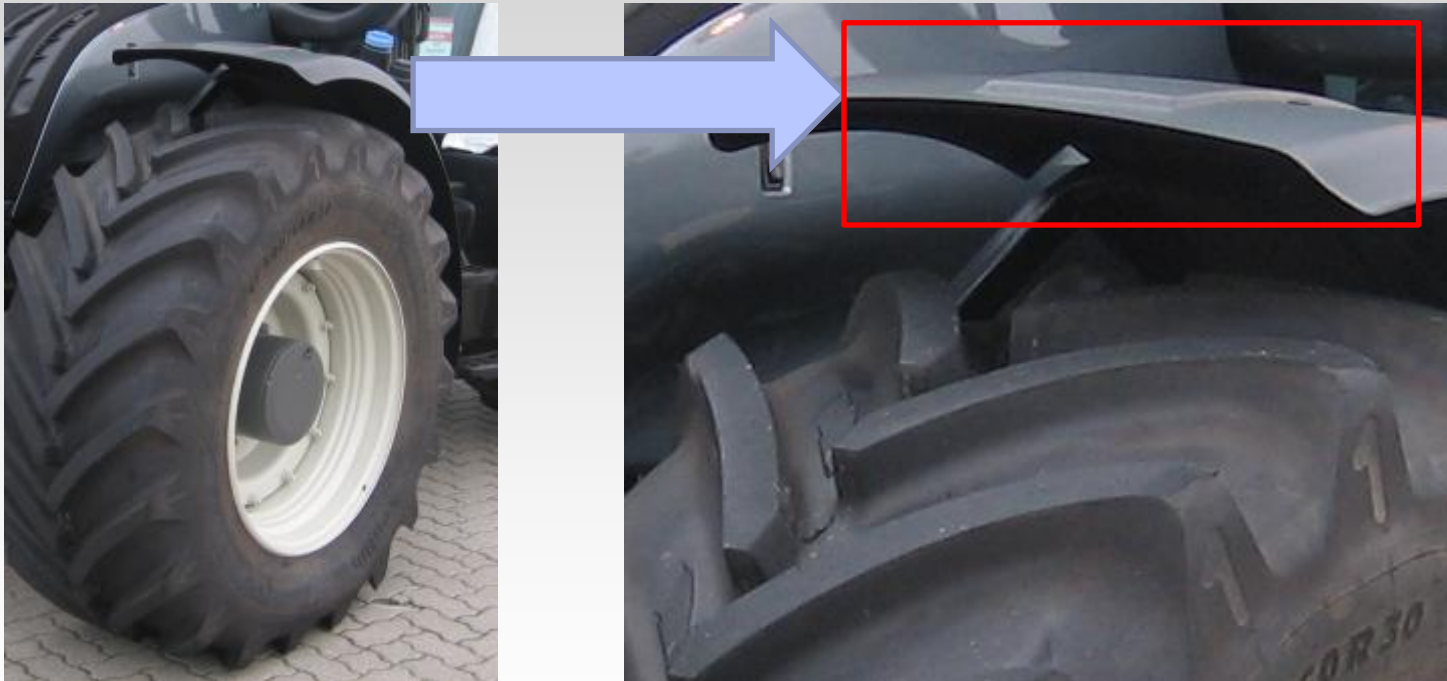
- Solution: Wheel bolt/ wheel nut





# Practical implementation

- Problem: Mudguards



# Practical implementation

- Solution: Mudguards



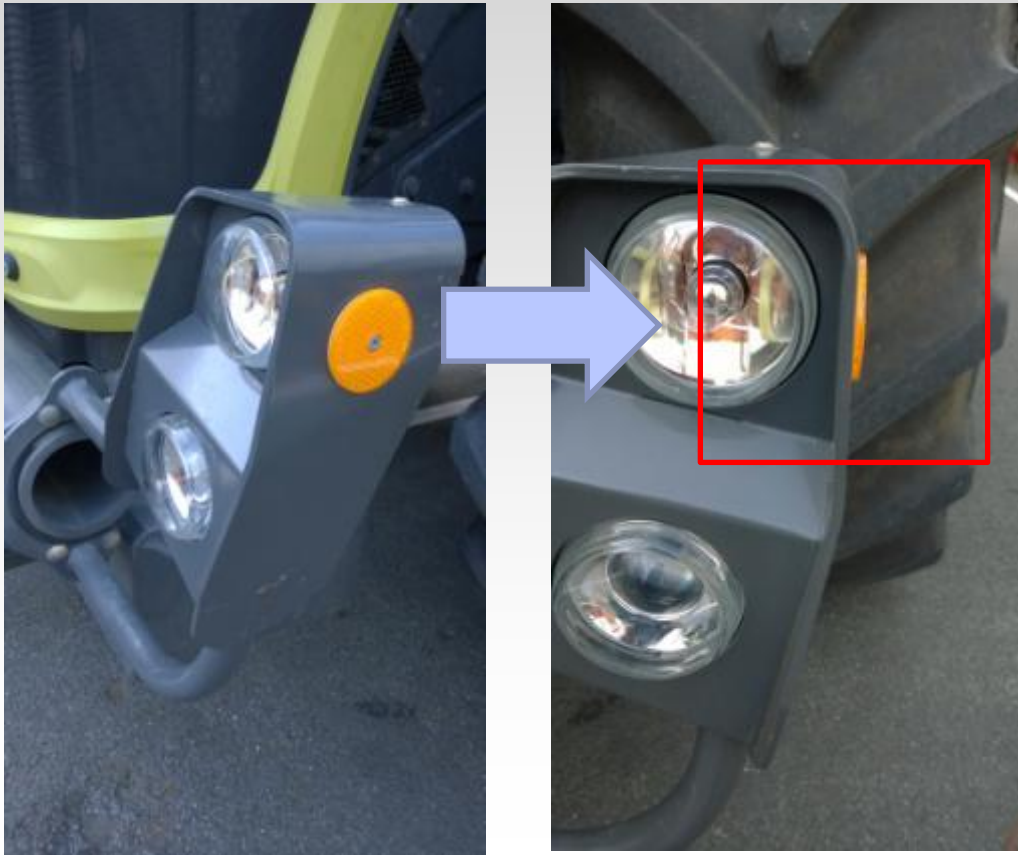
- Problem: Steps



We are working on the problem of roughness!

# Practical implementation

- Problem: Side reflectors



Reflectors are not exempt!  
We are in discussion with the authorities!



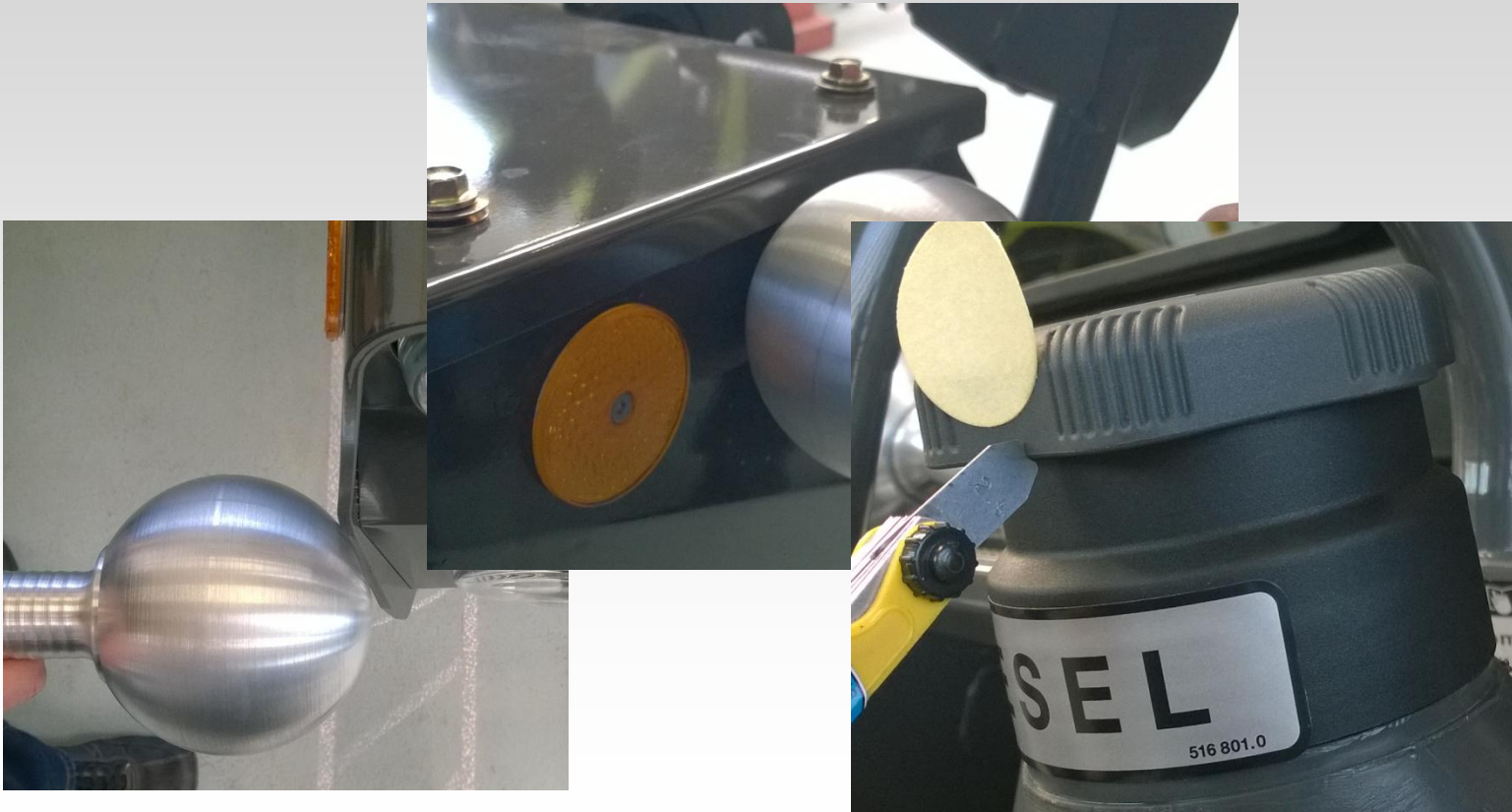
# Practical implementation

- Further problems with the implementation:



# Practical implementation

- Further problems with the implementation:



# Thank you for listening



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