



## SERVICE INSTRUCTIONS FOR THE USE OF WHEELS IN VEHICLE MANUFACTURER'S PLANTS

# ES 1.06

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- *Préconisations d'utilisation des roues dans les usines des constructeurs*
- Sicherheitshinweise für den Gebrauch von Rädern bei den Fahrzeugherstellern

Developed by EUWA - Association of European Wheel Manufacturers  
Members of EUWA represent the main manufacturers of wheels, for all types of vehicles

### 1 SCOPE

This EUWA Guideline specifies service instructions concerning the handling and mounting of wheels. EUWA intends to inform people charged with wheel / tyre handling about the product risks related to their activities.

### 2 FIELD OF APPLICATION

The following guideline is valid for vehicle wheels which are produced or commercialized by EUWA members, in particular for passenger car wheels. It concerns the activities of handling and mounting these wheels in OE car manufacturer's plants and their sub-contractor's sites.

### 3 GENERAL INSTRUCTIONS

- 3.1 The wheel is a highly stressed component of the vehicle that in service may be subjected to extreme forces. Improper or unsafe wheel / tyre servicing practices can lead to risks during utilisation by the consumers. Therefore, all service operations must be performed only by qualified and appropriately trained personnel.
- 3.2 Avoid damages or deformations of the wheel due to the application of high forces or due to impacts during all operations like handling, valve mounting, tyre mounting, balancing and mounting to the vehicle.  
→ *Risk of reduced fatigue life performance.*
- 3.3 In all those operations, avoid shocks or scratches which may damage the surface protection of the wheel.  
→ *Risk of resulting corrosion which may reduce fatigue performance of the wheel in service.*

### 4 MOUNTING OF TYRE ONTO WHEEL RIM

- 4.1 Fixation of the wheel on the tyre mounting machine: verify that wheel disc and wheel rim do not present any deformation or damage after tyre mounting.  
→ *Risk of reduced fatigue life performance.*
- 4.2 Use a neutral non-aggressive mounting paste which complies with the specification.  
→ *Risk of damage of the wheel paint if the solvents used are not compatible.*  
→ *Risk of relative movement between tyre and rim if the product does not dry.*

Main changes compared to the last issue:

## 5 BALANCING OF THE TYRE AND WHEEL ASSEMBLY

- 5.1 Verify that the wheel is well centred on the balancing machine and that the centre hole is not deformed after operation.  
→ *Risk of mounting problems or reduced fatigue life performance.*
- 5.2 The contact surface between wheel and machine must be clean in order to achieve perpendicularity between the machine and the central axis of the wheel.  
→ *Risk of improper balancing and resulting vibration problems.*
- 5.3 Avoid deformations of the wheel attachment face due to applied fixation forces or fixation torques higher than given in the specification.  
→ *Risk of mounting problems or reduced fatigue life performance.*
- 5.4 Only use approved balancing weights.  
→ *Risk of improper seating and loss of balancing weights.*
- 5.5 The rim flanges must not be damaged by excessive weight mounting forces or impacts. Avoid successive mounting and de-mounting of balancing weights.  
→ *Risk of corrosion of the rim flanges.*

## 6 MOUNTING OF THE TYRE / WHEEL ASSEMBLY TO THE VEHICLE

- 6.1 The tyre/wheel assembly must be correctly positioned relative to the hub when mounting on the vehicle. Make sure that all matching contact surfaces of hub and wheel are clean and no foreign objects are between wheel and hub.  
→ *Risk of uniformity problems and vibrations*  
→ *Risk of damages to the wheel in a highly stressed area which may cause fatigue problems*
- 6.2 To prevent rusting, small amounts of oil may be applied to the wheel nut and stud threads. Care must be taken not to over lubricate.  
→ *Excessive lubrication may cause wheel loss.*
- 6.3 The screws of all disc wheels have to be fastened with the recommended torque which is in accordance with the vehicle manufacturer's instructions. Tighten progressively to the final torque, not in one go.  
→ *Excessive screw tightening may cause deformation of wheel disc or of bolt/stud failure.*  
→ *Insufficient tightening may cause wheel loss.*
- 6.4 On a new vehicle and always after a wheel / tyre replacement, it is imperative to verify the mounting torque after approximately 50-100 km of operation and, where necessary, to retighten the wheel screws to the correct value.  
→ *Insufficient tightening may cause wheel loss.*

## 7 MOUNTING OF THE WHEEL OR HUB COVER

- 7.1 The mounting of wheel or hub cover shall not require excessive forces which may damage the surface protection.  
→ *Risk of resulting corrosion*
- 7.2 The wheel cover must be mounted in the correct angular position versus the valve in order to avoid damages or bending of the valve.