



Intelligent Transport System for Innovative Intermodal Freight Transport

Deliverable No. 5.5

Optimised prototype of trailer

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¹R = Report; P = Prototype; O = Other

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² **PU** = Public; **RE** = Restricted to a group specified by the consortium **CO** = Confidential, only for members of the consortium (including the Commission Services)

Overview	
Author(s):	Klaus Holz
Contact Person(s)	Klaus Holz Organisation: WECON GmbH Address: An der Hansalinie 10; 59387 Ascheberg GERMANY Email: k. holz@wecon.de Tel: +49 2593 921-12 Fax: +49 2593 921-25

Review:		
Date	Version	Reviewed by:
15.09.2015	0.1	Oleg Dyck (RWTH Aachen)
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History			
Version	Date	Person	Changes
0.1	15.09.2015	Klaus Holz (WECON)	Document draft
0.2	15.09.2015	Oleg Dyck (RWTH Aachen)	Review, format and structure
1.0	24.09.2015	Alexia Fenollar Solvay (RWTH Aachen)	Final Version

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Table of contents

1. Final trailer prototype	1
2. Trailer optimisations	2

List of figures

Figure 1.1: Air vessels with strained suspensions	1
Figure 2.1: Air vessels with strained suspensions	2
Figure 2.2: Redesigned air vessels with mounting brackets	3
Figure 2.3: Additional spare wheel carrier	4
Figure 2.4: Rear splash guard	5
Figure 2.5: Redesigned rear splash guard	5

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1. Final trailer prototype

Figure 1.1 present the final design of the trailer chassis. This prototype has following characteristics:

- Size: 45 ft
- Hitch: Gooseneck
- Weight: Target 3,850 kg
- Coupling height: 850 mm



Figure 1.1: Air vessels with strained suspensions

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2. Trailer optimisations

Test runs shows that the air vessels touch the ground of some loading docks in case of inclination. These inclination is caused by air suspension or dock construction or both.

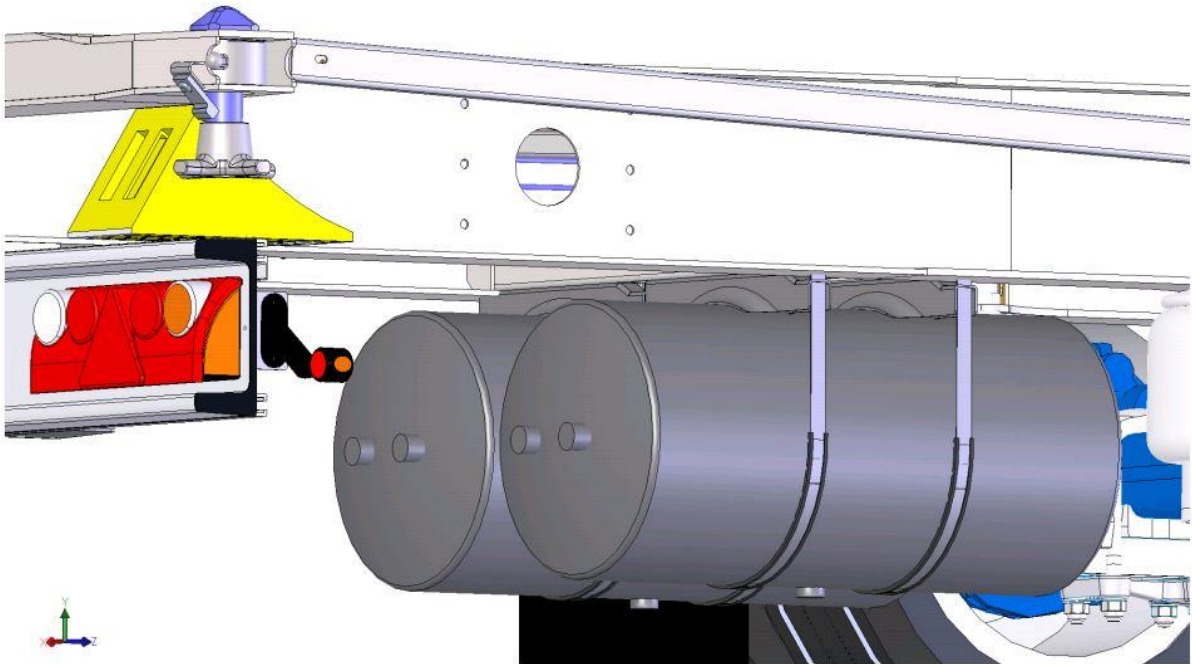


Figure 2.1: Air vessels with strained suspensions

Air vessels with integrated mounting brackets (cf. figure 2.1) replaced the former once with strained suspension (cf. figure 2.2). Now the position is about 50 mm higher (Cutting out the outer brackets is necessary).

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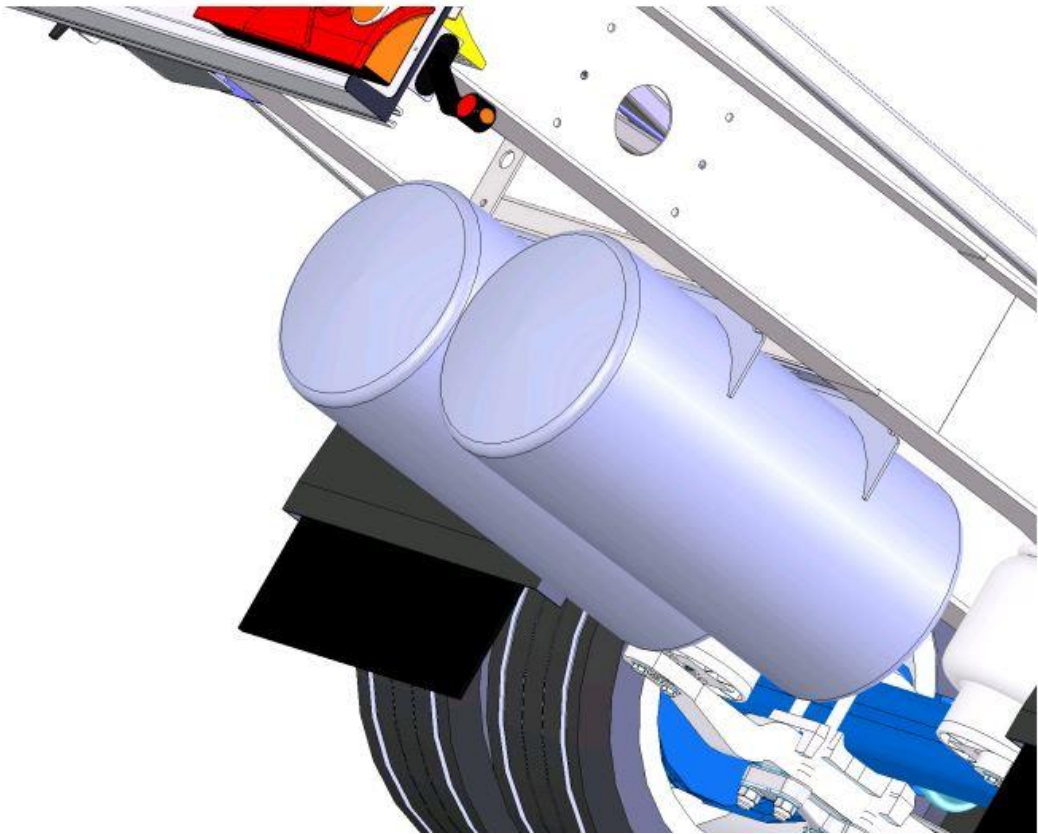


Figure 2.2: Redesigned air vessels with mounting brackets

Due to the use of special tire types which are not available on spare market we have to carry our own spare wheels for trailer and truck machine with us. For that we add two spare wheel carriers to the chassis (cf. figure 2.3).

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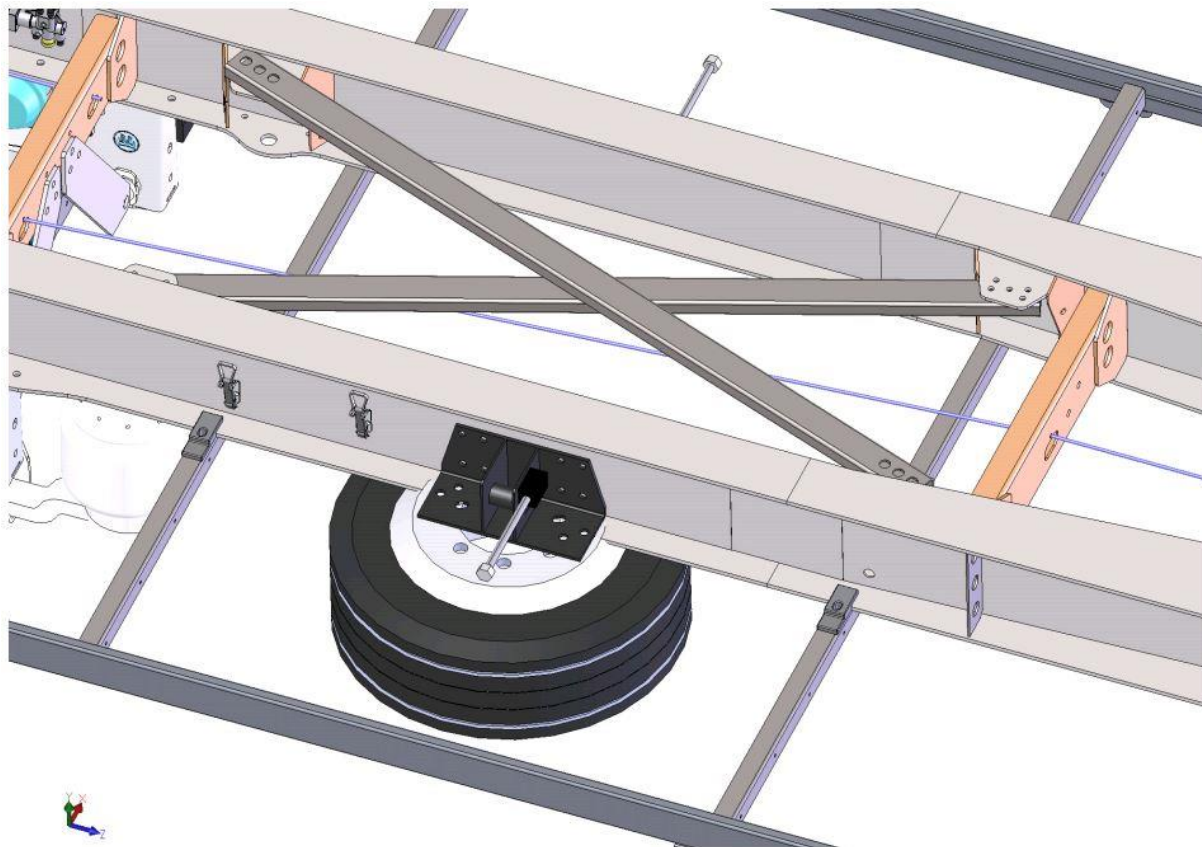


Figure 2.3: Additional spare wheel carrier

The rear splash guard has to be replaced do to the same situation like air vessels (cf. figures 2.4 and 2.5).

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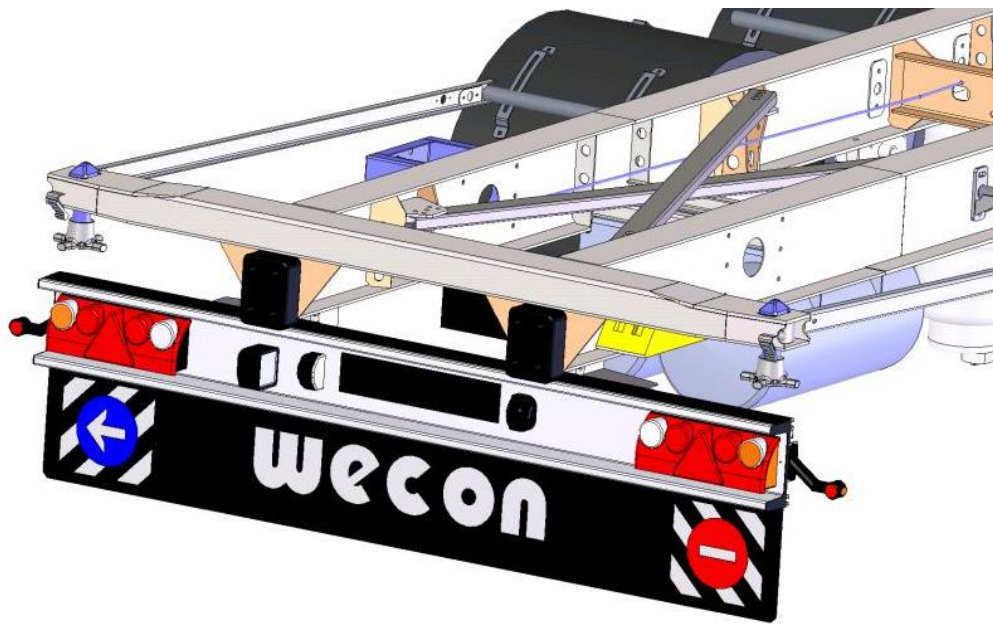


Figure 2.4: Rear splash guard

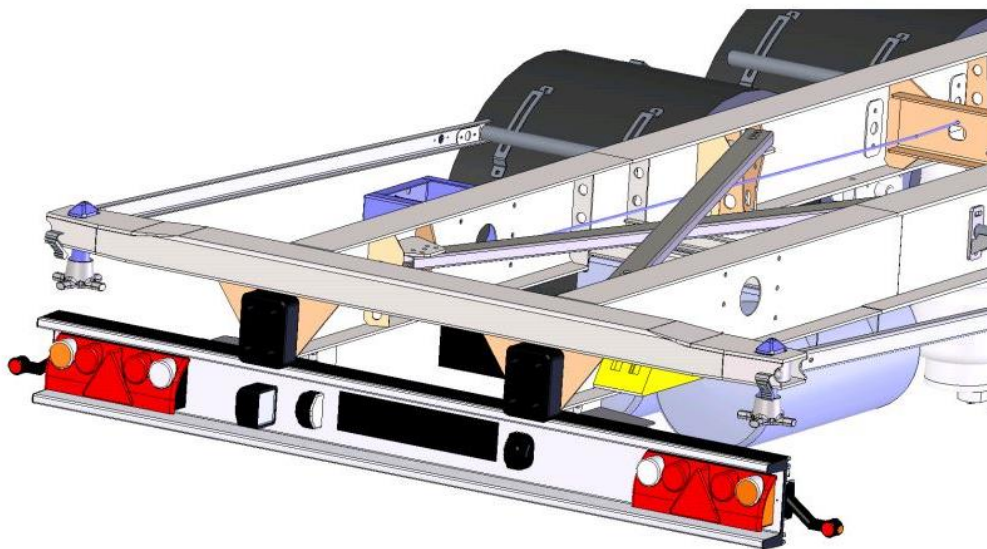


Figure 2.5: Redesigned rear splash guard

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