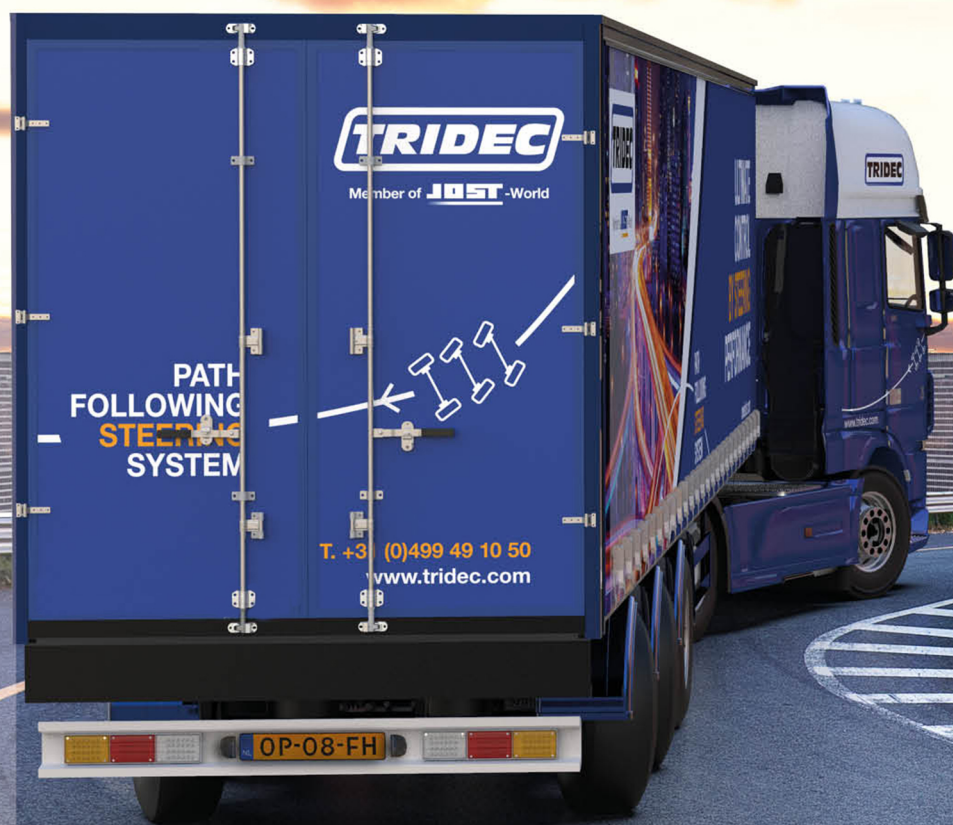
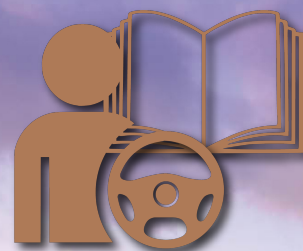
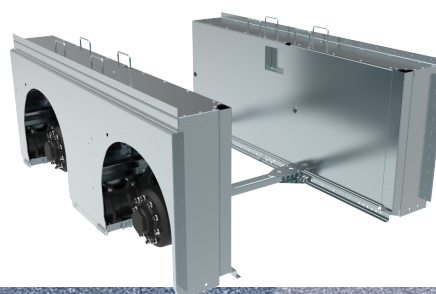


# Steering systems and axle suspensions



1200 LV-O  
User manual  
Release 07/2019  
*01-10-2016...*



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## Foreword



This user guide contains all necessary information about using the LV-O.

The guide must always be stored in the vehicle used to tow the trailer on which the LV-O is installed. A separate maintenance and repair manual for service technicians is available on our website: [www.TRIDEC.com](http://www.TRIDEC.com).

### Effective use:

Any modifications whatsoever could compromise the safety of the system. The TRIDEC product guarantee and the type approval certificate shall be rendered invalid if these products are modified without obtaining written consent from TRIDEC.

Prior to putting the system into service, compliance with the applicable national road traffic regulations must be established for the trailer on which the system is installed. The system may only be used in accordance with the manual for the truck and any other trailer manuals.

The diagrams in this manual are only included as examples and are not intended for any other purposes. Images shown may vary slightly from the system supplied.

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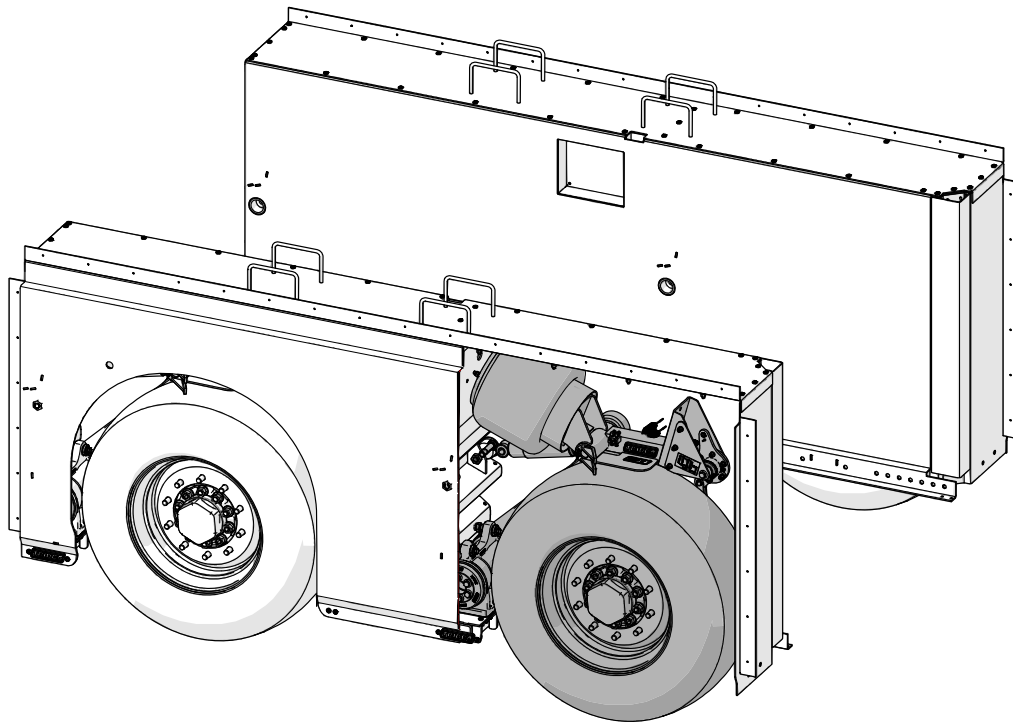
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# 1 Description

## 1.1 Operating

The LV-O is designed to be installed on the chassis of a trailer/semi-trailer or on an integral body and frame. The system is designed in such a way that the space between the wheel houses can be entirely utilised for holding cargo.



1201\_001

**Figure 1-1**

The LV-O with wheel houses consists of:

- Two wheel houses
- Cross-members
- Multiple suspension systems

The integrated wheel house construction forms part of the chassis or integral body and frame. The construction is sufficiently rigid to absorb the forces on the wheel.

Several wheel house constructions, which differ in the number of axle lines that can be fitted, are available. Each axle line comprises two independent wheel suspension constructions. The LV-O has air bellows shock absorption.

Each wheel house construction consists of:



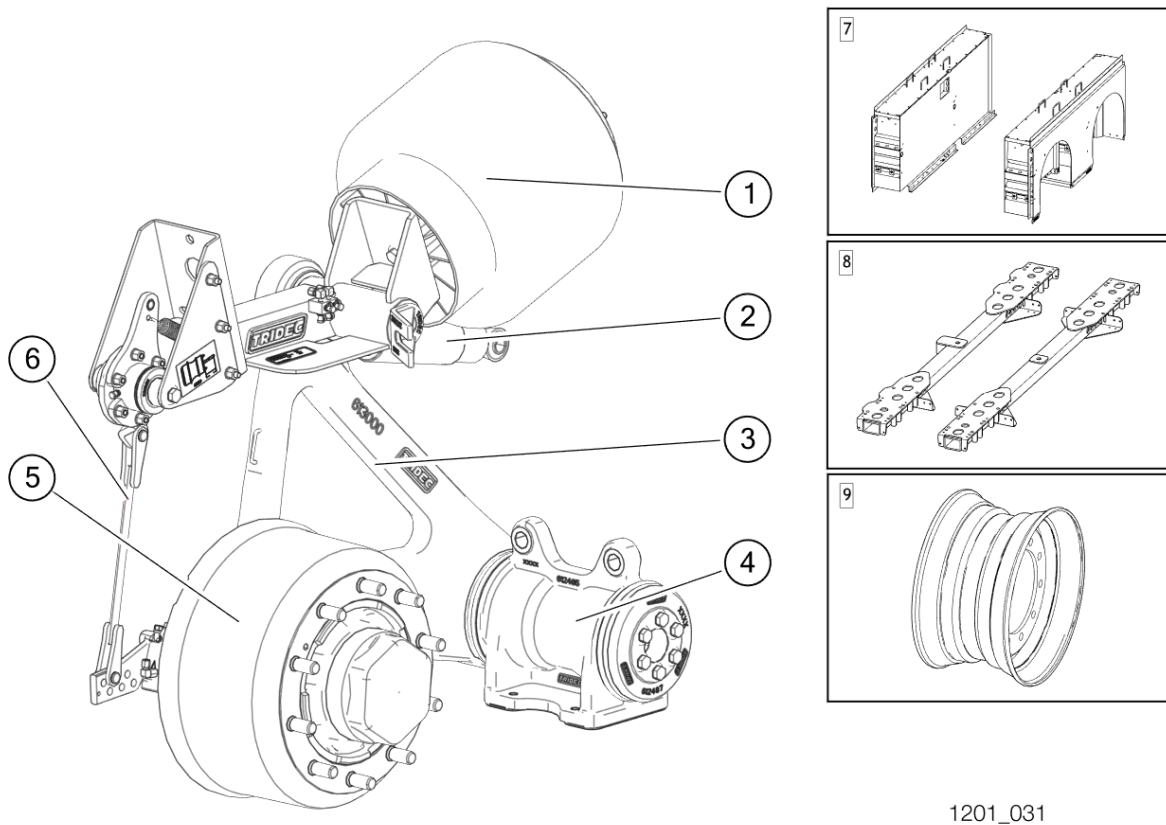
- triangle with stub axle
- bearing housing
- air bellows
- shock absorber

The suspension is attached to the wheel house construction at points on the bearing housing, the shock absorber and the air bellows. The wheel house has a slim width because the air bellows is position above the triangle. The stub axle has a lever-operated drum brake.

## 1.2 Components



The figure below shows the parts from which the LV-O is constructed.



1201\_031

**Figure 1-2**

- |                    |                            |
|--------------------|----------------------------|
| 1. Air bellows     | 6. Brake control           |
| 2. Shock absorber  | 7. Wheel house (optional)  |
| 3. Triangle        | 8. Cross-member (optional) |
| 4. Bearing housing | 9. Wheel rim (optional)    |
| 5. Stub axle       |                            |



## 2 Putting into service



The following paragraphs contain information regarding putting the LV-O into service.

### 2.1 Vehicle registration and delivery




When the manufacturer delivers a trailer/semi-trailer on which LV-O systems have been installed to the customer it must be accompanied by all related documents (CE Declaration, User Manual, etc.).

		The trailer on which the LV-O system is installed may not be driven on public highways until compliance with the applicable national road traffic regulations has been verified.
---	---	--

		Each country has its own specific road traffic regulations. Contact the national inspection authority in the relevant country for the necessary information.
---	---	--

Subject	Action
CE sticker	Ensure that the CE sticker has been placed in a clearly visible position on the LV-O.
CE declaration of compliance	Store the CE declaration with the vehicle documents in accordance with applicable guidelines.
User guide	Provide the customer with the LV-O user guide. Instruct the customer to keep the user guide with the trailer.

	The guarantee registration form must be completed and returned to TRIDEC. The sales conditions for the guarantee period stipulated enter into effect upon receipt. The buyer will not be covered by the guarantee for the supplied products if the registration form is not returned to TRIDEC.
---	---

### 3 Safety & environment

The following paragraphs contain information about using the LV-O safely. The procedures that have to be followed when the LV-O reaches the end of its lifespan are also explained.

#### 3.1 Safety while operating



Operating a trailer on which LV-O systems are installed may involve some risks.

Consult the relevant regulations (for example: road traffic regulations, company procedures, health and safety regulations) which are applicable to the country where the trailer will be used.

##### General instructions for operating a trailer with an LV-O:

- **NEVER** drive with or park a trailer on which an LV-O has been installed on public highways until compliance with the national road traffic regulations has been verified for the entire truck-trailer combination.
- Read the user guide carefully **BEFORE** coupling and using a trailer with an LV-O.
- Perform the daily inspection **BEFORE** coupling and using a trailer with an LV-O.
- The driver of the truck / tractor is **ALWAYS** responsible for the use of the trailer.

The nature of possible dangers and restrictions during use are depicted in the pictograms below (zie "Pictograms" on page 6).



#### 3.2 Environment



The LV-O must be dismantled and disposed of in accordance with local and national regulations once it has reached the end of its lifespan, regardless of the cause.

Contact your local or national public services, waste management authority or the supplier you purchased the product from for more information regarding locations where the materials can be collected for recycling.

## 4 General information

The following paragraphs contain general information pertaining to this user guide and the product manufactured by TRIDEC.

### 4.1 Pictograms

The following pictograms are used in this user guide:





















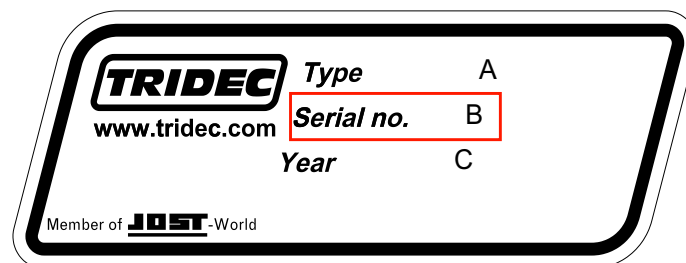
Description	Description	Description
 Important message!	 Beware of falling material!	 Delivery information.
 Danger of becoming trapped!	 Read this information before you start!	 Parts information.
 Important restriction!	 Chance of damage to the system!	 Information about daily use!
 Wear safety shoes	 Wear a safety helmet	 Requirements set by TRIDEC.
 Wear work gloves	 Wear protective clothing	 Surface finishing
 Wear hearing protection	 Wear safety glasses	 Information about storage
 Mounting information		 Tip

Table-1 Pictograms

### 4.2 Model designation

A sticker is placed on products manufactured by TRIDEC.



8300\_007

Figure 4-1

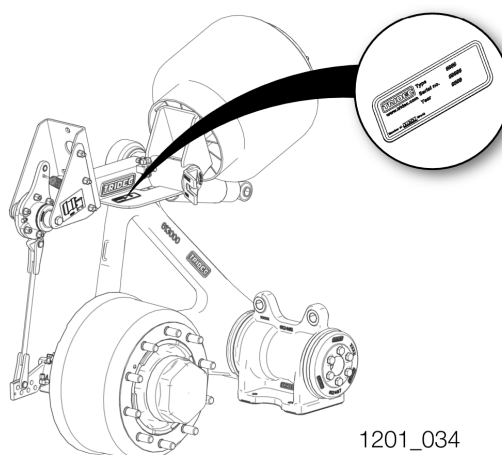


The sticker provides essential information for ordering spare/replacement parts. All product-specific information can be obtained by referencing the serial number on the sticker.

- Type: Coding for product variant
- Serial no.: Is the order number (required when ordering parts)
- Year: Year of construction



Never remove the sticker affixed by TRIDEC!



1201\_034

Figure 4-2



The serial number is required for obtaining the correct service information and for ordering parts.

The meaning of the type coding on the sticker is given in the table below.

WD-900-S LV-OCW xxxxx-x-xxx	Description
W	Suspension
D,T or E	Number of axles under the semi-trailer (E=1, T=2, D=3)
9	Maximum load in tonnes per axle (in this example, 9t=9000 kg)
00, 10, 20	Number of steered axles (00=0, 10=1, 20=2, etc.)
S, T	S= Single air, T = double air
LV-O	Suspension type
C, L	C= cast steel, L= welded
B	B= Concrete transport
W	W= Wheel house

WD-900-S LV-OCW xxxxx-x-xxx	Description
xxxxx-x-xxx	Serial number

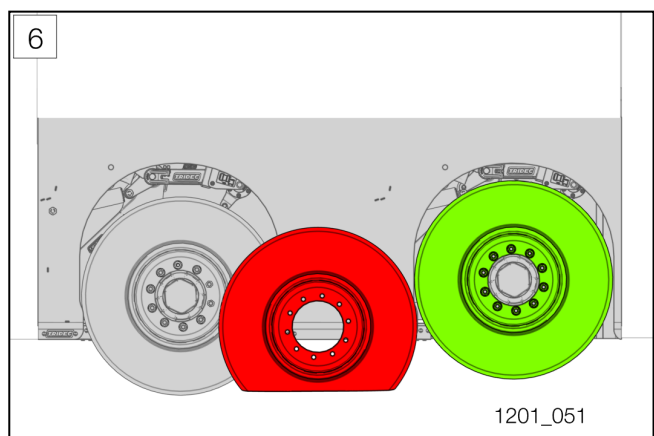
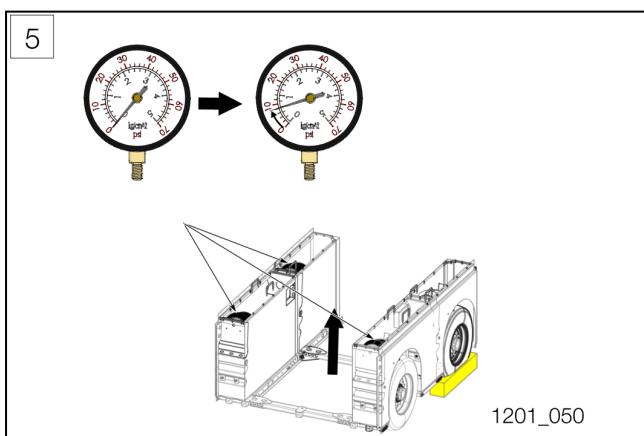
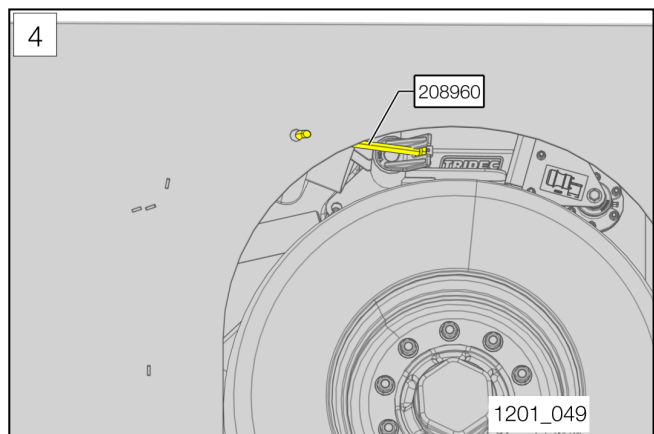
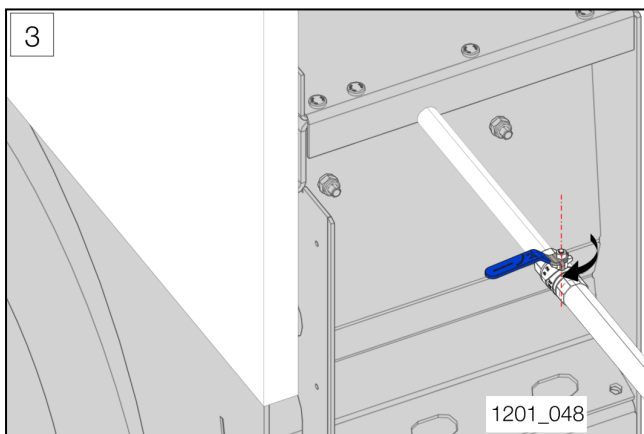
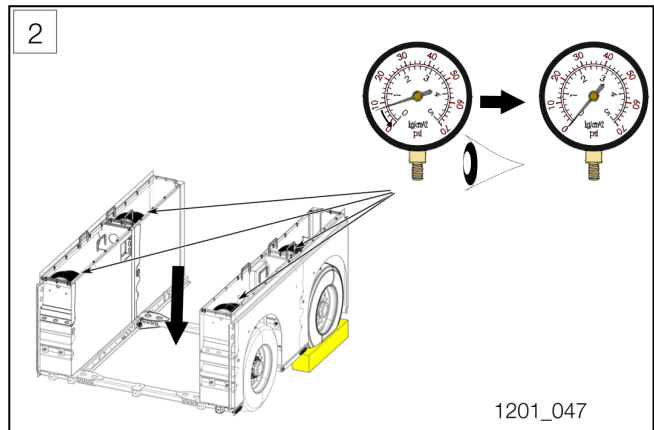
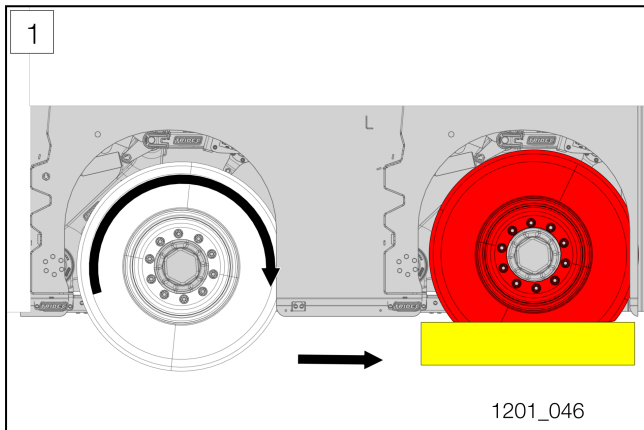
## 4.3 Replacing a wheel

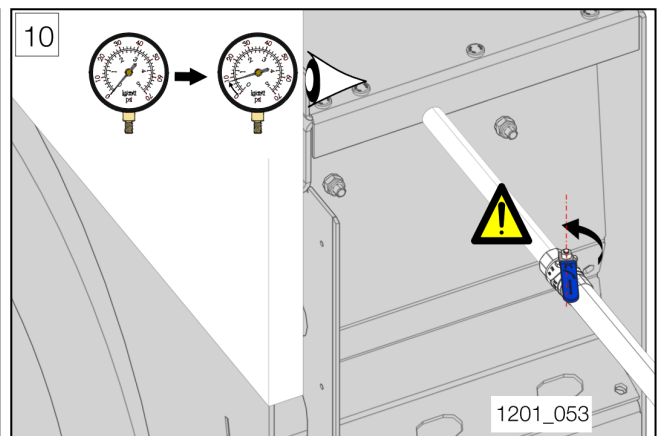
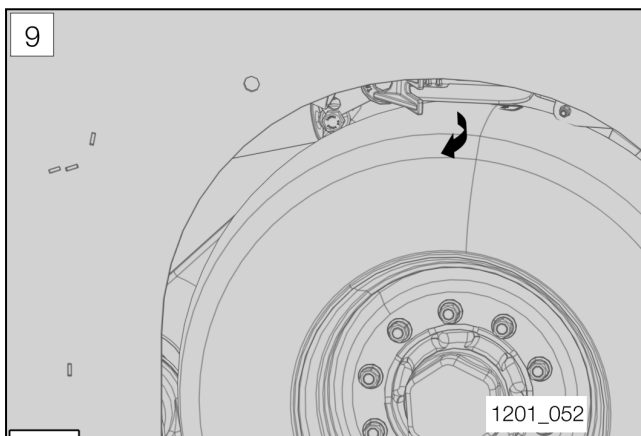
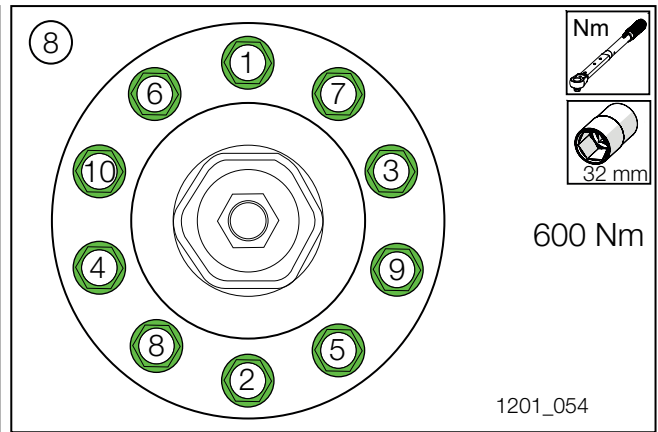
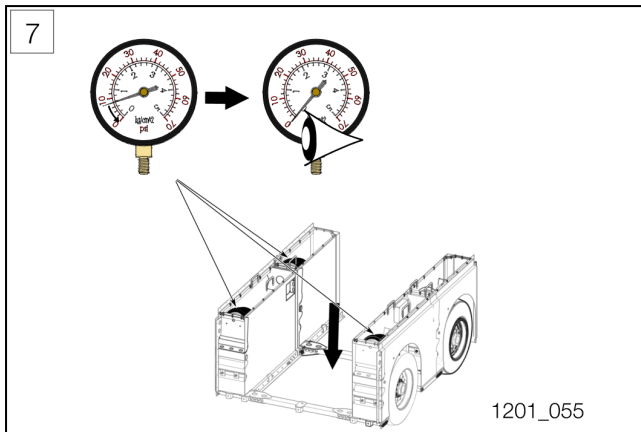
Gesymboliseerde veiligheidsrisico's en verplichte werkkleding



1. Follow the procedure below when replacing a wheel.

### Procedure





#### 4.3.1 Jackpoints

The jack may only be placed in the indicated positions when changing a wheel on a trailer/semi-trailer on which an LV-O and wheel houses have been installed (zie "" below).

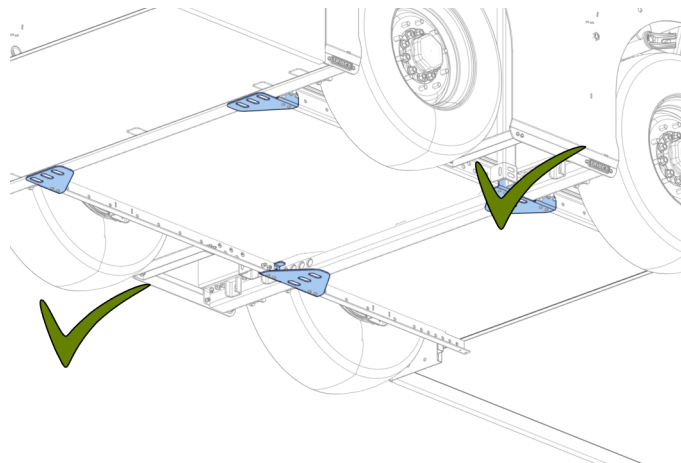


Figure 4-3



The trailer/semi-trailer may only be lifted at one of the jack points. The trailer/semi-trailer may NOT be laden when doing this!!!



4.4 Legend

The following pictograms are used in this user guide:  
The colored symbols indicate the individual phases during the installation of the TRIDEC product or the necessary tools.


















Description		Description		Description		Description	
	Tools (not included with delivery)		To be installed		Pre-installed		Already installed
	Disassembly		Jack point		Six-monthly maintenance		

Tabelle-2 legend

## 5 Maintenance

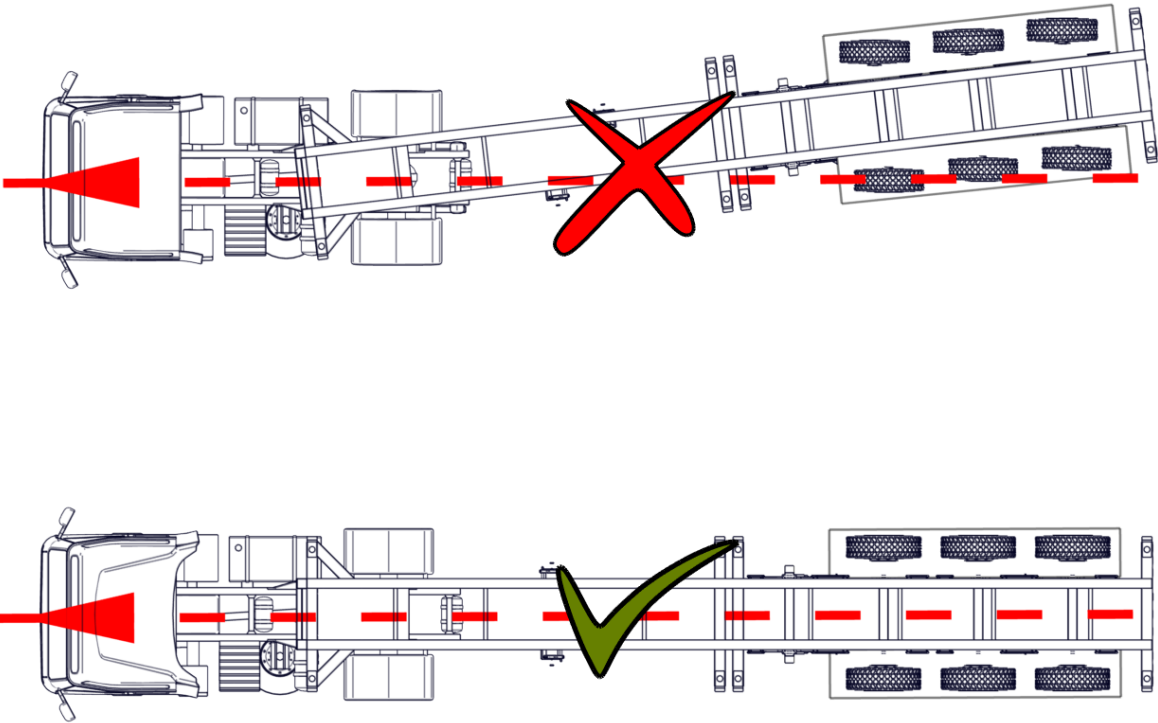
The LV-O is essentially maintenance free. TRIDEC does, however, recommend visually inspecting the following each time the LV-O is used;

Inspection item		Action
		Make sure the tyres are at the correct pressure.
		Check the tyres for damage.
		Check for missing or loose nuts and bolts.
		Check the trailer for damage that can affect its handling.
		Check whether the trailer/semi-trailer follows the tractor unit in a straight line (zie " " on the next page).
	For maintenance on the stub axle, see the manufacturer's service information.	

Tightening torque Nm (if not specified)			
Type	Class		
	8.8	10.9	12.9
M4	3	4	5
M5	6	8	10
M6	10	14	17
M8	25	35	42
M10	50	70	85
M12	80	120	140
M14	130	190	225
M16	200	300	330
M16x1.5	210	320	360

Tightening torque Nm (if not specified)			
Type	Class		
	8.8	10.9	12.9
M20	400	560	650
M20x1.5	440	650	775
M22	550	770	920
M24	725	1000	1200
M24x2	800	1100	1275

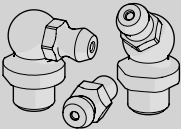
Do not use lubricants when fitting new nuts and bolts.



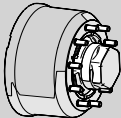

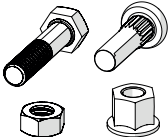
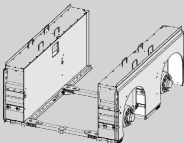


8300\_073\_02

Figure 5-1

5.1 Periodical maintenance

Component	Action	Interval
	Lubrication	

Component	Action	Interval
	Check the amount of play. Must not be too tight or the brakes might not work.	
	Follow the manufacturer's instructions	
	Tighten as indicated in the torque table (see TRIDEC general)	After the first 10,000 km or 2 months. Then every 100,000 km or 12 months
	Check for damage and deformation.	After the first 10,000 km or 2 months. Then every 100,000 km or 12 months



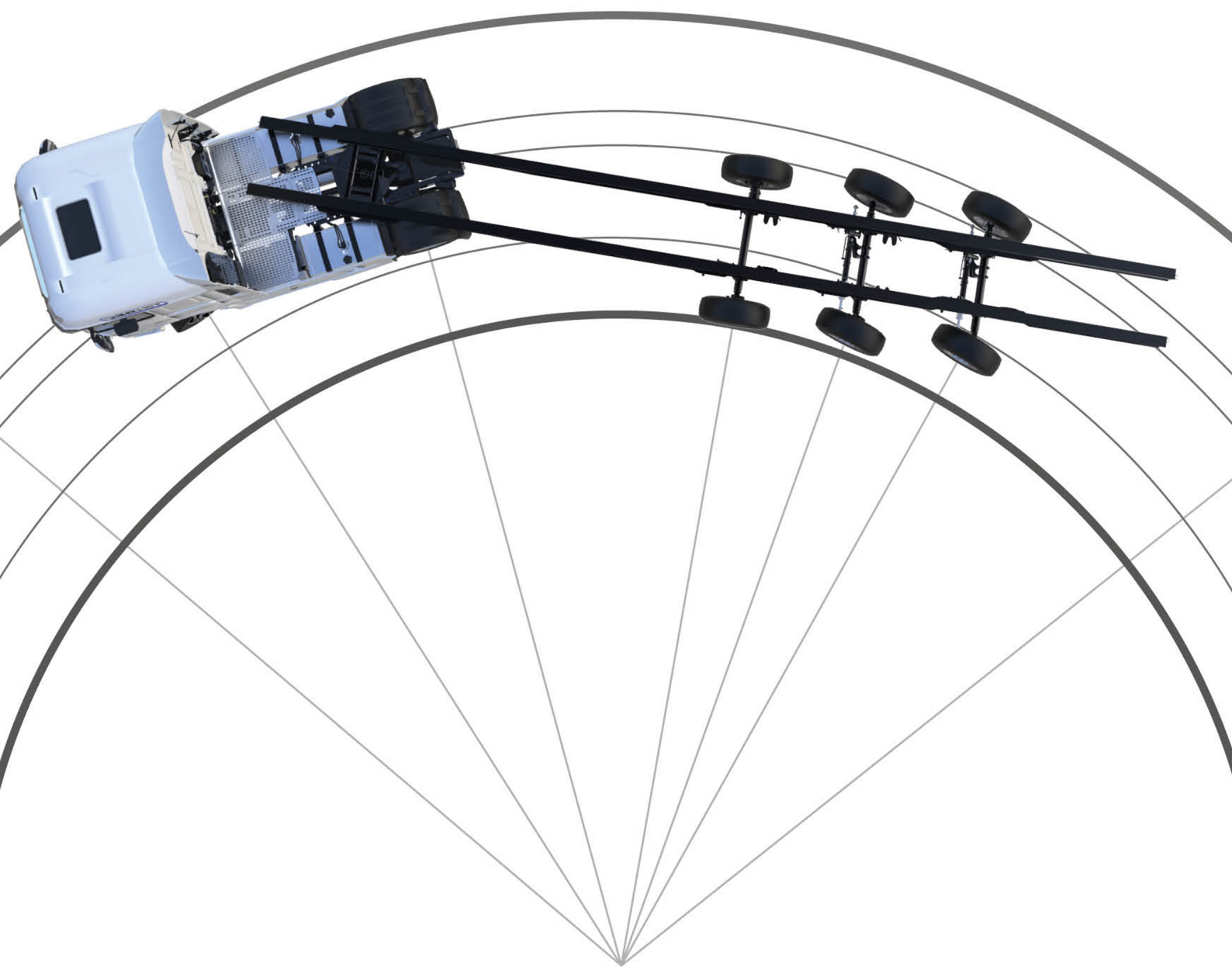
## Notes

## Notes

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[Notes](#)

# Excellent manoeuvrability



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