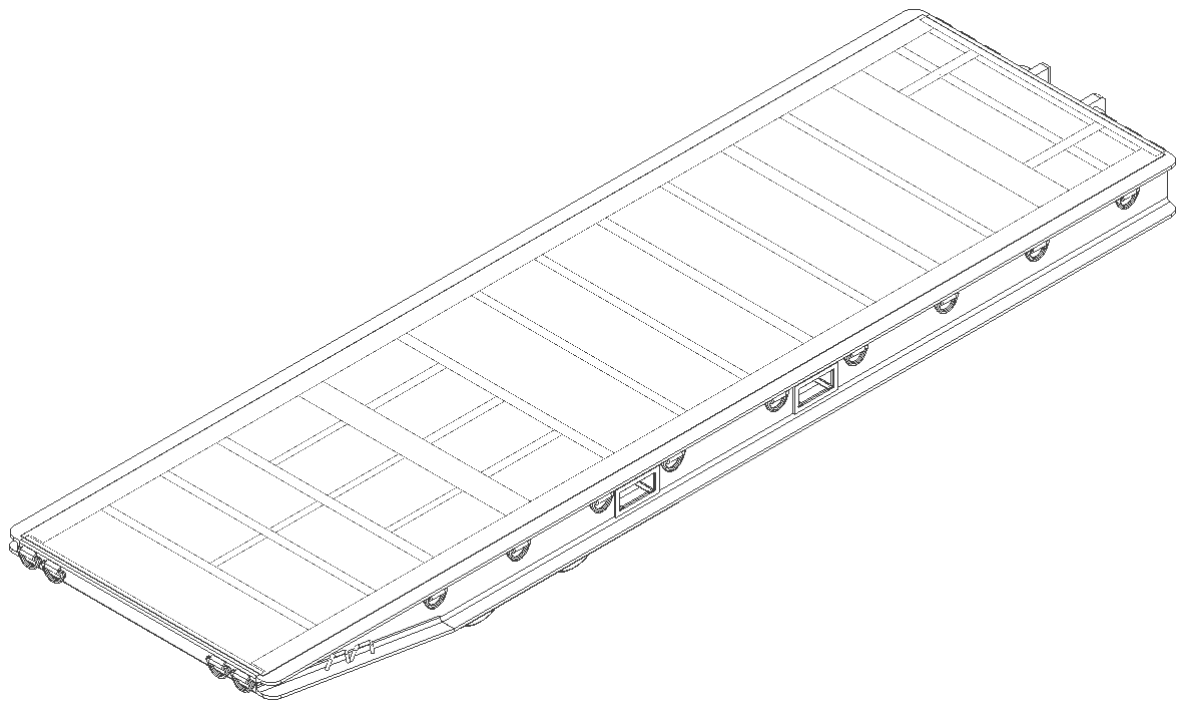


TRANSLATION OF  
“ISTRUZIONI ORIGINALI”



# INDUSTRIAL TRAILER WITH TYRES – ROLLTRAILER 30ft 130 t



## ASSEMBLY INSTRUCTIONS MANUAL

Model:	<b>SRP2</b>	Revision:	<b>00</b>
Serial number:	<b>2265 (refer to the declaration of incorporation)</b>	Capacity:	<b>130 t</b>
Version:	<b>Low</b>	Construction year:	<b>2020</b>

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## REVISIONS

REVISIONS				
MODEL	LANGUAGE	DATE	VERSION	NOTE
SRP2	English	03/2020	00	

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Drawings and other documents that accompany the partly completed machinery are property of **Morello Giovanni S.r.l.**

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The company **Morello Giovanni S.r.l.** reserves the right to change, without prior warning, the characteristics of the product described in this manual.

In case of doubts or difficulties in understanding or interpretation of the manual, the original/official version referred to as "ISTRUZIONI ORIGINALI" on the cover, must be considered as the valid version.

Some of the pictures included in this handbook must be considered as an example, therefore they may not refer to the partly completed machinery herein described.

# HANDBOOK STRUCTURE

The manual is divided into 9 chapters.

## **CHAPTER 1 – GENERAL INFORMATION**

This chapter contains general descriptions regarding the handbook structure.

## **CHAPTER 2 – SAFETY**

This chapter contains a description regarding the standards, working environment conditions, ergonomics, accident prevention devices used, residual risks, warning plates applied to the partly completed machinery.

## **CHAPTER 3 – GENERAL DESCRIPTION**

This chapter contains the description of the functioning principles, general technical data and description of the partly completed machinery.

## **CHAPTER 4 – TRANSPORT AND STORAGE**

This chapter contains instructions on how to use the proper packing, handling, transport and unloading at the user's plant.

## **CHAPTER 5 – ASSEMBLY**

This chapter contains the instructions on how to correctly carry out assembly operations in the works of the user, and the checks, inspections and any adjustments required, before putting into use.

## **CHAPTER 6 – USAGE**

This chapter contains the instructions for the use of the partly completed machinery.

## **CHAPTER 7 – DISMANTLING**

This chapter contains information and warnings to properly decommission and dismantle the partly completed machinery at end-of life.

## **CHAPTER 8 – MAINTENANCE**

This chapter contains the system maintenance schedule. It contains the warnings, precautions and instructions to correctly carry out the maintenance operations on the partly completed machinery.

## **CHAPTER 9 – ATTACHMENTS**

# INDEX

1.	GENERAL INFORMATION.....	1-1
1.1	INTRODUCTION.....	1-1
1.2	SERVICE DEPARTMENT .....	1-1
1.3	GLOSSARY .....	1-2
1.4	SYMBOLS.....	1-3
1.5	MANUFACTURER'S ADDRESS .....	1-4
1.6	SAFETY STANDARDS.....	1-5
1.7	RESPONSIBILITY OF THE MANUFACTURER.....	1-5
1.8	MANAGEMENT OF THE PARTLY COMPLETED MACHINERY.....	1-6
1.9	INTEGRITY VERIFICATION.....	1-6
1.10	WARRANTY.....	1-7
2.	SAFETY .....	2-1
2.1	GENERAL INFORMATION.....	2-1
2.1.1	Declaration of the Partly completed machinery.....	2-2
2.1.2	Foreseen and Unforeseen uses .....	2-3
2.2	OPERATING ENVIRONMENTAL CONDITIONS .....	2-4
2.2.1	Installation of Fire Protection .....	2-4
2.2.2	Explosive atmosphere .....	2-4
2.2.3	Lighting .....	2-4
2.2.4	Vibrations .....	2-4
2.2.5	Noise.....	2-4
2.3	DISPOSAL OF EXHAUSTED MATERIALS .....	2-4
2.4	SAFETY DEVICES APPLIED ON THE PARTLY COMPLETED MACHINERY .....	2-5
2.4.1	Personal protective equipment.....	2-5
2.5	RESIDUAL RISKS .....	2-6
2.5.1	General information .....	2-6
2.5.2	Residual risks .....	2-6
2.5.3	Plates on the partly completed machinery.....	2-6
3.	GENERAL DESCRIPTION .....	3-1
3.1	LAYOUT.....	3-1
3.2	TECHNICAL DATA .....	3-3
3.3	GROUP DESCRIPTIONS.....	3-4
3.3.1	Trailer structure.....	3-4
3.3.2	Wheels group.....	3-5
3.3.3	Type of steering .....	3-6
3.3.4	Movement.....	3-6
4.	TRANSPORT AND STORAGE.....	4-1
4.1	STORAGE.....	4-1
4.2	TRANSPORT.....	4-1
4.3	LIFTING .....	4-2
4.3.1	Weights.....	4-2
4.3.2	Trailer lifting .....	4-3
5.	ASSEMBLY.....	5-1
5.1	CHECKS .....	5-1
5.1.1	Checks on mechanical groups .....	5-1
5.1.2	Nuts and bolts tightness check.....	5-2
5.2	UNIVERSAL INTERNATIONAL RECYCLING CODES.....	5-3
6.	USE .....	6-1

**INDUSTRIAL TRAILER  
WITH TYRES  
Serial number 2265**



6.1	TRAILER MOVEMENT .....	6-1
6.1.1	Trailer service braking.....	6-2
6.1.2	Trailer parking brake .....	6-2
6.2	POSITIONING THE LOAD.....	6-3
6.2.1	Load distribution: stability area .....	6-4
6.2.2	Load diagram .....	6-5
6.3	LOADING THE TRAILER ON THE SHIP RAMPS.....	6-7
7.	DISPOSAL.....	7-1
8.	MAINTENANCE .....	8-1
8.1	GENERAL PRECAUTIONS FOR SAFETY .....	8-1
8.2	CONTROL PLAN ON SAFETY.....	8-2
8.2.1	Controls and functional test .....	8-2
8.3	TIGHTENING TORQUES .....	8-2
8.4	PROCEDURE TO STOP FOR MAINTENANCE .....	8-3
8.4.1	Trailer preparation for maintenance.....	8-3
8.5	MAINTENANCE FREQUENCY .....	8-4
8.6	LUBRICATION POINTS.....	8-5
8.7	WHEEL BEARINGS ADJUSTMENT .....	8-6
8.8	CUSHION REPLACEMENT PROCEDURE .....	8-7
8.8.1	Securing the pin.....	8-9
8.9	WHEEL REPLACEMENT PROCEDURE .....	8-11
8.10	AXLE REPLACEMENT PROCEDURE .....	8-13
8.11	ROCKER ARM REPLACEMENT PROCEDURE.....	8-14
8.12	MAINTENANCE OPERATION CARDS .....	8-16
8.13	SPARE PARTS .....	8-17
9.	ATTACHED DOCUMENTATION .....	9-1
9.1	EXPLODED DRAWINGS.....	9-2
9.1.1	Rocker arm and axle assembly .....	9-2

**GENERAL INFORMATION**

**1**

**SAFETY**

**2**

**GENERAL DESCRIPTION**

**3**

**TRANSPORT AND STORAGE**

**4**

**ASSEMBLY**

**5**

**USE**

**6**

**DISPOSAL**

**7**

**MAINTENANCE**

**8**

**ATTACHMENTS**

**9**

**INDUSTRIAL TRAILER  
WITH TYRES  
Serial number 2265**



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# 1. GENERAL INFORMATION

## 1.1 INTRODUCTION



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### NOTE

**MORELLO GIOVANNI S.r.l.** manufacturing company of the partly completed machinery described will be indicated in the manual as **Manufacturer**.

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### NOTE

The Company purchasing the partly completed machinery, is indicated in the handbook with the name: **Customer**.

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The manufacturer recommends a training course for personnel responsible for operating and maintaining the partly completed machinery to increase familiarity and know-how of the various procedures.

This manual contains the features, performances, instructions for use and the references to the preventive and remedial operations of the partly completed machinery.

**The Manufacturer insists that this document is read by the persons assigned to the running and maintenance of the partly completed machinery, as well as by the persons who carry out the transport and assembly.**

This document is the assembly instructions manual for the assembly of the:

**INDUSTRIAL TRAILER WITH TYRES ROLLTRAILER SERIES SRP2 30ft 130 t LOW**

and has been drawn up in compliance with directive 2006/42/CE.

The assembly instructions manual is an integral part of the partly completed machinery and is to be kept until the final dismantling. It is to be kept by the person in charge of the partly completed machinery.

## 1.2 SERVICE DEPARTMENT

For technical assistance, contact the manufacturer:

**Morello Giovanni S.r.l.**

Head Office and Factory:

Lungo Dora Colletta 85/A

10153 – Torino (Italy)

TEL. 011.248.05.69

TEL./FAX. 011.85.00.85

e-mail: [info@morellogiovanni.it](mailto:info@morellogiovanni.it)

site: [www.morellogiovanni.it](http://www.morellogiovanni.it)

## 1.3 GLOSSARY

**Component:** a constituent part of the electrical equipment, usually specified by its function, but used in various applications.

**Machinery Directive:** the DIRECTIVE 2006/42/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the approximation of the laws of the Member States relating to machines.

**Supplier:** entity (Manufacturer, installer, system integrator) that provides equipment or services associated with the partly completed machinery (the user can also act as a manufacturer for himself).

**Partly completed machinery:** group that almost forms a machine but that, alone, is not able to ensure a specific application. A drive system is a partly completed machinery. Partly completed machines are only for use incorporated or assembled with other machines or other partly completed machines or equipment to construct a machine regulated by this directive.

**Safety measure:** means that eliminate or reduce a hazard.

**Operator:** a person qualified to install, operate, adjust, clean and maintain the partly completed machinery.

**Hazard:** Potential source of harm.

**Procedure for safe operation:** a working method that reduces the risk.

**Contact person:** person for conducting certain operations or assessments which may arise during the work or maintenance.

**Risk:** combination of the probability of occurrence of harm and the severity of that damage.

**Transport:** series of operations to transfer the partly completed machinery from the works of the Manufacturer to the final workplace of the Customer.

**Foreseen use:** use of the partly completed machinery in conformity with the information provided in the instructions for use.





**Improper use:** use of the partly completed machinery outside the limits specified in the technical documentation.

**User:** entity using the partly completed machinery.

**Danger zone:** area within or near the partly completed machinery in which the presence of an exposed person constitutes a risk to his health and / or safety.

## 1.4 SYMBOLS

The manual uses a number of symbols that are meant to draw the reader's attention and highlight some aspects that are particularly important.

SYMBOL	MEANING	NOTE
	<p><b>DANGER</b></p>	<p>Indicates a hazard with risk of injury, even death, for the user.</p> <p>Pay close attention to text blocks indicated by this symbol.</p>
	<p><b>CAUTION</b></p>	<p>A warning of possible deterioration or damage to the partly completed machinery.</p> <p>Pay attention to the texts indicated by this symbol.</p>
	<p><b>NOTE WARNING</b></p>	<p>Indicates a warning or note of key functions or useful information.</p> <p>Pay attention to the texts indicated by this symbol.</p>
	<p><b>ADDITIONAL INFORMATION</b></p>	<p>Indicates additional information.</p> <p>This information does not have a direct Influence on the description of a function or with the development of a procedure. It may be a cross-reference to other additional documentation, for example attached instructions for use manuals, technical documents or other sections of this manual.</p>

## 1.5 MANUFACTURER'S ADDRESS

For any kind of information or clarifications regarding the use, maintenance, etc., the Technical Office of the Manufacturer is always available to the customer requirements.

It is appropriate that the latter puts the questions in clear, with references to this manual, always indicating the data shown on the identification plate.

Any request for assistance, service at the customer, or clarification regarding the technical aspects of this document should be addressed to:



MATERIAL HANDLING TECHNOLOGY SINCE 1946

**MORELLO GIOVANNI S.r.l**

Lungo Dora Colletta 85/A 10153 - TORINO (TO) – ITALIA

TEL. 011.248.05.69 – TEL./FAX 011.85.00.85

e-mail: [info@morellogiovanni.it](mailto:info@morellogiovanni.it)

site: [www.morellogiovanni.it](http://www.morellogiovanni.it)

## **1.6 SAFETY STANDARDS**

Prescriptions, instructions, regulations and related safety notes described in the various chapters of the manual are intended to define a set of behaviour and rules to be observed when performing the various activities that constitute the mode of intended use of the partly completed machinery in order to operate in conditions of safety for personnel, for the equipment and the surrounding environment.

The safety instructions are addressed to all authorized personnel, trained and authorized to perform the various activities and operations:

- Transport.
- Use
- Management
- Maintenance.
- Cleaning.
- Decommissioning and dismantling.

## **1.7 RESPONSIBILITY OF THE MANUFACTURER**

The manufacturer declines any liability arising from the incorrect use or misuse of the partly completed machinery in question and from damage caused by the use of non-prescribed spare parts, by maintenance not carried out properly and by tampering with circuits, components.

The responsibility regarding the application of the safety precautions contained further on, is the task of the technician in charge of the activities to be carried out by the partly completed machinery. He/she is to ascertain that the operators authorised to carry out the required activities observe, and are aware of, the prescriptions contained in this document and the general safety standards applied on the partly completed machinery.

Failure to follow the safety instructions can cause injury to persons and damage to equipment.

## **1.8 MANAGEMENT OF THE PARTLY COMPLETED MACHINERY**

The partly completed machinery control is allowed only to authorized and properly trained persons, or at least with adequate technical expertise.

The operators assigned to the use and the maintenance of the partly completed machinery are to be aware of and know how to apply the safety standards (an integrating part of their job).

Before starting the partly completed machinery, do the following:

- Read this manual carefully.

Never remove, even only partially, the warning plates on the partly completed machinery. If they become worn/damaged, replace them immediately.

## **1.9 INTEGRITY VERIFICATION**

You must ensure that the partly completed machinery has not been damaged during transport. Therefore, in case of an accident or in the presence of visible damage (signs or traces of impact) please report it in the following way:

- With a written record on the Transport Document.
- By communicating to the carrier and to **MORELLO GIOVANNI S.r.l.** damage detected by registered letter within 48 hours of receipt of the partly completed machinery.

## **1.10 WARRANTY**

**MORELLO GIOVANNI S.r.l** guarantees the its partly completed machinery are free of manufacturing flaws for the period specified in the relevant terms of the contract.

The buyer is only entitled to replacement of parts recognized as defective: the costs of packaging and transport, as well as any installation, are against him. In this case, must be specified:

- Date and number of the purchase document.
- Partly completed machinery model.
- Serial number.

Will not be recognized claims for damages for loss of production caused by any periods of inactivity of the partly completed machinery.

Damages are excluded caused by improper use to the contents of this "Assembly Instructions Manual" which is an integral part of the partly completed machinery, including the maintenance, if not conforming to the instructions provided.

The warranty will not be recognized for the partly completed machinery on which were performed unauthorized modifications. Modifications or tampering of safety devices are in every way strictly prohibited.

If damages occur during warranty period, the warranty is valid only using original spare parts.

Repair work may only be performed by skilled operators, who are familiar with the partly completed machinery.

**INDUSTRIAL TRAILER  
WITH TYRES  
Serial number 2265**



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**GENERAL INFORMATION**

**1**

**SAFETY**

**2**

**GENERAL DESCRIPTION**

**3**

**TRANSPORT AND STORAGE**

**4**

**ASSEMBLY**

**5**

**USE**

**6**

**DISPOSAL**

**7**

**MAINTENANCE**

**8**

**ATTACHMENTS**

**9**

**INDUSTRIAL TRAILER  
WITH TYRES  
Serial number 2265**



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## 2. SAFETY

### 2.1 GENERAL INFORMATION

The Customer is to instruct the operators regarding accident risks and general accident-prevention rules as required by the EU directives and the laws in the country where the partly completed machinery is used.

The operators are to know the functioning of the partly completed machinery and its characteristics.

Tampering, or unauthorized replacement of one or more components of the partly completed machinery, the adoption of accessories and the use of particular parts other than those recommended may cause injury risks.



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#### **DANGER**

It is strictly forbidden to tow the partly completed machinery at a speed over 6 km/h. The Manufacturer declines all responsibility for the safety of the partly completed machinery in case of failure to comply with this prohibition.

---



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#### **CAUTION**

It is the responsibility of the operator who uses the partly completed machinery to ensure that during movement the area is safe and clear of objects and persons, and that there is nobody on the loading bed.

---

### 2.1.1 Declaration of the Partly completed machinery

The partly completed machinery **DECLARATION OF INCORPORATION** is supplied with the partly completed machinery in accordance with the essential safety requirements based on the Machines Directive 2006/42/CE (**Annex II B**).



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**NOTE**

Any modification made to the partly completed machinery will immediately annul the DECLARATION OF INCORPORATION issued by the Manufacturer.

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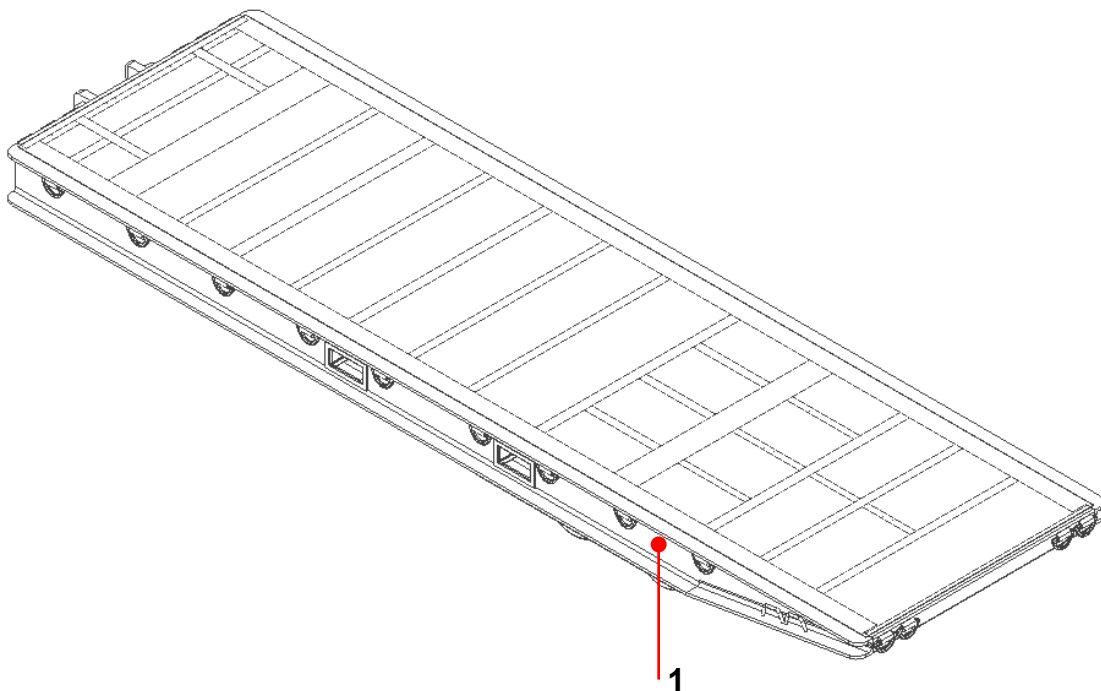
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**NOTE**

The figure follows indicating the position of the plate with the identification data of the partly completed machinery.

---

(1) Identity plate



## 2.1.2 Foreseen and Unforeseen uses

The partly completed machinery has been designed and constructed to transport heavy loads, distributed and concentrated on the loading bed, in accordance with the technical specifications indicated in this manual, by means of an appropriate towing vehicle.

It can be used on external or internal flooring, in concrete and /or asphalt, flat and level, able to sustain the weight of the partly completed machinery and with this fully loaded.

The partly completed machinery is not to be used on roads (road traffic).

Use is not possible of the partly completed machinery for purposes other than those planned, either greater or lesser.



---

### DANGER

The use of the partly completed machinery for processing purposes not described in this manual is **IMPROPER USE**. The Manufacturer declines all responsibility for any damage caused to property and/or persons and believes fallen every kind of guarantee of the partly completed machinery. The manufacturer declines all responsibility in the event of tampering with the partly completed machinery. Unauthorized modifications or servicing performed by untrained personnel.

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### DANGER

In the event of abnormal behaviour of the partly completed machinery it is forbidden to carry out any movement because specific competence of maintenance personnel.

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### CAUTION

It is strictly forbidden to climb on / carry persons on the partly completed machinery.

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### NOTE

There is no pre-defined operator position, since the use of the partly completed machinery is by means of the towing device that is mechanically connected to it.

---

## 2.2 OPERATING ENVIRONMENTAL CONDITIONS

La partly completed machinery is to be used in an environment equipped with all the safety precautions required by the laws in force in the user country.

The ambient temperature must be between -10 °C and + 40 °C.

### 2.2.1 Installation of Fire Protection

The partly completed machinery is not equipped with its own sprinkler system.

### 2.2.2 Explosive atmosphere

The partly completed machinery has not been designed and built to operate in zones with explosive atmosphere.

### 2.2.3 Lighting

The partly completed machinery does not have its own lighting system.



---

#### CAUTION

It is the task of the Customer to provide correct lighting in the working area.

---

### 2.2.4 Vibrations

The partly completed machinery does not produce hazardous vibration to the health of the operators who work there.

### 2.2.5 Noise

The partly completed machinery does not produce acoustic emissions harmful for the operators who work there.

## 2.3 DISPOSAL OF EXHAUSTED MATERIALS

The partly completed machinery, when working normally, does not produce any type of waste or exhausted material.

In every country there are specific regulations for disposal to safeguard the environment.

The customer must be aware of these standards and work in such a manner to respect them.

In particular, see chapter 7 for disposal of the materials that the partly completed machinery is composed of.

## 2.4 SAFETY DEVICES APPLIED ON THE PARTLY COMPLETED MACHINERY

### 2.4.1 Personal protective equipment

**Function:** Protection of the operator during processing.

**Characteristics and methods:** Those who work on the partly completed machinery must use personal protective equipment such as to minimize the possible risks.



---

#### **DANGER**

The clothing of those who work, or perform maintenance on the partly completed machinery must comply with the essential safety requirements set by EU Directives and laws in the country where the partly completed machinery is used.

---



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#### **CAUTION**

During the operations of management and maintenance, personnel should wear appropriate work clothing so as to prevent the occurrence of accidents.  
To avoid mechanical type risks, such as dragging, trapping or otherwise, it is forbidden to wear bracelets, watches, rings or chains.

---

## 2.5 RESIDUAL RISKS

### 2.5.1 General information

In the design phase have been assessed all zones or high-risk parts and were taken as a result all necessary precautions to avoid risks to persons and damage to the partly completed machinery components.



---

#### NOTE

Do not insert foreign objects in the partly completed machinery movement area.

---

### 2.5.2 Residual risks

Having carefully considered all the possible risks on the partly completed machinery, all the solutions necessary have been implemented to eliminate risks and limit danger for exposed people.



---

#### CAUTION

It is strictly forbidden to carry out any type of changes, to avoid creating additional dangers and resulting risks which were unplanned.

---

### 2.5.3 Plates on the partly completed machinery

The Manufacturer has installed a series of warning plate on the partly completed machinery, defined in accordance with the European standards regarding the graphic symbols to be used. The plates in question are located in a prominent position on the partly completed machinery.

The maintenance service is required to immediately replace all the plates which, due to wear, they should become illegible.







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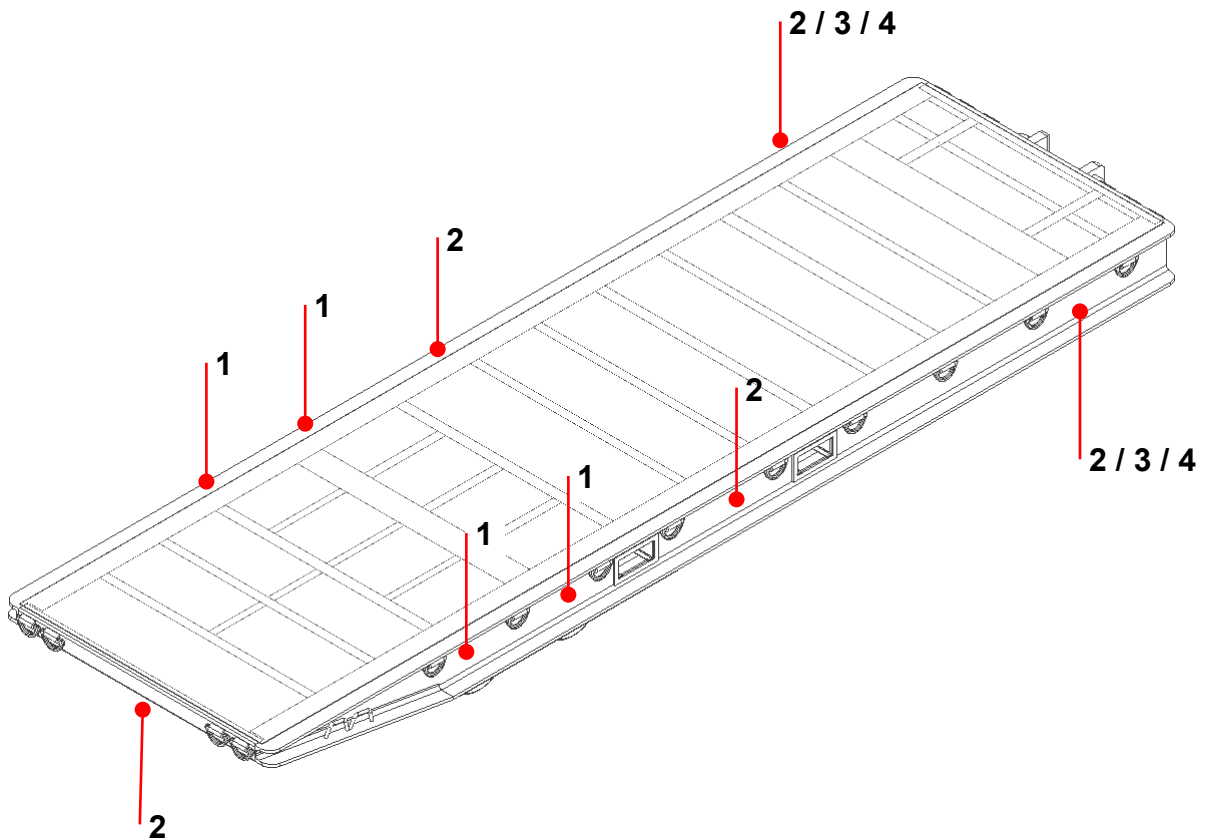
#### CAUTION

It is absolutely forbidden to remove the warning notices on the partly completed machinery. The manufacturer declines all responsibility for the safety of the partly completed machinery in case of failure to comply with this prohibition.

---



PLATES ON THE PARTLY COMPLETED MACHINERY		
Plate 1		Crushing hazard
Plate 2		Do not climb on trailer
Plate 3		It is compulsory to wear protective gloves
Plate 4		It is compulsory to wear safety shoes



**INDUSTRIAL TRAILER  
WITH TYRES  
Serial number 2265**



BLANK PAGE

**GENERAL INFORMATION**

**1**

**SAFETY**

**2**

**GENERAL DESCRIPTION**

**3**

**TRANSPORT AND STORAGE**

**4**

**ASSEMBLY**

**5**

**USE**

**6**

**DISPOSAL**

**7**

**MAINTENANCE**

**8**

**ATTACHMENTS**

**9**

**INDUSTRIAL TRAILER  
WITH TYRES  
Serial number 2265**



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### 3. GENERAL DESCRIPTION

The partly completed machinery has been designed and constructed to transport heavy loads, distributed and concentrated on the loading bed, in accordance with the technical specifications indicated in this manual, by means of an appropriate towing vehicle.

It can be used on external or internal flooring, in concrete and /or asphalt, flat and level, able to sustain the weight of the partly completed machinery and with this fully loaded.

The working zone is to be clear and with sufficient space for the movement of the partly completed machinery.

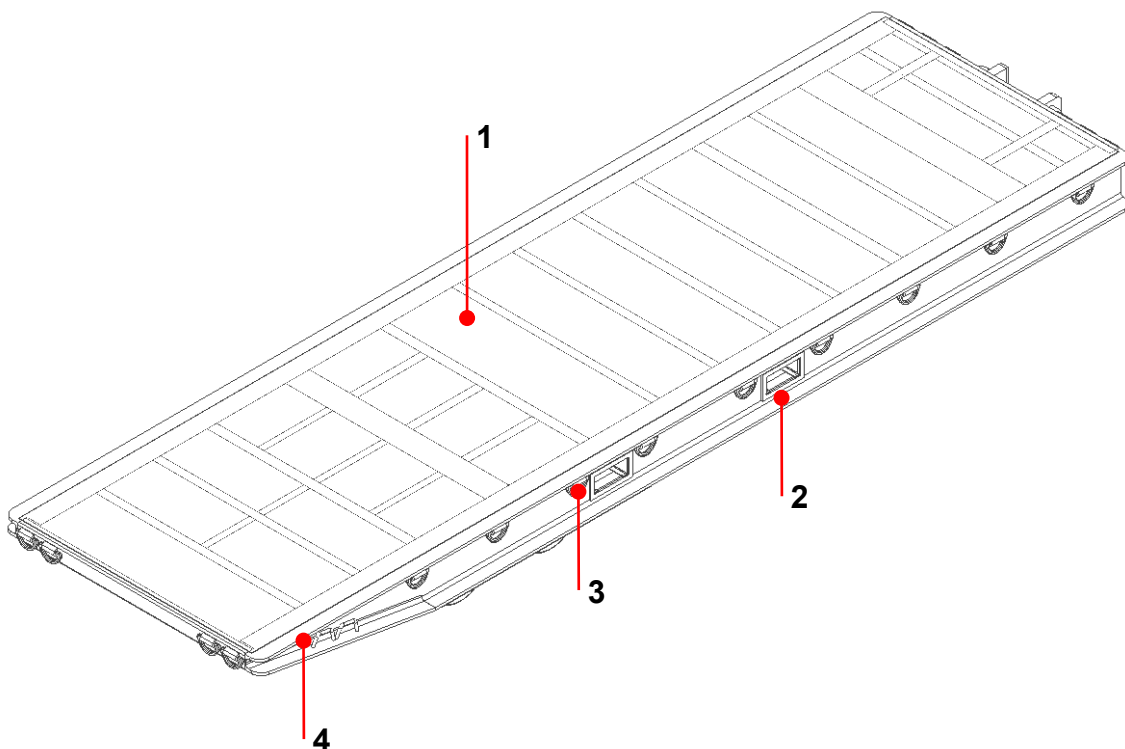


#### NOTE

The partly completed machinery, described in this manual, hereinafter is called **TRAILER**.

### 3.1 LAYOUT

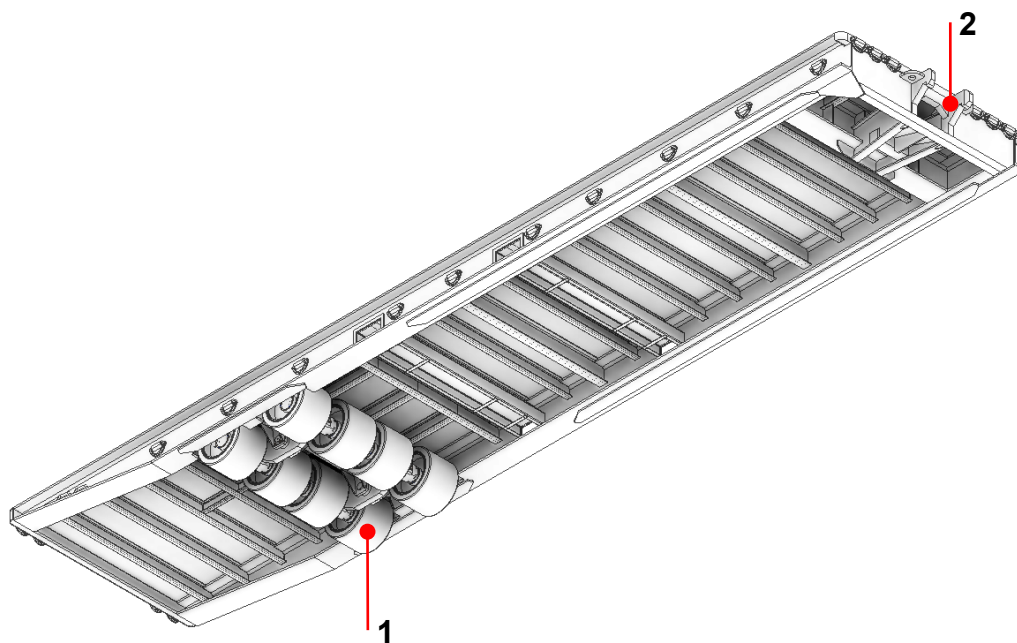
GENERAL	
1	Loading bed
2	Trailer lifting point
3	D-RING 50 t (load slinging point)
4	LASHING-EYE 32 t (load slinging point)



**INDUSTRIAL TRAILER  
WITH TYRES  
Serial number 2265**



GENERAL	
1	Wheels group
2	Coupling point to towing device



## 3.2 TECHNICAL DATA

The following table shows the main technical features of the trailer.

<b>GENERAL</b>	
Trailer weight	Approx. 10.400 kg
Payload	130 t t evenly distributed or 120 t concentrated on 8,5 m or 100 t concentrated on 8 m or 80 t concentrated on 6,5 m (see load diagram attached)
Payload of each axle	Approx. 28 t
Load on fifth wheel	Approx. 39 t (including tare of gooseneck)
Loading bed dimensions	Approx. 9.200 mm x 2.700 mm
Loading bed height with trailer horizontal	Approx. 720 mm
Loading bed height, front side (with trailer resting on ground)	Approx. 650 mm
Frame	Steel
Loading bed covering	Chequered steel plate
Trailer lifting points	2 (insertion of forks)
Translation	Mechanical
Coupling points for trailer	1 by gooseneck
Line of axes	2
Type of steering	Single turn
Maximum steering angle	± 90°
Number of wheels	8
Type of wheels	CUSHION 28x22x16
Wheels dimensions	Ø 620 x 420 mm
Max speed	6 km/h



### NOTE

The characteristics listed in the table above may be changed; therefore, for greater accuracy or verifications relating to the partly completed machinery characteristics refer to the partly completed machinery table attached.



### NOTE

The trailer does not have mechanical stops. It is responsibility of the operator not to exceed maximum steering angle.

## 3.3 GROUP DESCRIPTIONS

### 3.3.1 Trailer structure

Frame with two bearing side members (section bars HEB 450 Europeo in S355 reinforced), constructed with over-dimensioned steel section bars and assembled by electric arc seam welding. The cross members are in S355 Europeo.

The trailer has a loading bed in seam welded chequered steel plate (5+2 mm).

The structure obtained has been calculated to sustain both flecional and torsional stress with hypothesis of a load of appropriate size and adequately distributed.

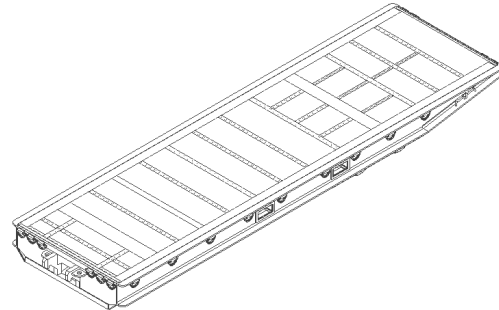
The paintwork, after sanding, has been executed with two coats of an anti-rust product and two coats of nitro-synthetic enamel RAL 3011.

On the perimeter there are 26 D-Rings (50 t), arranged as follows:

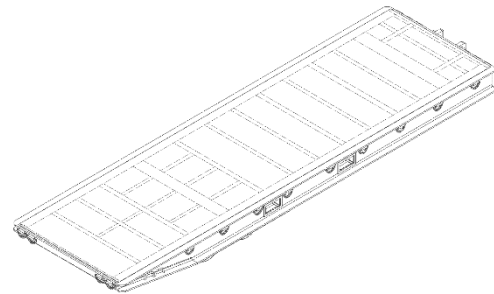
- n. 8 for each long side;
- n. 6 on the front head;
- n. 4 on the rear head;

There are also 4 Lashing-Eyes (32 t,) two on each long side.

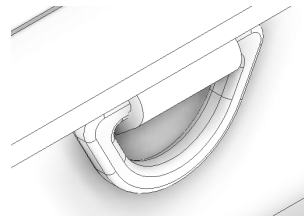
The trailer has 2 openings, including tubular section bars, to pass the forks of the lift truck. On both sides the openings are marked with RAL 1018 colour paint.



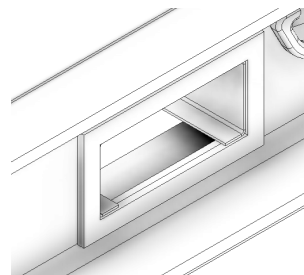
*Front*



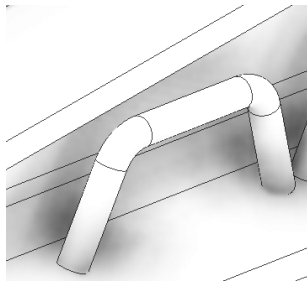
*Rear*



*D-RING*



*Forks insertion point*



*Lashing-Eye*



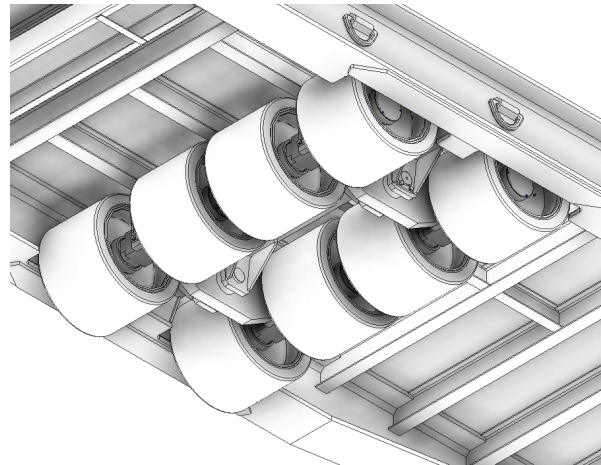
### 3.3.2 Wheels group

Trailer movement is by means of four swinging axles, mounted on two rocker arms to allow longitudinal swinging.

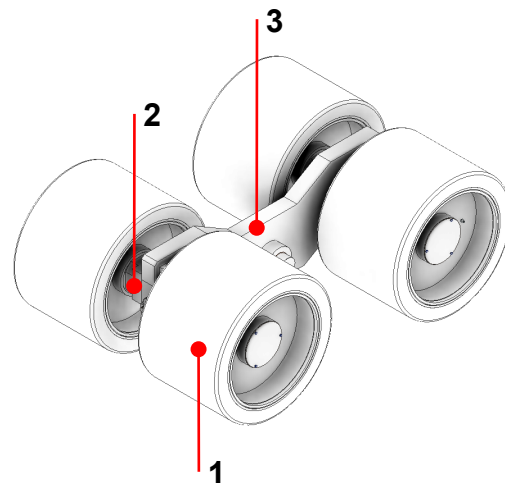
The axles are in S355 Europeo. A pair of wheels with steel core and cushion covering are mounted on each axle.

Axles and rocker arms swing on self-lubricating marine-type bushing.

- (1) Wheel
- (2) Swinging axle
- (3) Floating rocker arm

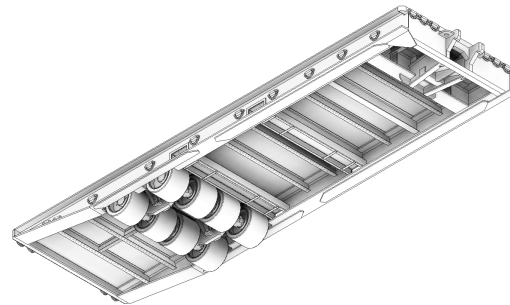


*Wheels group – rear zone of trailer*



### 3.3.3 Type of steering

The steering is single turn.



---

#### NOTE

The trailer does not have mechanical stops. It is responsibility of the operator not to exceed maximum steering angle.

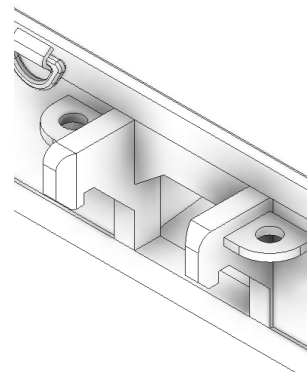
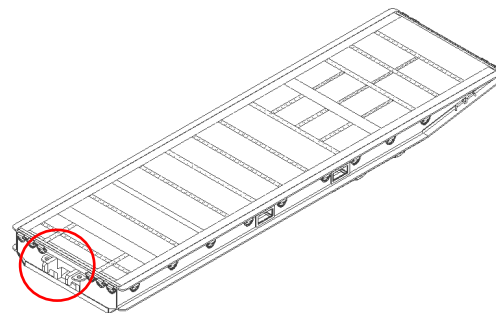
---

### 3.3.4 Movement

Trailer coupling is by inserting the gooseneck (not part of the supply) in the gap provided in the front part.

The front tunnel is in S355 Europeo, with a thickness of 40 mm.

There are two safety hooks to couple with the gooseneck, constructed in S460 Europeo with a thickness of 80 mm. The hooks are completed with safety rings (S355 Europeo, thickness 30 mm) for the gooseneck chains.



*Coupling point*



---

#### ADDITIONAL INFORMATION

For further information see the attached layout.

---

**GENERAL INFORMATION**

**1**

**SAFETY**

**2**

**GENERAL DESCRIPTION**

**3**

**TRANSPORT AND STORAGE**

**4**

**ASSEMBLY**

**5**

**USE**

**6**

**DISPOSAL**

**7**

**MAINTENANCE**

**8**

**ATTACHMENTS**

**9**

**INDUSTRIAL TRAILER  
WITH TYRES  
Serial number 2265**



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## **4. TRANSPORT AND STORAGE**

### **4.1 STORAGE**

The trailer is shipped by the Manufacturer already assembled. Transport is only to be carried out by authorised persons.

Its packaging does not protect from outdoor climatic events such as rain, snow, hailstones, etc. even when the partly completed machinery is transported in wooden crates. For this reason, if it is exposed to bad weather, it must be in a closed container until definitive storage.

### **4.2 TRANSPORT**

The partly completed machinery may be shipped, according to the destination, in the following ways:

- **BY SEA** → the partly completed machinery is enclosed in a flat-bottomed case and secured with tie-bars. The case is lined with tarred paper and has a hatch for Customs clearance; it also contains bags with drying salts against humidity and salinity.
- **BY AIR** → the partly completed machinery is enclosed in a flat-bottomed case and secured with tie-bars. The case is lined with tarred paper and has a hatch for Customs clearance; it also contains bags with drying salts against humidity and other atmospheric agents.
- **BY LAND** → Land transport can be divided into two categories:
  - **LONG-DISTANCE TRANSPORT** the partly completed machinery is covered with protective sheets, enclosed in a flat-bottomed wooden cage and secured with tie-rods on the loading bed of the articulated vehicle.  
To lift the cases, scrupulously follow the instructions stamped on the outside of the packaging. The packaging can be recovered for possible re-use, it is therefore a good rule to keep it in a protected place, to avoid damage that could affect the reliability. If instead it is to be disposed of, it is the responsibility of the Customer to dispose of it in accordance with the regulations of the country.
  - **MEDIUM AND SHORT-DISTANCE TRANSPORT** the partly completed machinery is secured to a pallet and covered with protective sheets.

The anchorage points for lifting are indicated on the shipped packages.

Furthermore, externally on the packages there are all the indications to identify the contents and for the safe handling:

- Address of the receiver and the sender.
- Dimensions (length, width, height).
- Gross, net weight and tare.
- Centre of gravity.
- Notes and symbols (e.g. fragile, this way up, etc.).
- Packing list holder label (to be contained inside each package).

## 4.3 LIFTING

Before any handling and/or lifting operations, it is important to know the weight.



---

**CAUTION**

All handling and lifting operations are to be carried out by qualified operators, who know the standards regarding lifting and handling of loads, and fully observe the same.

---

---



---

**CAUTION**

Use suitable lifting equipment, appropriate for the weight and overall dimensions of the load to be handled.

---

---



---

**CAUTION**

Always check correct balance of the load. If it is unbalanced, rest it immediately on the ground and reposition the slings / forks.

---

---



---

**CAUTION**

When the load has been lifted by a height over 50 cm, it is most important that the operators remain at a safety distance of more than 2 m.

Breakage of a sling or an uncontrolled movement of the load is a serious hazard for the operators.

---

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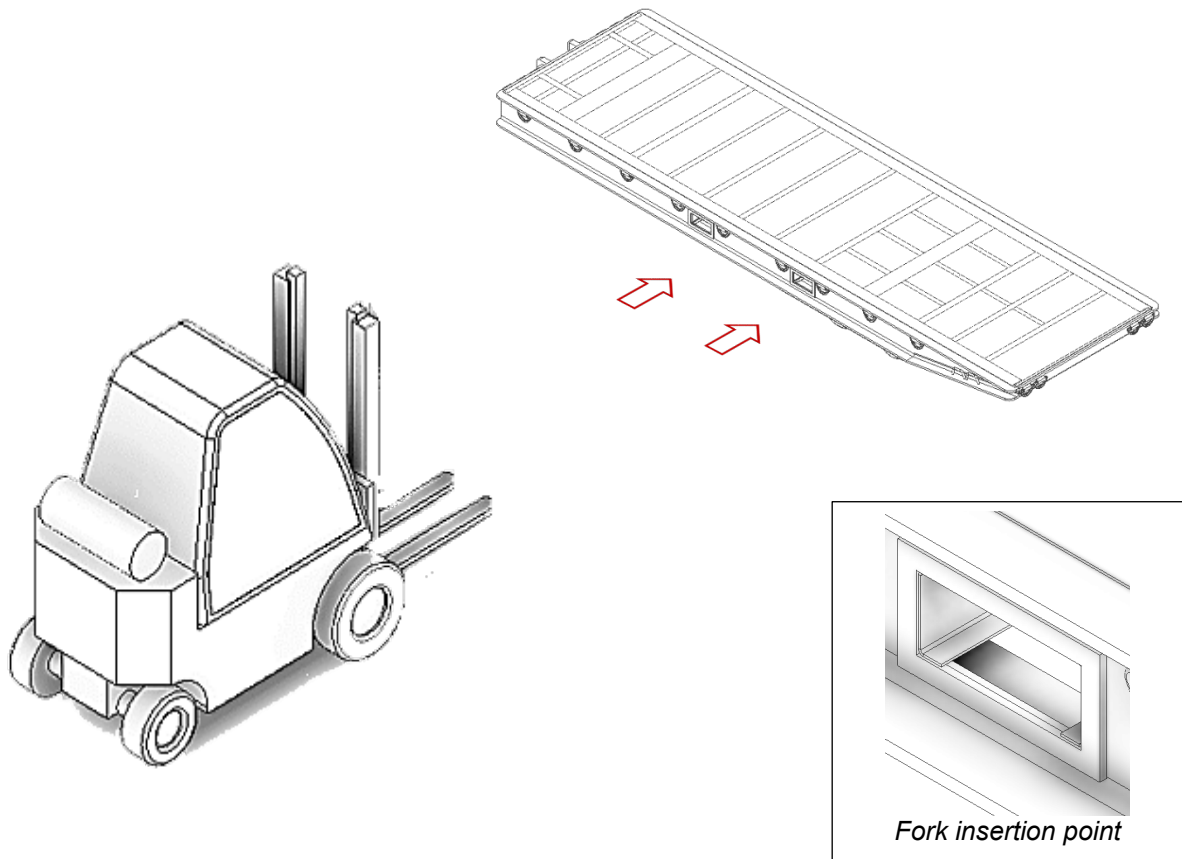
### 4.3.1 Weights

GENERAL	
Weight overall trailer	Approx. 10.400 kg

### 4.3.2 Trailer lifting

To lift the trailer, proceed as follows:

- Make sure that the loading bed is free.
- Approach the trailer with a lift truck having forks of a suitable length.
- Insert the lift truck forks in the two points provided on the frame.
- Slowly lift the forks to bring them in contact with the frame.
- Slowly lift the trailer avoiding abrupt movements.
- Transfer it, keeping it as close as possible to the ground.
- Upon arrival at destination, slowly and gradually lower the trailer.
- Only extract the forks after the trailer is resting completely on the ground.



*Illustrative image only*



---

#### **CAUTION**

The truck forks are to be of adequate length. It is task of the operator to ensure the correct insertion.

---

**INDUSTRIAL TRAILER  
WITH TYRES  
Serial number 2265**



BLANK PAGE



**GENERAL INFORMATION**

**1**

**SAFETY**

**2**

**GENERAL DESCRIPTION**

**3**

**TRANSPORT AND STORAGE**

**4**

**ASSEMBLY**

**5**

**USE**

**6**

**DISPOSAL**

**7**

**MAINTENANCE**

**8**

**ATTACHMENTS**

**9**

**INDUSTRIAL TRAILER  
WITH TYRES  
Serial number 2265**



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## 5. ASSEMBLY

Before using the trailer, remove fastening restrictions used for the transport.



---

### NOTE

The trailer is supplied by the Manufacturer already assembled.

---

## 5.1 CHECKS

Before using the trailer, a series of checks and inspections are to be made, to avoid problems when it is operating.

For the use of the trailer, the Customer is to provide:

- handling zones with sufficient space for the loading and unloading operations;
- flooring able to sustain the weight of the trailer and the load;
- suitable pulling system to move the trailer.
- appropriate gooseneck device for trailer coupling.

### 5.1.1 Checks on mechanical groups



---

### DANGER

Checks and inspections on mechanical groups are to be carried out with the trailer stationary.

---

- Make a general visual check of the trailer groups, checking there are no mechanical anomalies or foreign bodies.
- Check that moving parts are correctly lubricated.

### 5.1.2 Nuts and bolts tightness check

The following table indicates the tightening torques of each screw size.














Ø Screw	Screw pitch	Pre-tightening torque [kgm]	Tightening torque [kgm]
M6	1	0.75	1
M8	1.25	1.8	2.4
M10	1.5	3.6	4.8
M12	1.75	6.5	8.5
M14	2	10	13
M16	2	15	20.5
M18	2.5	22	29
M20	2.5	30	40
M22	2.5	42	56
M24	3	50	70
M27	3	80	105
M30	3.5	95	130



**CAUTION**

To tighten the bolts, use a torque wrench.

## 5.2 UNIVERSAL INTERNATIONAL RECYCLING CODES

Symbol	Code	Description
<b>Plastics</b>		
	#1 PET o PETE	Polyethylene terephthalate or arnite: water bottles, soft drink bottles, shampoo bottles
	#2 HDPE	High-density polyethylene: containers of yogurt, detergent bottles
	#3 PVC o V	Polyvinyl chloride: food containers
	#4 LDPE	Low Density Polyethylene: frozen food bags, squeezable bottles
	#5 PP	Polypropylene or MOPLEN: bottles
	#6 PS	Polystyrene or Styrofoam: Disposable glasses
	#7-#19 O	Any other plastics
<b>Paper</b>		
	#20 PAP	Corrugated Cardboard: boxes of furniture to assemble
	#21 PAP	Paperboard, not corrugated: packaging of sandwiches in fast-food
	#22 PAP	Paper: pack of fries in fast-food, newsprint, paper bags
	#23-#39	Other types of paper
<b>Metals</b>		
	#40 FE	Steel
	#41 ALU	Aluminium: cans
	#42-#49	Other types of metal
<b>Wooden materials</b>		
	#50 FOR	Wood

**INDUSTRIAL TRAILER  
WITH TYRES  
Serial number 2265**



Symbol	Code	Description
	#51 FOR	Cork
	#52-#59	Other types
<b>Textiles</b>		
	#60 TEX	Cotton
	#61 TEX	Jute
	#60-69	Other textile materials.
<b>Glass</b>		
	#70	Transparent / colorless glass: water bottles
	#71	Green glass: wine bottles
	#72	Brown glass: bottles of beer
	#73-79	Other materials in glass and cans
<b>Composite materials</b>		
	#80	Paper and cardboard / various metals
	#81	Paper and cardboard / plastic
	#82	Paper and cardboard / aluminum: bag of packed biscuits
	#83	Paper and cardboard / tin
	#84	Paper and cardboard / plastic / aluminum
	#85	Paper and cardboard / plastic / aluminum / tin
	#86-#89	Other composite materials
	#90	Plastic / aluminium
	#91	Plastic / tin
	#92	Plastic / various metals
	#93-#94	Other composed materials
	#95	Glass / plastic
	#96	Glass / aluminium
	#97	Glass / tin
	#98	Glass / various metals
	#99	Other composite materials

**GENERAL INFORMATION**

**1**

**SAFETY**

**2**

**GENERAL DESCRIPTION**

**3**

**TRANSPORT AND STORAGE**

**4**

**ASSEMBLY**

**5**

**USE**

**6**

**DISPOSAL**

**7**

**MAINTENANCE**

**8**

**ATTACHMENTS**

**9**

**INDUSTRIAL TRAILER  
WITH TYRES  
Serial number 2265**



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## 6. USE

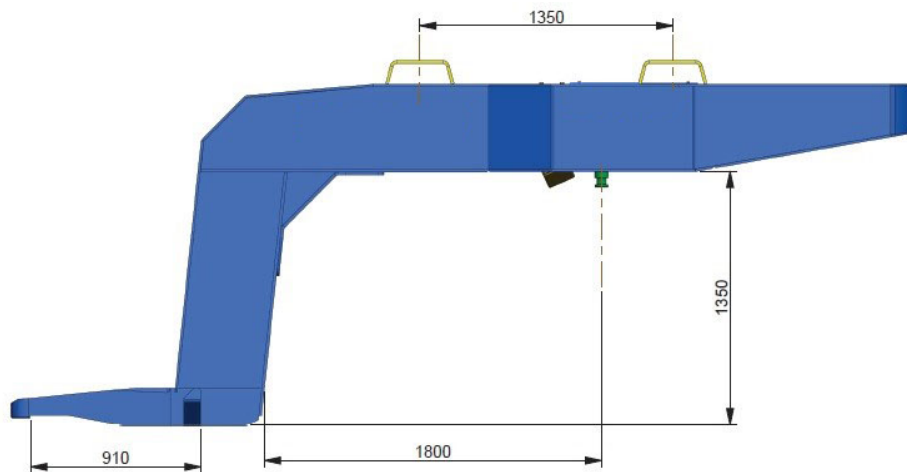
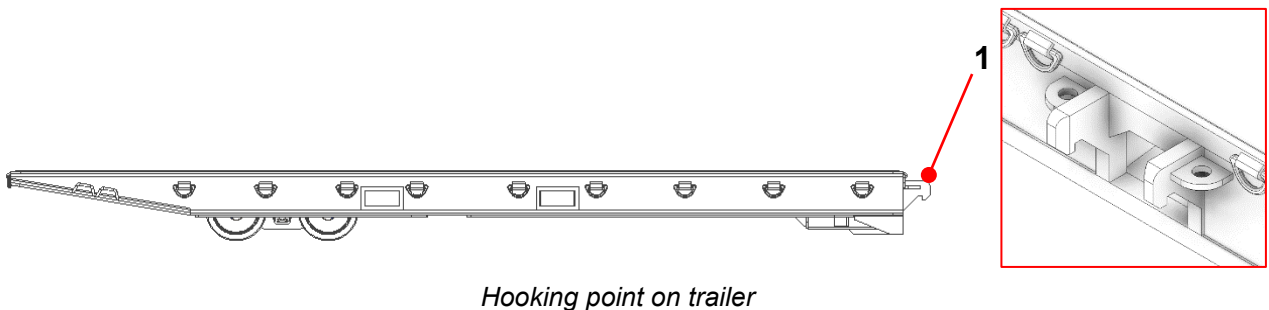


### CAUTION

Before use, make a general visual check on the trailer groups, making sure there are no mechanical faults

### 6.1 TRAILER MOVEMENT

For trailer use, the towing vehicle has to be hooked in the front part (1), with an appropriate hooking device (gooseneck).



*Example of compatible "gooseneck" hooking device  
– not supplied by the Manufacturer*

### CAUTION



It is task of the towing vehicle operator:

- Only to steer with the trailer already in motion;
- To avoid abrupt turns;
- Reduce speed when steering;
- Not to exceed the maximum steering angle of 90°.

---

**CAUTION**



It is task of the towing vehicle operator:

- To check correct anchorage of the gooseneck to the rolltrailer.
  - Pay attention during movement of the rolltrailer and check that the area is safe and free of persons and/or objects
  - Appropriately adjust the height of the fifth wheel to avoid accidental impacts.
- 

**6.1.1 Trailer service braking**

---

**CAUTION**



The trailer does not have a service brake. To decelerate and stop the trailer travel refer to the towing tractor, which has to be equipped with an appropriate braking system.

---

**6.1.2 Trailer parking brake**

---

**CAUTION**



The trailer does not have a parking brake. Pay attention when parking the trailer and block the wheels with appropriate chocks (lower limbs impact/crushing hazard). Do not park the trailer on sloping floors.

---

## 6.2 POSITIONING THE LOAD

It is recommended to lower the loads avoiding impacts that would cause additional tensions inside the bearing structure and the mechanical parts.

During loading and transport, check that the load remains inside the trailer loading bed perimeter.



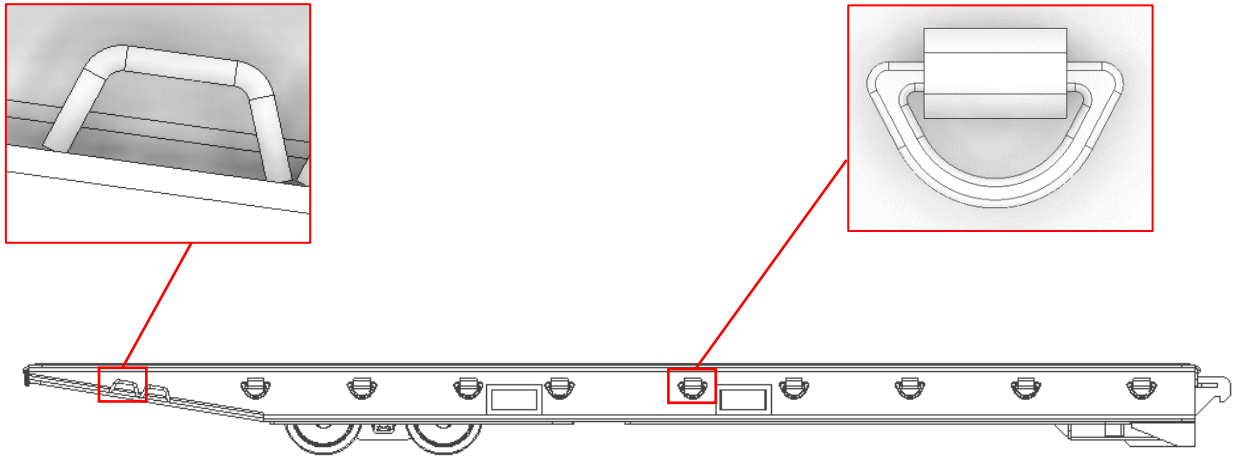
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### CAUTION

The operator in charge of the towing vehicle is to pay careful attention when moving the trailer with load.

---

The trailer has No. 26 D-RINGS and No. 4 LASHING-EYE to secure the load.



---

### CAUTION

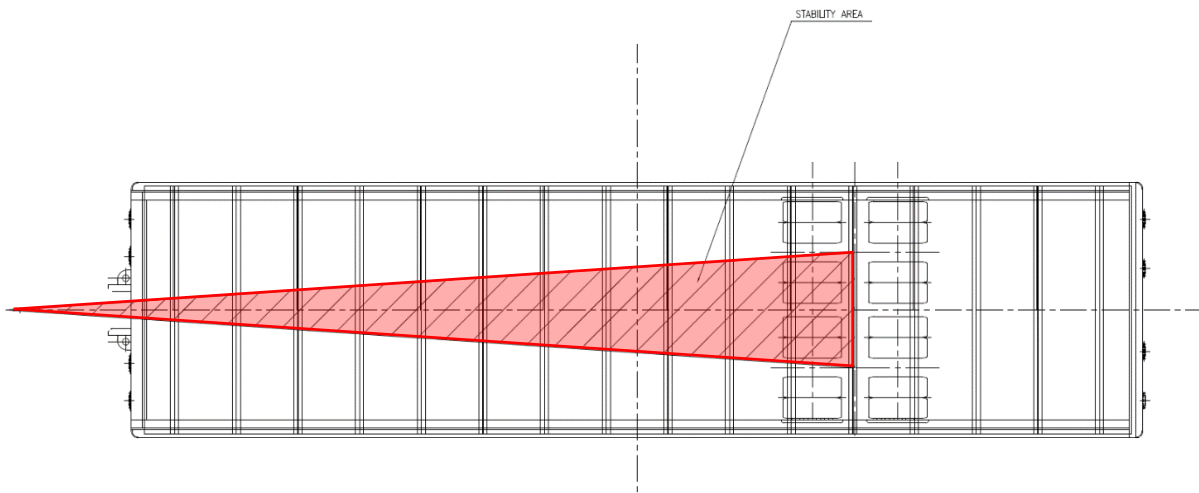
It is task of the operator to anchor the load with adequate slinging systems according to the dimensions of the same before moving the trailer.

---

### 6.2.1 Load distribution: stability area

The points that permit the frame to discharge the load to the ground are basically three, as shown in the following figure.

These form a “stability triangle” by the joining of these points.



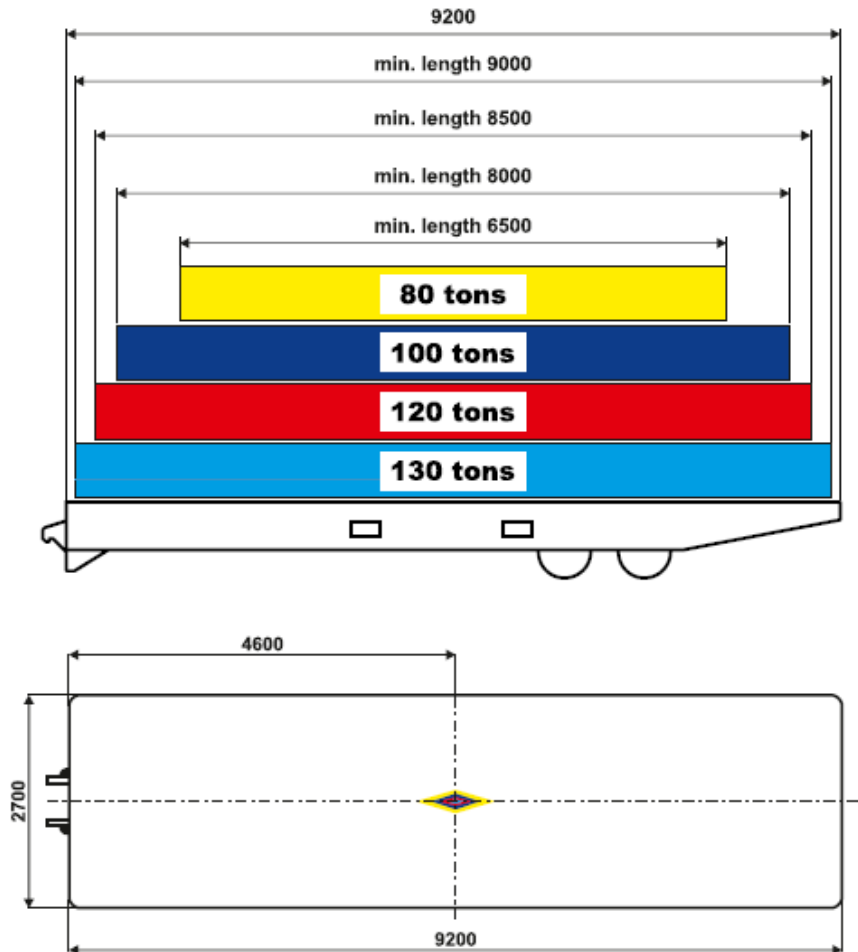
*Stability triangle*

**To avoid overturning hazards, it is necessary that the load centre of gravity is always inside this triangle (both with trailer parked and with trailer in motion).**

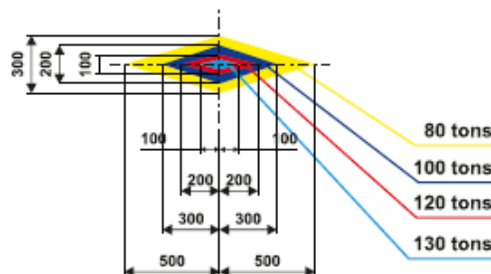
### 6.2.2 Load diagram

The load diagram shows the correct arrangement of the load, and the relative centre of gravity, on the trailer. This information is indicated on the trailer frame.

With a **distributed load**, follow the indications given in the following diagram



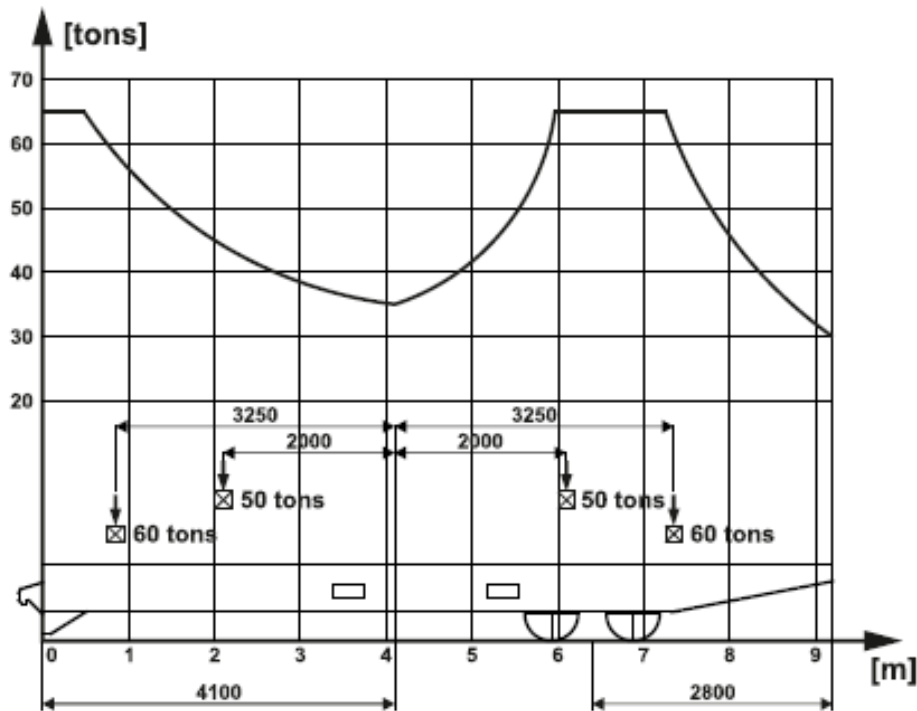
**Load center of gravity must be within the areas, corresponding to the load**



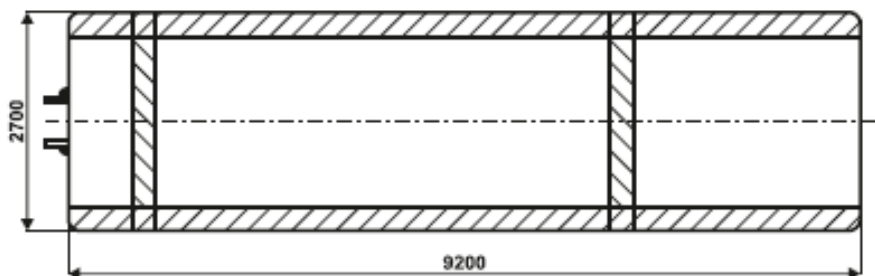
**CAUTION**

Distribute the load evenly.

With a concentrated load, follow the indications given in the following diagram

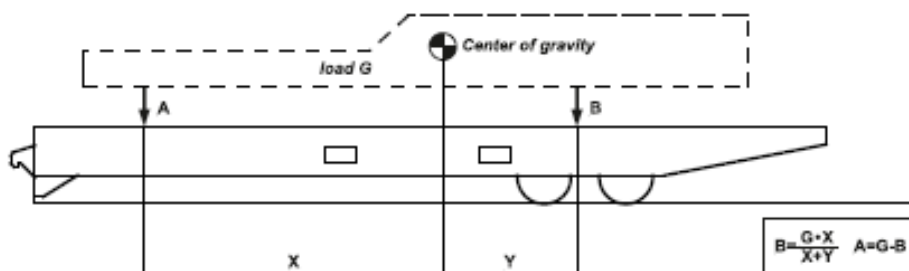


Point loads on the platform to be placed or transferred using transversal supports to the longitudinal beams



**Loading instruction**

- 1) Identify loads center of gravity
- 2) Calculate the loads, coming to the Rolltrailer platform acc to below scheme



- 3) Make sure, load center of gravity is in the determined area
- 4) Loads A and B shall not exceed the limit line in above diagram

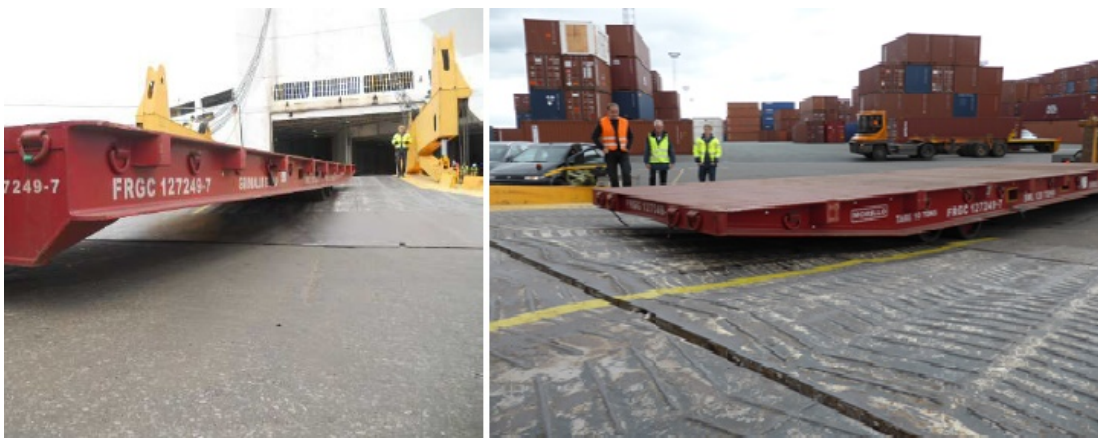
## 6.3 LOADING THE TRAILER ON THE SHIP RAMPS



### CAUTION

To avoid breakage of the swinging axles, the trailer is to move on the ship loading ramps always parallel to the same and never in diagonal.

Some figures follow, as examples, regarding the correct movement of the rolltrailer on the ship ramps (with or without load).



The trailer rear cross member must never touch the ramp, as shown in the example figures that follow.





---

**CAUTION**

If the trailer cross member touches/ grates the ship loading ramp, the operator is to immediately stop the movement. Under these conditions an increase could occur in the swinging angle of the axles and the rocker arms over the nominal limit, causing overloads and possible break down

---



---

**CAUTION**

To avoid touching/grazing the ramp, the operator is to reduce the inclination angle of the trailers to the ramp (with or without load).

---



<b>GENERAL INFORMATION</b>	<b>1</b>
<b>SAFETY</b>	<b>2</b>
<b>GENERAL DESCRIPTION</b>	<b>3</b>
<b>TRANSPORT AND STORAGE</b>	<b>4</b>
<b>ASSEMBLY</b>	<b>5</b>
<b>USE</b>	<b>6</b>
<b>DISPOSAL</b>	<b>7</b>
<b>MAINTENANCE</b>	<b>8</b>
<b>ATTACHMENTS</b>	<b>9</b>

**INDUSTRIAL TRAILER  
WITH TYRES  
Serial number 2265**



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## 7. DISPOSAL

The following section contains some tips and suggestions for proper operation of dismantling of the partly completed machinery at the end of the operating life.



---

### ADDITIONAL INFORMATION

The following operations are the responsibility of authorized personnel.

---

- Make sure that, around the partly completed machinery, there is sufficient space to enable staff to perform all the necessary movements without risk.
- Disassemble the partly completed machinery by taking, for each group.
- Remove the moving parts and separate, as far as possible, the various components for the type of materials (plastic, metal, etc.), in order to be able to be disposed of through a separate collection.
- Remove and move the parts from the work zone taking all the necessary precautions.
- Before lifting large components check correct fastening of the lifting devices and only use appropriate slings and equipment.



---

### ADDITIONAL INFORMATION

Disposal operations must be carried out in accordance with the provisions of the regulations in force in the country where the partly completed machinery is used.

---



---

### NOTE

In case of difficulty in dismantling, demolition of the partly completed machinery, or for added security, please contact the Manufacturer and indicate cause of the removal and serial number.

---

- The partly completely machinery is built with various materials, recyclable and not. For this reason, its removal involves adequate separation of the materials: steel, aluminium, copper, bronze, special alloys, plastic, etc.
- The manufacturer assumes no liability for any damage caused by any use of the individual components other than the one prescribed.



---

### CAUTION

The dismantling must be done in accordance with applicable laws. These rules must be adhered to.

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**INDUSTRIAL TRAILER  
WITH TYRES  
Serial number 2265**



BLANK PAGE

**GENERAL INFORMATION**

**1**

**SAFETY**

**2**

**GENERAL DESCRIPTION**

**3**

**TRANSPORT AND STORAGE**

**4**

**ASSEMBLY**

**5**

**USE**

**6**

**DISPOSAL**

**7**

**MAINTENANCE**

**8**

**ATTACHMENTS**

**9**

**INDUSTRIAL TRAILER  
WITH TYRES  
Serial number 2265**



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## 8. MAINTENANCE

### 8.1 GENERAL PRECAUTIONS FOR SAFETY

The maintenance, troubleshooting and repair, are only to authorized personnel.

The operators assigned to the running and the maintenance of the partly completed machinery are to be well trained and have in-depth knowledge of accident prevention regulations.

The accident-prevention precautions contained in this manual are always to be strictly observed during the use and maintenance of the partly completed machinery, to avoid damage to persons and objects.

These precautions will be recalled and further detailed in the manual, you will be prompted, each time a procedure involving risk of harm or injury occurs, through notes WARNING and DANGER:



**DANGER** notes prior to an operation indicate that, if not correctly followed, it could result in injury.



The **CAUTION** notes precede an operation that, if not executed correctly, could cause damage to the partly completed machinery and / or the persons operating on it.

After every maintenance operation, check correct functioning of the partly completed machinery.



---

#### **CAUTION**

Maintenance operations are to be carried out with no load.

---

## 8.2 CONTROL PLAN ON SAFETY



### CAUTION

Never modify or tamper in any way with the components of the trailer.

### 8.2.1 Controls and functional test

Periodically check:

- That the bolts and screws have not slackened.
- That the wheels rotate correctly.
- That there is no axial movement of the wheels.

## 8.3 TIGHTENING TORQUES

Check correct tightness of all the machine nuts and bolts.



### CAUTION

To tighten, use a torque wrench.

The following table indicates the tightening torques of each screw size.

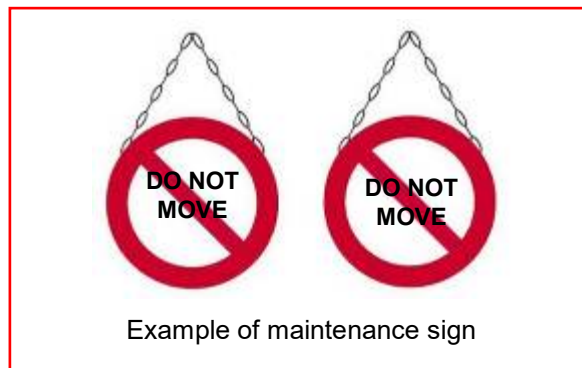
Ø Screw	Screw pitch	Pre-tightening torque [kgm]	Tightening torque [kgm]
M6	1	0.75	1
M8	1.25	1.8	2.4
M10	1.5	3.6	4.8
M12	1.75	6.5	8.5
M14	2	10	13
M16	2	15	20.5
M18	2.5	22	29
M20	2.5	30	40
M22	2.5	42	56
M24	3	50	70
M27	3	80	105
M30	3.5	95	130



## 8.4 PROCEDURE TO STOP FOR MAINTENANCE

Before implementing the maintenance procedure, described in this chapter, the operator must stop and place the trailer in maintenance status, in compliance with the following procedure:

- Release the trailer from the towing device.
- Affix a sign "MAINTENANCE IN PROGRESS - DO NOT MOVE - WORK IN PROGRESS".



---

### CAUTION

After every maintenance operation, check correct functioning of the trailer.

---

### 8.4.1 Trailer preparation for maintenance

Before lifting the trailer, the Customer is to procure four appropriate maintenance-aid devices on which the trailer is to be positioned.



---

### NOTE

The Manufacturer shall not be held in any way liable if unsuitable devices are used.

---



---

### NOTE

Before lifting the trailer, position the four maintenance-aid devices in an appropriate segregated area, to which the entry of unauthorised persons is prohibited.

---



---

### CAUTION

Before starting the operations, check that the lifting devices are adequate, and that all the operators have the necessary personal protection devices (PPD).

---

Lift the trailer, using appropriate lifting equipment, and position it on the four maintenance-aid devices, that have an adequate payload.

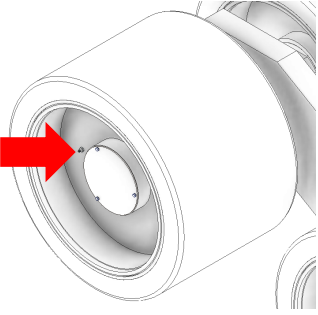
## 8.5 MAINTENANCE FREQUENCY

To guarantee reliability of the partly completed machinery, you need to ensure regular and efficient maintenance. The maintenance, troubleshooting and repair, are only to authorized personnel.

Frequency	Description
Weekly	Clean the loading bed.
Monthly	Clean the wheels.
Monthly	Check that the wheels rotate correctly.
Monthly	Visually check intactness of the axles, rocker arms and the wheels. If necessary, replace.
Monthly	Check correct positioning and anchorage of the axle and rocker arm pins.
Monthly	Check there is no axial movement of the wheels. If necessary, adjust (procedure in par. 8.7).
Three-monthly	Grease the lubrication points.
Yearly	Check tightness of all nuts and bolts.

## 8.6 LUBRICATION POINTS

Some of the points to be lubricated/greased are indicated below.

FREQUENCY	COMPONENT	IMAGE	MODE
Three-monthly	Wheel bearings		Insert grease in the nozzles.



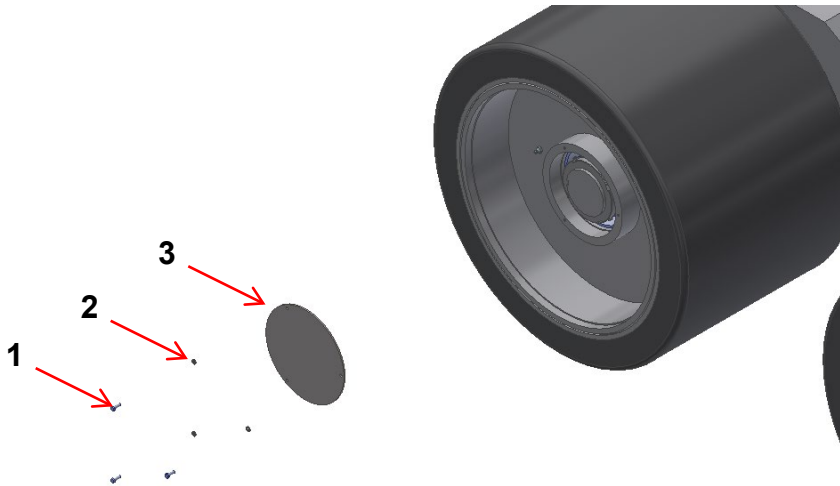
### NOTE

To lubricate/grease moving mechanical parts, use ORGREASE 2 MOTECX.

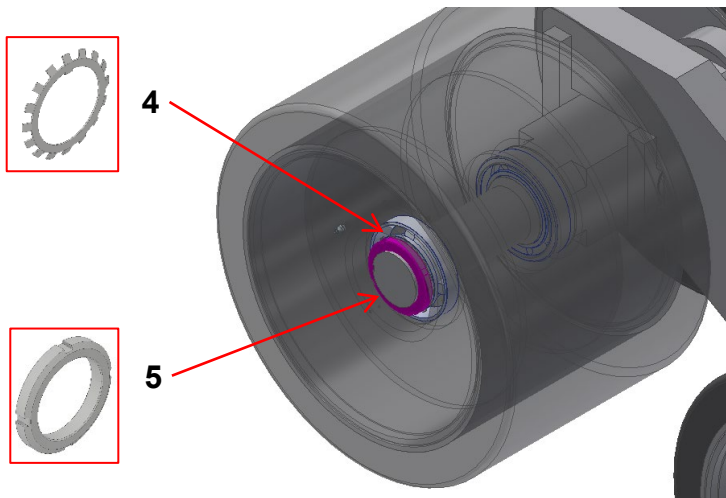
## 8.7 WHEEL BEARINGS ADJUSTMENT

If there are axial movements of the wheels, proceed as follows:

- a) Unscrew the 3 M5x16 screws (1) and remove the M5 split washers (2).
- b) Remove the cap (3).



- c) Open the safety washer (4).
- d) Tighten the ring nut (5) to lock the wheel.

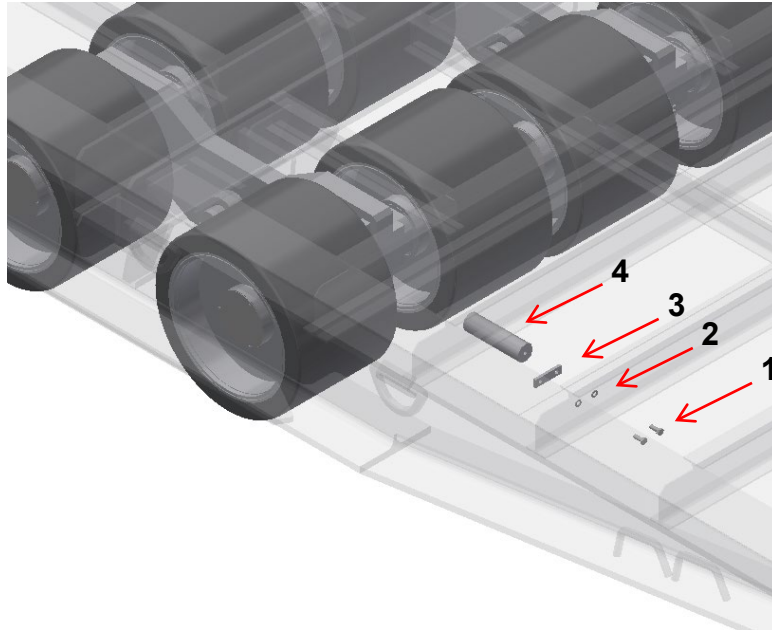


- e) Slightly loosen the ring nut (5) so that the wheel slides freely, but without axial movements
- f) To reassemble, proceed in reverse, starting from step "c".
- g) Check correct functioning of the wheel.

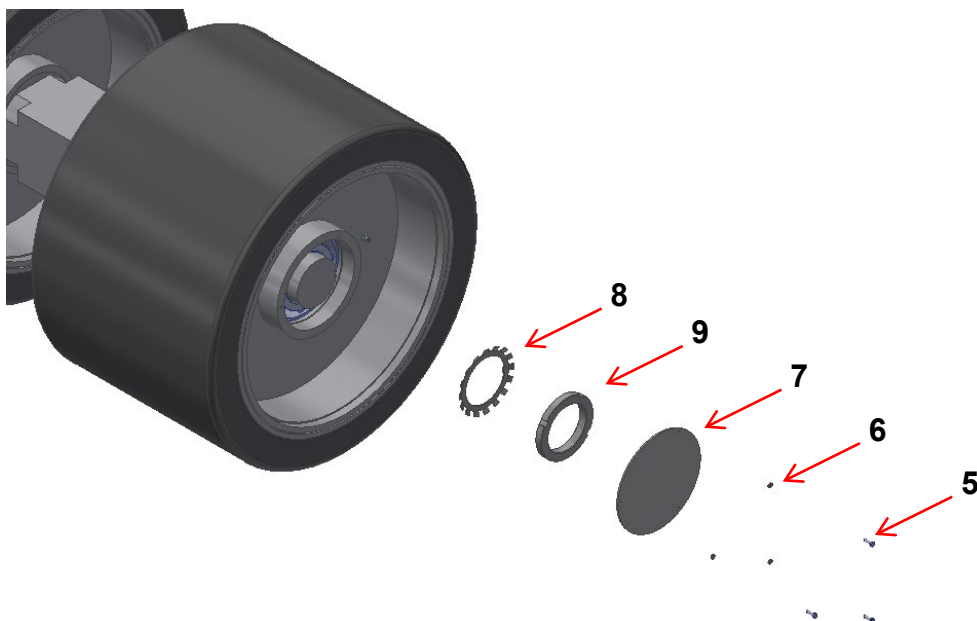
## 8.8 CUSHION REPLACEMENT PROCEDURE

To replace a cushion, proceed as follows:

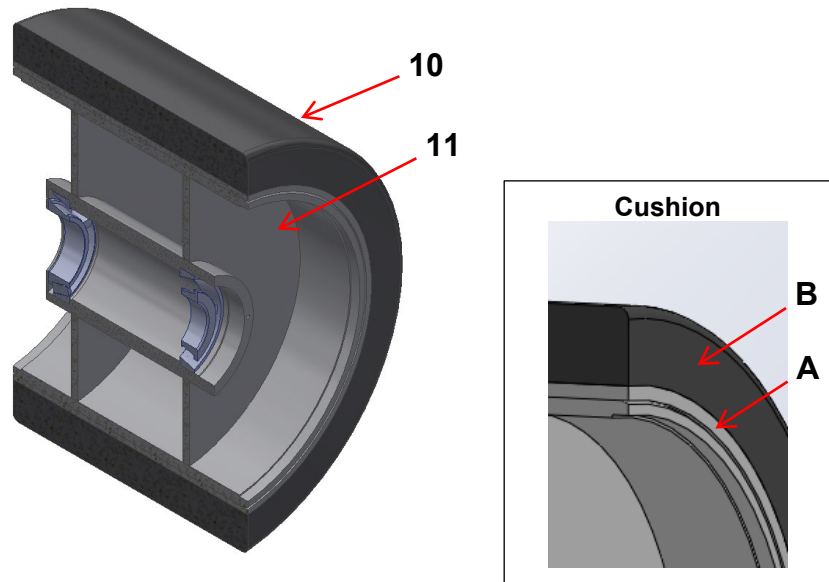
- Suitably sustain the axle to be removed (weight approx. 550 kg).
- Unscrew the two M14x35 fastening screws (1) and remove with the relevant M14 split washer (2).
- Remove the anti-rotation plate (3).
- Take out the pin (4) and remove the axle.



- Unscrew the three M5x16 screws (5), remove the relevant M5 split washers (6) and take out the cap (7). Open the washer MB18 (8), unscrew the ring nut KM18 (9) and remove them.



- Suitably sustain the wheel (weight approx. 250 kg) and remove it from the axle.
- Take out the cushion (10) (weight approx. 100 kg.) from the wheel central core (11).



*Illustration of wheel section*



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**NOTE**

The cushion includes the outer ring (A) and the tyre (B).

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Replace the cushion with a spare part (code 620x420-480) having the same characteristics and proceed in reverse for the assembly.



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**CAUTION**

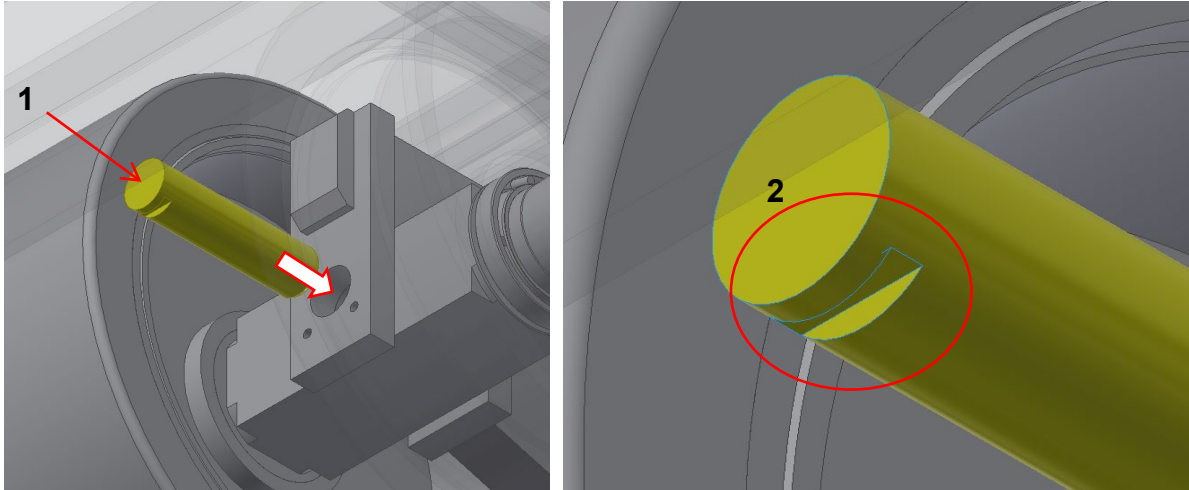
For further information regarding the operations to remove and refit the cushion, contact the Manufacturer.

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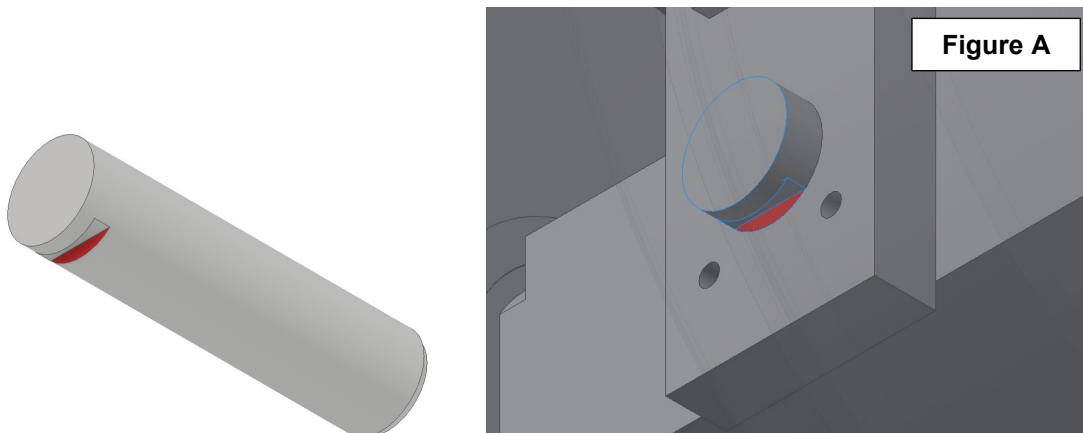
### 8.8.1 Securing the pin

When assembling the axle, pay attention to the correct orientation and fastening of the pin. Proceed as follows:

- Correctly position the axle and insert the pin (1) in the relevant hole, taking care to position the cut (2) downward.



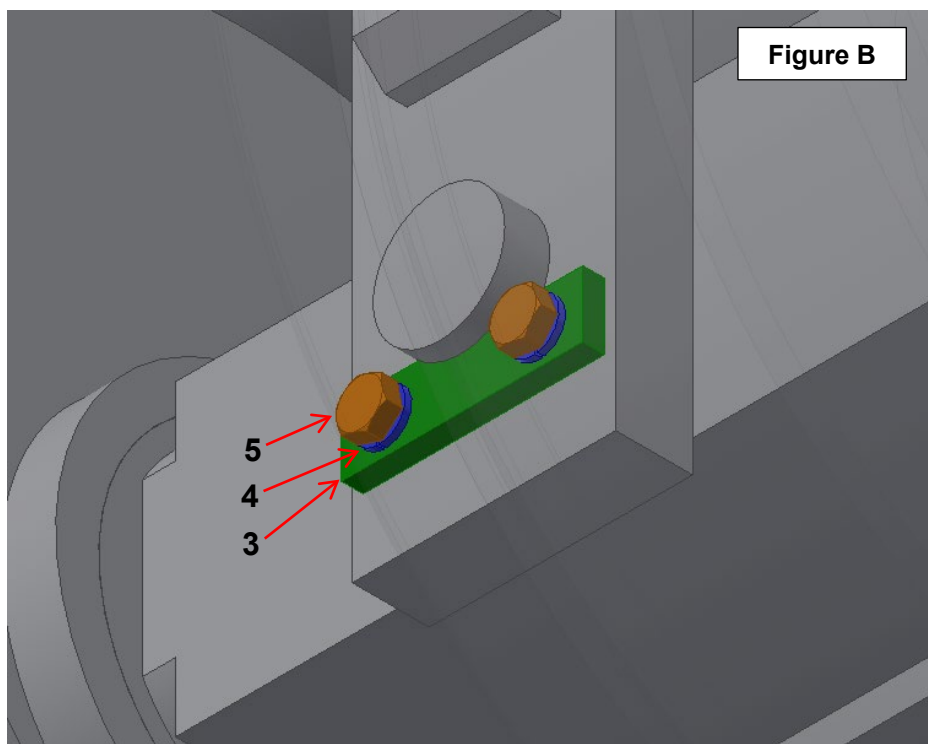
- Push the pin so as to align the internal face of the cut (shown in red in the following figure) with the outer face of the plate (**Figure A**).



**INDUSTRIAL TRAILER  
WITH TYRES  
Serial number 2265**



- Insert the anti-rotation plate (3), the split washers (4) and correctly tighten the two screws (5) (Figure B).

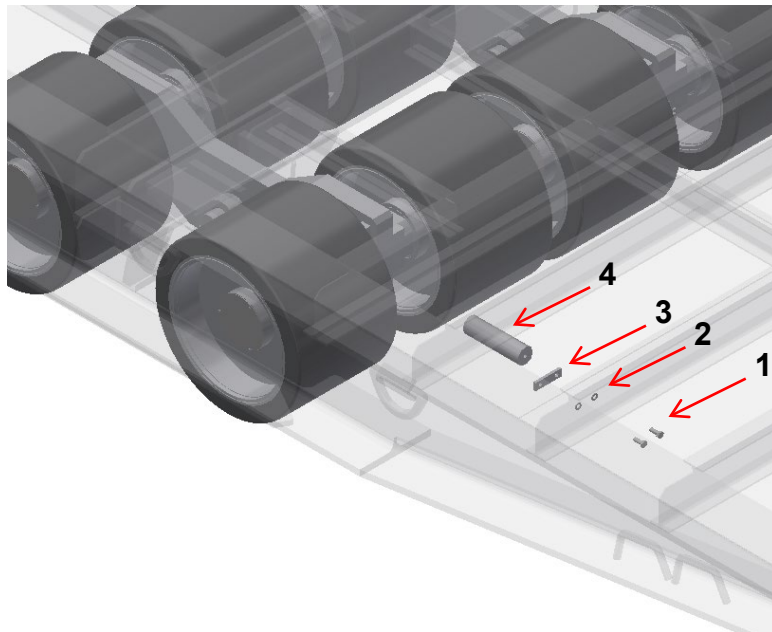




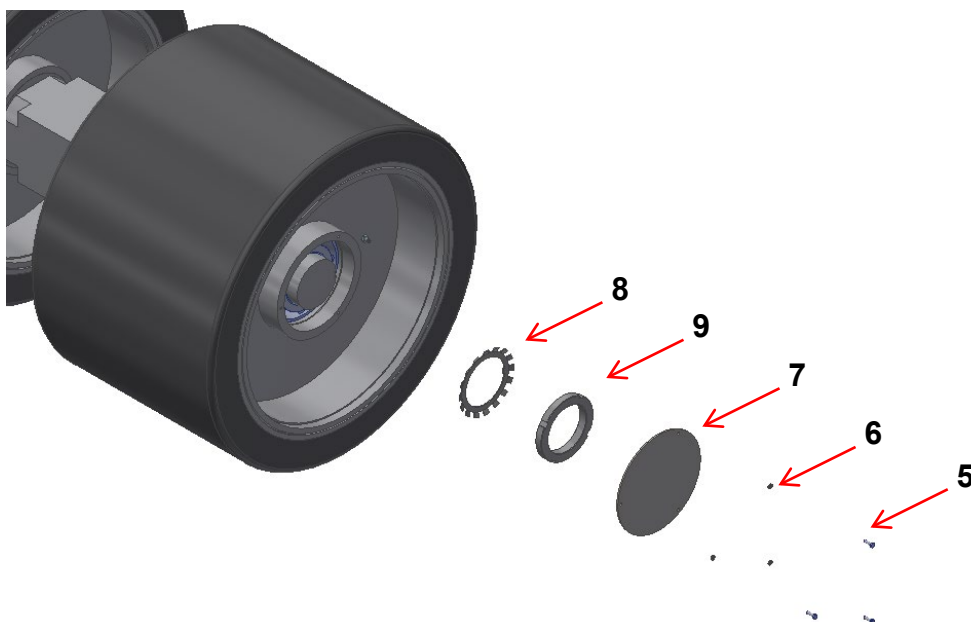
## 8.9 WHEEL REPLACEMENT PROCEDURE

To replace a wheel, proceed as follows:

- Suitably sustain the axle to be removed (weight approx. 550 kg).
- Unscrew the two M14x35 fastening screws (1) and remove them with the relevant M14 split washers (2).
- Remove the anti-rotation plate (3).
- Take out the pin (4) and remove the axle.



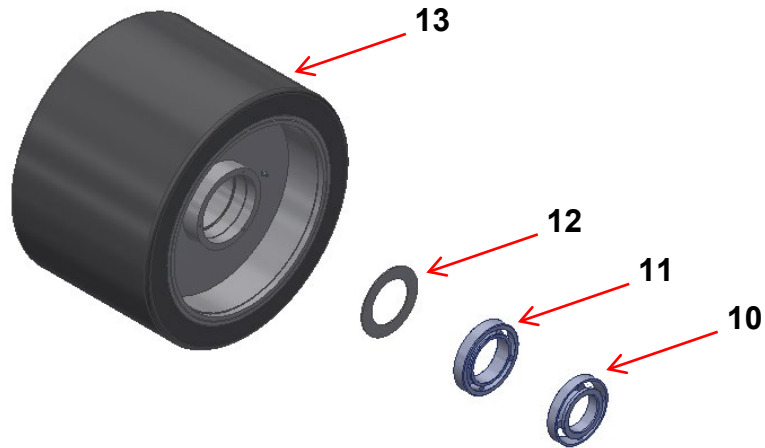
- Unscrew the three M5x16 screws (5), remove the relevant M5 split washers (6) and take out the cap (7). Open the washer MB18 (8), unscrew the ring nut KM18 (9) and remove them.



**INDUSTRIAL TRAILER  
WITH TYRES  
Serial number 2265**



- Suitably sustain the wheel (weight approx. 250 kg) and extract it from the axle.
- Take out the bearings (10) and (11) and the dust cover (12) to free the wheel (13).



Replace the wheel with a spare part (code 2263.A3A.GN008) having the same characteristics and proceed in reverse to assemble.



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**CAUTION**

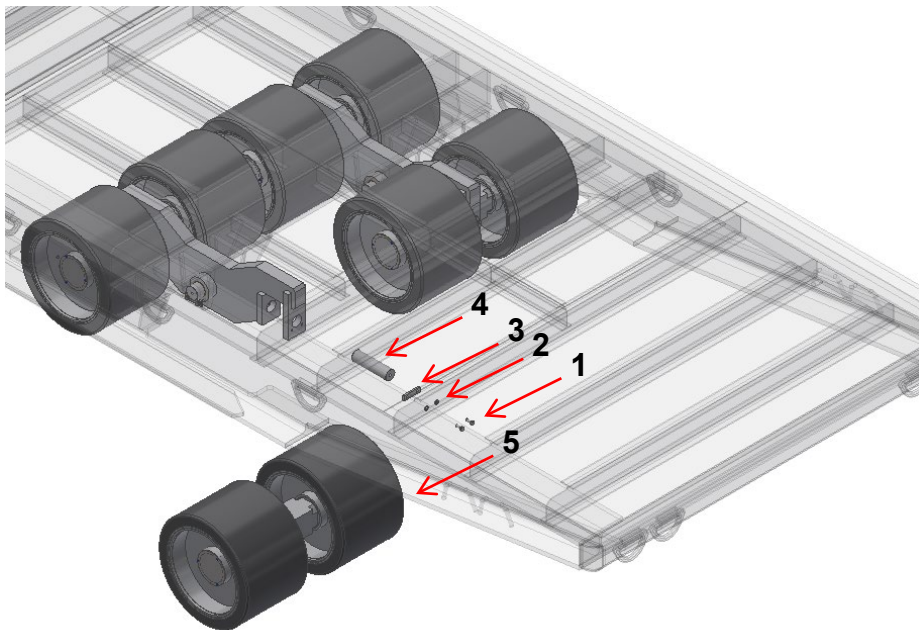
**When reassembling the axle, pay attention to the correct orientation and fastening of the pin, following the procedure indicated in paragraph 8.8.1.**

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## 8.10 AXLE REPLACEMENT PROCEDURE

To replace an axle, complete with wheels, proceed as follows:

- Suitably sustain the axle to be removed (weight approx. 550 kg.).
- Unscrew the two M14x35 fastening screws (1) and remove them together with the relevant M14 split washers (2).
- Remove the anti-rotation plate (3).
- Take out the pin (4) and remove the axle (5).



Replace the removed axle with a complete spare part (code 2263.A3A.AA001), having the same characteristics, and proceed in reverse to assemble.



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### CAUTION

Before starting to assemble the spare part, make sure that there are the two bushings DU.65.70.60 inside the hole of the axle.

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### CAUTION

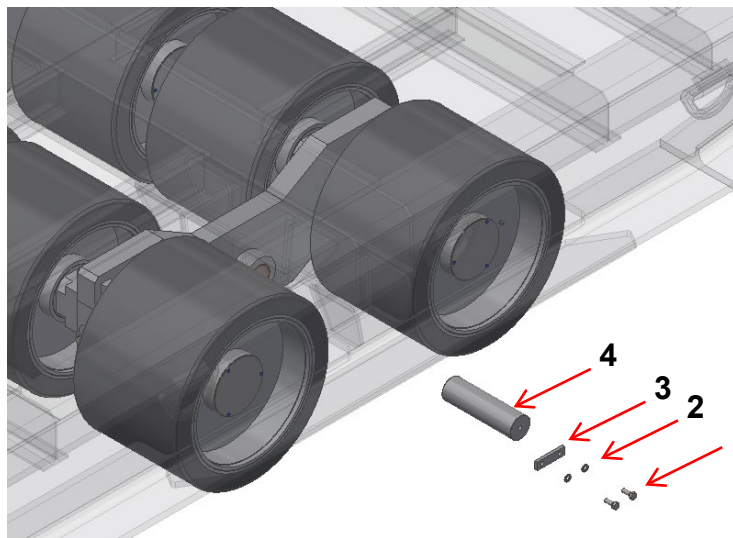
When reassembling the axle, pay attention to the correct orientation and fastening of the pin. Following the procedure indicated in paragraph 8.8.1.

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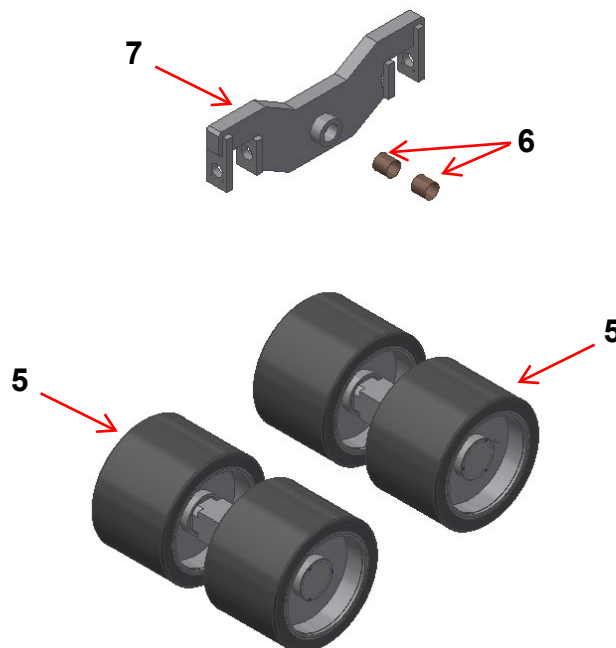
## 8.11 ROCKER ARM REPLACEMENT PROCEDURE

To replace a rocker arm, proceed as follows:

- Suitably sustain the rocker arm to be removed (weight approx. 1400 kg).
- Unscrew the two M14x35 fastening screws **(1)** and remove them with the relevant M14 split washers **(2)**.
- Remove the anti-rotation plate **(3)**.
- Take out the pin **(4)** and remove the rocker arm with the axles.



- Remove the two axles **(5)**, following the procedure indicated in paragraph 8.10, take out the two bushings **(6)** and free the rocker arm **(7)** (weight approx. 200 kg).



Replace the rocker arm with a spare part (code 2263.A3A.GN003) having the same characteristics and proceed in reverse to assemble.



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**CAUTION**

**When reassembling the axles, pay attention to the correct orientation and fastening of the pins, following the procedure indicated in paragraph 8.8.1. Follow the same indications for the fastening and orientation of the rocker arm pin.**

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## 8.13 SPARE PARTS

A spare parts list follows. The letter “U” indicates parts subject to wear that it is recommended to keep in stock, whereas the letter “R” indicates those which could break (for which it is necessary to contact the Manufacturer).



### CAUTION

Use only original spare parts. Replacement with parts that are not originals could jeopardise partly completed machinery functioning.



### CAUTION

The spare parts are to be kept clean, lubricated and stored in appropriate containers to preserve the integrity over time.

U / R	Description	Manufacturer	Q.ty installed	Q.ty recommended
U	WHEEL WITH CUSHION Ø620x420 code 2263.A3A.GN008	MORELLO	8	2
U	CUSHION RING type 620x420-480	MORELLO	8	2
R	AXLE COMPLETE WITH WHEELS code 2263.A3A.AA001	MORELLO	4	-
R	ROCKER ARM code 2263.A3A.GN003	MORELLO	2	-
U	WHEEL TAPER ROLLER BEARINGS CODE 30218 90/160/32,5	SKF or similar	8	2
U	WHEEL TAPER ROLLER BEARINGS CODE 32022 X 110/170/38	SKF or similar	8	2
R	RING NUT KM 18	SKF or similar	8	-
R	WASHER MB 18	SKF or similar	8	-
U	ROCKER ARM BUSHING DU 80/85 L=80 LOCULAR	CPS	4	1
U	AXLE BUSHING DU 65/70 L=60 LOCULAR	CPS	8	2

**INDUSTRIAL TRAILER  
WITH TYRES  
Serial number 2265**



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**GENERAL INFORMATION**

**1**

**SAFETY**

**2**

**GENERAL DESCRIPTION**

**3**

**TRANSPORT AND STORAGE**

**4**

**ASSEMBLY**

**5**

**USE**

**6**

**DISPOSAL**

**7**

**MAINTENANCE**

**8**

**ATTACHMENTS**

**9**

**INDUSTRIAL TRAILER  
WITH TYRES  
Serial number 2265**



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## **9. ATTACHED DOCUMENTATION**

## 9.1 EXPLODED DRAWINGS

### 9.1.1 Rocker arm and axle assembly

Pos.	Description	Quantity
1	HEX HEAD SCREW M5X16	3
2	OPEN SPRING WASHER M5	3
3	STEEL CAP	1
4	RING NUT KM 18 M90x2	1
5	WASHER MB 18	1
6	TAPER ROLLER BEARING 30218 90/160/32,5	1
7	RUOTA CUSHION Ø620x420 2263.A3A.GN008	1
8	TAPER ROLLER BEARING 32022 X 110/170/38	1
9	DUST 110/170/3	1
10	BUSHING DU.65.70.60	2
11	ROUND AXLE PIN Ø65mm	1
12	AXLE ANTI-ROTATION PLATE	1
13	OPEN SPRING WASHER M14	2
14	HEX HEAD SCREW M14X35	2
15	ROCKER ARM ANTI-ROTATION PLATE	1
16	ROCKER ARM PIN Ø80mm	1
17	BUSHING DU.80.85.80	2

