

## USER MANUAL SWAP BODY SERIES



Kässbohrei

Enginuity, since 1893

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### FOREWORD

First of all, thank you for choosing us for your new vehicle investment.

Your vehicle is manufactured with the latest production technologies to the highest quality standards and equipped with the best safety and efficiency features.

You can find detailed information about the accessories, equipment and hardware that might be in your vehicle in this manual. The defined options in this manual can vary according to the vehicle specs.

Important information on how you can use your vehicle is explained in this user manual, please be sure that you review and understand the content. We suggest keeping this user manual available in your vehicle at all times. This information is specified in the product's user manual. We recommend you read this operating manual thoroughly to get the most out of your vehicle.

\* Owing to the developments in product research, the manufacturer reserves the right to make any changes in the product, without any prior notice. The publication rights of this documentation belong to the manufacturer.

## 1. GENERAL INFORMATION AND SAFETY INSTRUCTIONS

#### 1.1. About the User Manual

The usage and operation information given in this manual is prepared to make sure the vehicle is used in compliance with its purpose and as desired.

The instructions here contain important recommendations to perform your operations safely, completely, and in the most efficient manner. Complying with these instructions, warnings and recommendations will prevent accidents, decrease down-time & repair costs, and make sure you use your vehicle safely, reliably and problem-free.

Please read the operating instructions in this manual carefully and completely. The manufacturer is not liable for the damages and deficiencies caused by the failure to comply with these instructions. The instructions herein must be supported by local laws, rules and regulations. Please comply with these instructions to prevent accidents and protect your surroundings and the environment.

Any usage of transportation that goes beyond the use in accordance with the rules will be considered improper use.

Transportation of the following is not allowed:

- Carrying people and live animals
- Transportations that need to be carried according to special instructions, e.g., dangerous good transportations
- Transportation of unsecured goods
- Transportation of materials that are dangerous due to their properties or that need to be carried with special equipment
- Exceeding technically and legally permissible weights of the axles or king pin load

- Exceeding of the maximum vehicle speed
- Exceeding the permissible length, width and height
- Unapproved parts like tires, accessories, spare parts and etc. by the manufacturer
- The manufacturer shall not accept any responsibility for the problems and faults that occurs that are not in compliance with the purpose of the vehicle's usage. All the risks of this issue belong to the customer.

It is necessary to keep the user manual available on the vehicle at all times.

The vehicle can be equipped with a lot of different options. The standard or optional features will be explained in the manual. Some options may not be available for your vehicle

Adhere strictly to the operating instructions when using your vehicle. When problems occur which can lead to dangerous consequences, contact the service centre immediately.

### 1.2. Meanings of Symbols Used in User Manual

Several warnings are available in this manual to ensure maximum safety when using your vehicle. Each warning is indicated by a special symbol. These symbols and their meanings are as follows.



The information specified by this warning symbol is very important for health and human safety. When the given information is ignored, serious damage, injuries and even death may occur.



This symbol specified in this manual indicates that critical accidents may occur when the instructions do not comply.



This symbol is used when additional information is required.



This symbol is used when chemicals and other substances can be disposed of with precautions that will not harm the environment.

#### 1.3. Personal Protective Equipments

Personal protective equipments serves the purpose of preventing injuries and are prevents injuries and are determined by regional regulations depending on the load carried.

People who will work or perform operations on the vehicle must wear proper and appropriate protective clothing.

- Depending on the load to be carried, the eyes, ears, body, and respiratory tract must be protected with the relevant protective equipment.
- As a rule, gloves and work shoes are always used.



It is obligatory to use appropriate personal protective equipment during the operations.

Long hair is particularly dangerous when working on the vehicle, regardless of whether it is loose or tied up, and it should be protected properly to avoid tangling.

Wearing a tie, necklace and/or dangling jewelry when working on the vehicle is strictly prohibited. They may get caught in moving parts or mechanisms and cause injuries and even death.

#### **Protective Gloves**





Gloves should fit snugly. Otherwise, there is a risk of them getting caught in moving parts or mechanisms.

#### **Protective Cloth**



While working on the vehicle, appropriate overalls must be worn.

- Overalls should not have pleats, buttons or external pockets and their closure system should be made in such a way that they can be opened as soon as possible in case of an emergency.
- Interior pockets should have fastenings to close them up. Cuffs should be adjusted to fit the wrist.

#### **Protective Helmets**



When working around the vehicle, a lightweight helmet approved by an accredited institution should be worn.

#### **Protective Ear Plugs**



A hearing protective device (headsets or ear plugs) should always be used around selfpropelled vehicles.

#### **Protective Goggles**



Protective goggles should be worn during all maintenance operations.

#### **Protective Mask**



Appropriate protective masks should be used when working with substances that are dangerous to breathe or in dusty environments.

## 1.4. Terms of Use and Safety Information

It is necessary to keep the warranty, operating and maintenance manual and other documentation about the vehicle available on the vehicle at all times. To prevent possible accidents and environmental pollution, follow the operating instructions and binding regulations.

- Pay attention to the safety and warning signs placed on your vehicle.
- Always keep these safety and warning signs completely visible.
- Make sure that the load carrier is secured properly.
- In case of any dangerous condition in the operation of safety, stop your vehicle immediately and inform the authorized people or institutions.
- Do not modify anything on the vehicle without a written manufacturer's approval. Your vehicles guarantee terms do not cover unapproved modifications.
- The spare parts must meet the technical requirements set forth by the manufacturer company. Only the original spare part/parts meet their requirements.

#### 2. MAIN INFORMATIONS

There are vehicle identification stickers on the vehicle.



#### 2.1. Vehicle Identification Plate

Vehicle identification plate is located on the right side of the vehicle.



You may find these information's on this plate;



Vehicle Identification Plate

- 1- Vehicle Type
- 2- Serial Number
- 3- Technical Total Capacity
- 4- Permitted Total Capacity
- 5- Type Approval Number

#### 6- Production Date

The serial number of the vehicle (vehicle identification number) is located on the chassis.



Vehicle Identification Number

#### 2.2. Warranty and Responsibility

Our trailers, semi-trailers and truck onboard applications are manufactured in compliance with regulations and our quality standards. It is necessary to perform the maintenance to ensure our products always operate in the most efficient manner in compliance with our latest directives and maintenance programs. The warranty starting date is the date that the vehicle is delivered to the customer.

The performance of maintenance and repair/servicing of the vehicle with the use of original spare parts by authorized service shall assure the client's warranty rights. This warranty is based upon the usage and maintenance conditions described herein and in the warranty book. Thus, it is important to read and understand this operation manual and warranty book.

It is necessary to keep the warranty, always operating and maintenance manual available on the vehicle to allow authorized service performing the servicing to see the warranty conditions and maintenance records. In the repairs made during the warranty period, the authorized service performing the repair will demand this. Purchasing one trailer or semi-trailer is an important investment. For the highest return on your investment, it is necessary to comply with the manufacturer's procedures and recommendations during the operation period of the vehicle. The information provided by the client/driver related to

the warranty written in this manual shall be kept within our database.

## 3. LOWER STRUCTURE AND USAGE INSTRUCTIONS



- 1.Front Ramp Buffer
- 2.Rear Ramp Buffer
- 3.Forklift Attachements Points
- 4.K-Fix
- 5.Mapa Ports
- 6.Train Loading Points
- 7.Load Lashing Rings

#### 3.1. Front Ramp Buffer

It is positioned as welded to the chassis in order to protect the front panel from impacts at the front of the vehicle.



Front Ramp Buffer

#### 3.2. Rear Ramp Buffer

Equipment that protects the rear of the vehicle against impacts.

#### 3.2.1. V -Type Ramp Buffer

When the vehicle approaches the loading ramp, there is a V-type (1), corner welded steel ramp buffer to protect the rear of the vehicle against impacts and to protect the door lock handles from impacts.



V Type Ramp Buffer

#### 3.2.2. V+L Type Ramp Buffer

When the vehicle approaches the loading ramp, in addition to the standard welded V-type (1) ramp buffer, your vehicle can optionally have L-type (2) steel ramp buffers at the corners in order to protect the rear of the vehicle from impacts.



V+L Type Ramp Buffer

#### 3.3. Forklift Fork Holder

To be able to move the vehicle on the field when the vehicle is empty, there are fork slots in which forklift forks can be passed, suitable for lifting by forklift.



Forklift Fork Holder



#### 3.4. K-Fix

K-Fix (1) allows connection from multiple points with the help of spanzets in order to carry the load safely.

Each K-fix point has a maximum carrying capacity of 2.5 tons.



K-Fix

The pulling force of 2,500 kg should not be exceeded for each point on the K-Fix.

Over 1 m of K-Fix, a connection should not exceed 6000 kg.

#### 3.5. Eye Bolts

Your vehicle may optionally have eyebolt attachment points (1) that allow it to be lifted with eyebolts during loading operations.



Eyebolt Points



Eyebolt

#### 3.6. Train Loading Points

It is a structure designed for lifting the vehicle from train loading points (1) in operations such as train loading, loading the vehicle on a container carrier, etc.



Train Loading Points



#### 3.7. Load Lashing Rings

Load fastening rings are used to fix the load by connecting the transported load to the vehicle floor.

#### 3.7.1. U-Type Lashing Rings

It is positioned on the side rave. It is used to connect the transported load to the ground.

To use this load lashing ring (1), you can attach your braces by pulling the ring upwards with your hand.



U Type Lashing Ring



The maximum towing capacity of the las-hing rings on the front panel (1) is 1250 kg. This pull value must not be exceeded.



Lashing Rings At Front Panel

#### 3.7.2. Load Lashing Ring Embedded in Floor

Your vehicle may optionally have load lashing rings with a capacity of 2.5 tons, which are embedded in the floor, allowing the load to be fixed.



Lashing Rings Embeded in the Floor

#### 3.8. Floor

The floor of the vehicle can be covered with phenol resin coated plywood.

For forklift entries into the vehicle, there is a maximum forklift front axle load that has been defined specifically for your vehicle and tested according to a norm. You can see this information from the label on the vehicle or from the sales contract.



If a forklift which is heavier than the permitted forklift front axle load enters to the vehicle, the floor may be damaged, and the forklift can be tipped.



The accident may occur when you are walking on a wet floor.

In cold weather, there may be icing on the floor. Beware of slipping hazard.



The original spare parts must be used during the floor repair operation. Otherwise, the forklift front axle load might be reduced.



Phenol Resin Coated Plywood Floor

#### 4. UPPERSTRUCTURE COMPONENTS AND USAGE INSTRUCTIONS



- 1-2 Front Panel Front Pillar
- 3 Side Curtain
- 4 Curtain Tensioner
- 5 Train Loading Plate
- 6 Middle Pillar
- 7 Side Rows
- 8 Rear Pillar
- 9 Rear Panel
- 10 Roof

#### 4.1. Overview of Trailer Superstructure Components

#### 4.1.1. Front Panel

There are two type of front panels in vehicles.

- Steel Front panel
- Aluminum Front Panel

#### 4.1.1.1. Steel Front panel

Steel front panel is formed by combining 2 front pillars and steel panel with rivet connection. On the inside of the front panel there is a supporting plywood structure to protect the front panel from impacts. Two load securing rings with each of 1.250 kg capacity used for load securing are located on the inside of the right and left pillars.

## Optional fire extinguisher box, document box and plates (ADR, etc.) can be found.



Steel Front Panel



Plywood construction for protection from impacts

#### 4.1.1.2. Aluminum Front panel

The aluminum front panel formed of 2 aluminum front bollards and horizontally interlocking aluminum panels fixed to the aluminum front bollards with rivets.

There is a coupling plate on the front panel, and there are electrical sockets and air connection couplings on the coupling plate. Optional fire extinguisher box, document box and plates (ADR, etc.) can be found.



Aluminum front panel



Aluminum front panel impact protection plate

#### 4.1.1.3. Front Pillars

There are pillars connecting the side rows and the front panel at the front of the vehicle.



Front Pillar

#### 4.1.2. Side Curtain

#### 4.1.2.1. Curtain Types

Swapbody vehicles can have two types of curtain structures depending on the usage needs.

1.Standard curtain

2. Stainless steel intagrated Vertical Curtain

#### 4.1.2.1.1. Standard Curtain

In your vehicle, sliding side curtains produced in accordance with the relevant standards and norms can be found.



Standard Curtain

## 4.1.2.1.2. Stainless Steel Intagrated Vertical Curtain

In your vehicle, the stainless steel intagrated vertical curtain produced in accordance with the relevant standards and norms can be found. On both sides of the side curtain, there are vertical stainless steel profiles determined according to the design.

Curtain pockets are installed on the inside of the curtain. These pockets are fixed by passing stainless steel profiles.

With this curtain:

- Provides high lateral stability.
- There is no need for a side rows, thus allowing side loading to be carried out faster.



Stainless Steel Intagrated Vertical Curtain

#### 4.1.2.2. Openning The Curtain

• Turn on the curtain tension (1) by following the steps in the heading 4.1.2.4.



Curtain tensioner open

• Remove the curtain profile (2)



Removing The Curtain Profile

 Pull the curtain all the way to the front of the vehicle, holding the handle and the curtain profile at the same time.



Pulling The Curtain

It is dangerous to travel with an open, unsecured curtain. The curtain can fly and injure people. Unsecured curtain can also cause cargo goods to fall. Always make sure that the curtains are properly closed and secured before starting to drive.

## 4.1.2.3. Closing and Tensioning the Curtain

- Pull the curtain gathered to the front back to the rear of the vehicle when you are finished.
- At the rear of the vehicle, attach first the upper end of the curtain profile and then the lower end of the profile to the claw and place it in place.
- After making sure that the curtain profiles are fully seated, tighten the ratchet mechanism with the help of a lever until the curtain tension is maximum.
- Put the hooks of the fasteners on the curtain back into place and tighten them and lock their mechanisms.

#### 4.1.2.4. Rear Tensioner

Curtain stretching is made from behind the vehicle.

• By pressing the upper tongue on the curtain tensioning mechanism (1), the big lever (2) is pulled and the curtaiprofile is discharged.



Rear Tensioning



Full Open Position

• The Curtain rosd (3) is removed.



Curtain Rod

#### 4.1.3. Curtain Tensioner

Depending on the options selected in your vehicles, there may be curtain tensioners with mechanical lock.

The curtain tensioner with mechanical consists of the following parts:

1 Tension Strap

#### 2 Curtain Tension Lock

#### 3 Hook



Curtain Tensioner with Mechanical Lock

## 4.1.3.1. Opening The Curtain Tensioner

• Pull the curtain tensioner lock upwards.



• Remove the hook from the outer frame or board ring after the locking system is unlocked..



# 4.1.3.2. Tensioning and Closing The Curtain Tensioner with Mechanical Lock

Attach the hook (3) to the outer frame or the door hook, then stretch the curtain by pulling the tensioning strap (1), press the lock (2) mechanism to close it and make sure you hear the locking sound.

#### 4.1.4. Train Loading Plate

They are structures (1) designed to prevent the side curtain of the vehicle from being damaged during the train loading operations, due to the requirement to color the train loading plates as per the regulation. There are 4 pieces in total, 2 on the right and 2 on the left of the vehicle.



Train Loading Plate

#### 4.1.5. Middle Pillar

There are 3 sliding middle pillars on the right and left sides of the vehicle.



Sliding Pillar

#### **Opening The Middle Pillar**

Press the lever (1) down and pull it out.



Sliding Middle Pillar

Slide the pillar, which we rescued from its socket, on the rail, either forwards or backwards according to our needs.





There is a risk of parts falling out due to unsecured pillars. Only travel with fully secured pillars. There is a danger of accident due to the pressure exerted by the burden on the pillars while the pillars are untied. Be extremely careful when solving pillars.

In order for the pillars to slide or break, the side rows and side boards must be removed.

#### Closure of the siliding pillar:

- First, fit the pillar into the socket.
- Push the stem inward until the latch in the ring is fully engaged.

#### Completely removed the pillars:

 The pillars can be completely removed from the vehicle by means of the two skid spaces on the left and right at the front of the vehicle.

#### 4.1.6. Side Rows

Side rows are structural elements that support the sides of the vehicle and provide side support for the tarpaulin. They also prevent the goods from falling while driving. According to the load safety certificate conditions, the minimum candle is 3 rows. (Stainless steel intag-rated vertical curtain has no side rows)



If necessary, three of the side rows elements can be used as a side support structure by placing them on top of each other.

## Removing the Side Rows From Their Sockets

To remove the side member, lift the member from both sides at the same time and free it from its sockets.

Sliding Pillar



Side Rows

#### Placing The Side Rows In The Socket:

To insert the side row into the socket, first gently insert it into the socket from one side and then insert it into the socket from the other side.

#### Vehicles have 2 types of side rows:

- 1.Aluminum side rows
- 2.Wooden Side Rows

#### 4.1.6.1. Aluminum Side Rows

There are V Type aluminum side rows are used on vehicle. It can act as a board with its ability to be mounted on top of each other.



V Type Side Rows



V-type aluminum side rows mounted on top of each other

#### 4.1.6.2. Wooden Side Rows

Depending on the vehicle characteristics, your vehicles may have wooden side rows.



Wooden Side Rows

#### 4.1.7. Rear Pillars

There are rear pillars made of steel at the rear of the vehicle.



Rear Pillar

#### 4.1.8. Rear Panel

Swapbody vehicles have double hidden lock aluminum rear doors.



Double Hidden Lock Aluminum Rear Door

The door must always be in the closed position while traveling.
There may be a risk of acci- dent or injury if there is a strong wind or some other factor.

#### The Rear Panel Opening:

The handle of the door at the bottom of the box is removed from the latch by pulling 90 degrees towards yourself. Afterwards the door handles need to be made parallel to the door again to fix the door to the side of the vehicle.



If the door handles are not aligned with the door, damage to the side panel may occur.



Door Lever



Rear Panel Opening

#### 4.1.8.1. Rear Door Handle

The rear door handle is used to fix opened rear doors for safety and to prevent damage. They are located just behind the right and left rear wheels.

#### Fixing the door:

Hold the handle, pull outward in the direction of the arrow (1). Turn it  $90^{\circ}$  counterclockwise (2) so that it touches the door. At this point the door is fixed.



Fixing Rear Panel Wings

#### Unlocking the fixed door:

The arm is kept in its original position by being pulled back from the fixed point and turned 90° clockwise.



Allowing the door to swing back and forth can cause accidents. Always secure the open door with the door handle. Never drive with an open door. Secure the door before departure.

To fix the door in the open position, pull the rear door fastener from a point close to the exit while bringing the door retaining pin to the open position. This will both allow the pin to come out more easily and prevent it from being damaged.



Be careful not the squeeze your hand between the door and the side panel.

#### 4.1.9. Roofs

#### 4.1.9.1. Sliding Roof

Swapbody vehicles have a sliding roof system that opens on one way and facilitates loading-unloading operations.



Sliding Roof

#### 4.1.9.1.1. Openning The Sliding Roof

• The rear panels open.



The Rear Panel Openning

• The sliding roof pull cane(1) on the right rear panel is taken.



Sliding roof pull cane

• The length of the sliding roof pulling cane is taken to the desired level.



Sliding roof pull cane lock pin

 Lift the top of the rear panel profile by pushing it from the bottom with the roof cane.



 Then, pull the steel rope towards the front of the vehicle by means of the sliding roof pulling cane so that the deadbolts on the right and left parts get rid of the stops.



 Pull the sliding roof tow cane towards the front of the vehicle by attaching it to the metal ring on the roof or by attaching it to the green roof slide rope located on the outside of the vehicle.



Sliding roof from outside



Roof Sliding



Roof Sliding

The steel rope is only for the release of the deadbolts from the stops. Do not slide the roof by pulling on the steel rope. The pulling operation should be carried out by holding the ring on the iron part.

#### 4.1.9.1.2. The Sliding Roof Closing

- Engage the latches on the stops by pulling the roof from its front position towards the rear of the vehicle.
- Grab the ring in the middle of the upper profile and pull it downwards.
- Fix the profile by turning the pins on the profile 180° counterclockwise.

There is a roof slide usage label on the right interior door of your vehicles. This label describes how the sliding roof is to be opened and closed.



Roof Sliding Label

#### 4.1.9.2. Lifting Roof

Vehicles may be equipped with a roof lift system. The vehicle has a roof lift use label inside the rear panel.



Roof lift use label



In order for the roof to be lifted, the rear doors must be open.

It provides the opportunity to increase the internal height of the vehicles by +500 mm du-ring loading and to travel up to +100 mm internal height while cruising.

## 4.1.9.2.1. Key Components Of The Roof Lifting

- Mechanical roof lift arm
- Roof lowering button
- Roof lift level adjustment bar

#### 4.1.9.2.2. Lifting the Roof

- For lifting, hold the lifting arm, which is available on all 4 pillars, by the end and raise the roof by pushing and pulling it back and forth with the jack arm logic.
- Do this separately on all 4 pillars.



Traveling with a raised roof for loading is dangerous. The roof must be lowered while traveling.

The roof can be lifted a maximum of 500 mm for loading purposes. By changing the rear panel upper profile, it may be possible to travel with an increase in height up to 50 +50 mm, if desired.



Lifting The Roof



Roof lifting pump



Roof lifting lever



Roof lift level bar

#### 4.1.9.2.3. Lowering The Roof

Button (1) located in the opening in the middle of the lever inward, allowing the raised roof to come down. The rate of the roof descending is proportional to the amount of you press the button.

#### Stopping:

The stop is available on all roof lift arms. It can be adjusted to the desired level with the allen key.



There is a risk of accident during roof lifting operations other than those described.

![](_page_27_Picture_8.jpeg)

Button located in the opening in the middle of the arm

Read the following instructions carefully for safe roof lifting and personal safety;

- It is forbidden to drive the vehicle with the roof raised for loading purposes!!
- Only use your vehicle with the roof properly lowered or raised for travel purposes.

During the lifting of the roof, the following rules must be observed;

- There should be no load or weight (ice, snow, etc.) on the lifted roof.
- When the roof is to be lift in closed areas, at least 600 mm of free space should be left on the vehicle.
- It should be ensured that all safety devices and locks are properly applied on the raised or lowered roof.

 The raised roof must be lowered immediately after loading / unloading.

#### Before Each Ride:

- Snap the roof lift arm fully into place.
- Lock the curtain tensioner.

![](_page_28_Picture_4.jpeg)

- You have opened all the tarpaulin / curtain tensioners,
- Make sure you keep the rear panels open.

![](_page_28_Picture_7.jpeg)

Roof lift pump

![](_page_28_Picture_9.jpeg)

Curtain tension lever

#### **5. TRANSPORTATION PROCESS**

#### 5.1. Pre-Driving Checks

- The loads are distributed evenly to prevent any displacement during driving,
- The load weight is within the permissible limits,
- Obey the regulations of the country that you are in.

#### 5.2. Consideration During Loading-Unloading

![](_page_29_Picture_6.jpeg)

Risk of injury from unprofessional loading and unloading.

#### **Safety Reminders**

- Make sure that the weight or dimensions of the load do not go beyond the technical and legal limits.
- Consider the laws of the countries you are going to and passing through, as well as the laws when loading.
- Comply with all natio-nal/international laws, rules and regulations regarding loading and occupational safety.

## 5.3. Coutions During the Parking and Stopping

 If you are going to park the vehicle in a public traffic area, you must use the necessary marking plate in accordance with legal regulations.

![](_page_29_Picture_14.jpeg)

Some vehicles are suitable for stacking in 1+1 empty state. Vehicles suitable for stacking empty on top of each other have the labels below.

![](_page_29_Picture_16.jpeg)

Empty Stackable 1+1

![](_page_29_Picture_18.jpeg)

Empty Stackable 1+1

#### 5.4. Loading

- The load must be fixed properly. Otherwise, the load may be moved during transportation or emergency brakes.
- Place the Cargo as close as possible to the loading area's floor. The center of the gravity of the load must always be on the center line of the vehicle.
- The load must be fixed with straps or load securing profiles. Be sure that the load is fixed safely.
- After the loading operations, be sure that all the components are suitable for the transportation.

## 5.5. Important Technical Considerations

#### 5.5.1. Modifications on the Trailer

Repairing and modification operations must be made by only authorized services. Otherwise, your vehicle may be out of warranty.

#### 5.5.2. Considerations for Environment

Pollution in all its forms poses a threat to the environment. To keep the pollution at a minimum, collect the waste materials carefully and dispose of them in accordance with the regulations of your country.

#### 5.6. Cleaning The Vehicle

Before starting to clean the vehicle, check the hub and axle lifter for leaks. These may not be visible after the cleaning process is complete. Pay special attention to the following when washing with pressurized water:

- Do not hold the hose nozzle directly to the felts while washing with pressurized water.
- Clean the interior and exterior of the vehicle every time you return.

Do not use flammable liquids or toxic substances for cleaning.

#### 6. LOADING AND LOAD SECURITY

Swap body vehicles are designed to be transported container chassis with gooseneck and flat container chassis vehicles.

Vehicles have 40 ft and 45 ft locking points for container locks.

![](_page_31_Picture_3.jpeg)

#### 6.1. Coil Transportation

With vehicles designed for coil material transport, offers possibilities for securing roll materials.

#### 6.1.1. Coil Transport Well

A "V" shaped groove has been added to the vehicle superstructure floor so that the coil-shaped loads can be safely transported inside the vehicle without shaking, tipping over. This groove is called the coil transport well.

![](_page_31_Picture_8.jpeg)

Coil Well

Using The Coil Transport Well:

 There is a loading label on the rear panel. Determine the position of the coil load in accordance with the values on this label.

![](_page_31_Picture_12.jpeg)

• Lift the boards in the area where the coil will be placed.

![](_page_31_Picture_14.jpeg)

- Place pillar profiles if needed.
- Place the load.

![](_page_31_Picture_17.jpeg)

Removing The Coil Transport Well From Use:

- Remove pillar profiles, if any.
- Place the boards.

![](_page_32_Picture_0.jpeg)

Coil Transport Well Boards

![](_page_32_Picture_2.jpeg)

Openning The Coil Transport Well

![](_page_32_Picture_4.jpeg)

According to the number of coils to be transported, lift the required number of coils carrying chamber board. Uncover the coil transport well. Carry out the loading process of the coils, taking into account all laws, rules and regulations.

The coils are loaded in the coil well in the direction of travel (with the centerlines of the coils parallel to the centerline in the direction of travel of the vehicle).

![](_page_32_Picture_7.jpeg)

Risk of accident due to unprofessional loading of the coils. The coils can slide or coil out of the chamber they are in. Before setting off, make sure the coils are fully inserted and secured in the well. Transport the coils only with "Coil Transport Well" vehicles.

![](_page_32_Picture_9.jpeg)

Transport the coils only with the vehicle which has coil well.

Coils that can be transported in your ve-hicles; minimum diameter: 900 mm and maximum diameter: 2.000 mm. Coil loads must be tied in accordance with EN 12642 with mooring ropes suitable for the coil tonnage. The coils should be placed so that they rest against the pillars.

![](_page_32_Picture_12.jpeg)

Driving with overloaded vehicles can cause serious traffic accidents! It also causes great damage to the semi-trailer and tractor and reduces its life.

Overload: It has bad effects steering, braking and on speed control. Overloaded vehicles drive slow on slopes. On the contrary, they gain more and more speed on downhill descents. This will increase the stopping distance.

It may not be safe to drive with the maximum allowable load in bad weather and mountain passes. Take this into consideration before driving.

![](_page_33_Picture_0.jpeg)

Safety Of Coils

![](_page_33_Picture_2.jpeg)

Safety Of Coils

#### 6.2. Safety Instructions

![](_page_33_Picture_5.jpeg)

Accident hazards arising from loading and unloading and load securing process performed not professionally.

- Make sure that the cargo is properly distributed and in accordance with all laws, rules, and regulations. Check the loading limits, total weight, and axle load capacities. Do not exceed the weight limits which are defined in the user manual and identification plate. Comply with all national/international laws, rules and regulations about loading and occupational safety.
- Place the Cargo as close as possible to the loading area's floor. The center of gravity of the load must always be on the center line of the vehicle. Be all the regulations and laws about load security.

- While all vehicles are being designed, except for specific ones, it is assumed that the load will be distributed evenly on the load carriage surface and the calculations are done accordingly. Thus, the load up to the maximum carrying capacity of your vehicle must be distributed to ensure that equal weights are at the unit areas over the utilized carriage area. When the point loads are to be carried, a rigid distribution platform must be placed under the load that will place the load up to the unit area capacity of the semi-trailer.
- While loading by crane or forklift, make sure that there is no one under and around the load.
- During the loading operation, do not exceed the permissible maximum height. A loading performed within the specified loading limit will ensure that you keep away from traffic accidents.
- It is dangerous and prohibited to fix the load to the vehicle surface via a tool apart from the permissible equipment.

![](_page_33_Picture_13.jpeg)

Forces may affect the vehicle

- A- Brake Force
- **B-** Centrifugal Force
- C- Static Weight Force

![](_page_34_Figure_1.jpeg)

Load distribution

- A- Permissible front axle weight
- B- Permissible maximum weight
- C-Permissible rear axle weight
- D- Driving characteristic change limit

#### 6.2.1. Load Security

The international Highways Regulations specify the maximum loading capacities of tractors, trucks, trailers, semi-trailers along with how and how much of the tonnage and dimensions of these loads are to be secured.

For instance, here, the distribution of the load amount that can be carried by a 6x2 truck per its axle, to the vehicle's weight center according to its horizontal and vertical distance.

![](_page_34_Figure_10.jpeg)

Load Distribution

A- Permissible front axle weight

B- Permissible maximum weight

- C-Permissible rear axle weight
- D- Driving characteristic change limit

#### 6.3. Load Distribution and Load Limits of Tractor Semi-trailer Combination

- Ensure that you made a proper load distribution in compliance with all laws, rules, and regulations.
- In the loading process, take the loading limits, total weight, and axle load capacities into the account.
- Ensure that you have performed the loading in compliance with the laws and regulations of all countries where you drive the vehicle.

The axle loads of the tractor/semi-trailer combination may vary in a broad range in relation to the various loading conditions. Comply with the permissible axle loads specified in the operation manual or the axle manufacturer's manual.

Whenever you are in doubt, have your loads checked at a proper weighing station.

#### \*Axle load: This is the load conveyed by an axle or an axle group.

#### 6.4. Lashing Profiles

You may mount lashing profiles between the lashing rails and fix your cargo quickly. These profiles must be used only for fixing the cargo.

![](_page_34_Picture_25.jpeg)

#### 6.5. Load Security Certification

The vehicle superstructure may have been produced in accordance with the DIN EN12642 legislation. This legislation indi-cates that in case of a possible accident if the load carried inside the vehicle hits the panels, no permanent damage will occur to the panels.

![](_page_35_Picture_0.jpeg)

Load security certification sticker

For the maximum allowable panel strengths, you can check the load security label on the front panel.

Geprüfte Aufbaufestigkeit / Confirmed Bodystrength					
Vorderwand / Frontwall		0,5 P	xx.xxx kg		
Seitenwand / Sidewall		0,4 P	xx.xxx kg		
Seitenwand Doppelstock / Sidewall Doubledeck		0,5 P	xx.xxx kg		
Rückwand / Rearwall		0,3 P	x.xxx kg		
P = xx.xxx kg					
Fahrzeugaufbau entspricht	EN 12642-XL				
Vehicle body in complicance with					

Front Wall load securing sticker

#### 7. INSPECTION AND MAINTENANCE

#### 7.1. Safety Instructions

![](_page_36_Picture_2.jpeg)

There is a risk of accident that may arise in terms of a vehicle that is not built or built insufficiently. Read the following safety instructions carefully.

- Obey all traffic laws, rules and regulations.
- Comply with all environmental regulations. When removing operation, maintenance and cleaning residues, act according to these rules.
- Maintenance operations should be carried out by authorized services.

![](_page_36_Picture_7.jpeg)

If the EBS warning lamp comes on for any reason in the vehicle, immediately park the vehicle in the appropriate place and contact the nearest authorized service.

#### 7.2. Main Principles

The purpose of the maintenance operations on the vehicle is to provide the following:

- Always maintain the operating status of the semi-trailer,
- To prevent unexpected breakdowns and to extend the life of the vehicle,
- To prevent permanent damage to the semi-trailer,
- To ensure that the semi-trailer maintains its value,
- Reducing repair time for unavoidable repairs,
- The vehicle should be regularly cleaned and kept clean.

![](_page_36_Picture_17.jpeg)

#### 7.3. Cataphoresis Coating

Your vehicle chassis or components may be cataphoresis coated.

Electro-coating (Cataphoresis) method is a coating method based on the accumulation of paint on the part with electric current. The most complicated parts and assemblies that require a high level of performance in terms of painting quality are covered.

If there is any damage on the cataphoresis coated areas, it should be repaired quickly by an Authorized Service.

#### 7.4. Galvanized Coating

Your vehicle chassis or components may be galvanized.

White mottling on the hot-dip galvanized surface of new vehicles during the winter is normal and does not affect the quality or life of the coating. Galvanized surfaces can be washed with water at a maximum temperature of 50 °C for the first 3 months.

## 7.5. Periodic Maintenance and Controls

For periodic maintenance and checks, see the warranty and maintenance manual.

#### 7.6. Trouble Shooting

#### 7.6.1. Safety Regulations

![](_page_36_Picture_29.jpeg)

Read the following safety regulations.

- Comply with all laws, rules, and regulations to prevent accidents.
- Comply with all environmental protection rules. Dispose of process residues, cleaning aids and other residues in accordance with these rules.
- Troubleshooting work should only be carried out by trained personnel.
- Before troubleshooting, park the vehicle on a firm, and even surface and level it, and make sure that it is secured against sliding/tipping.

- Upon completion of the repair, ensure that all protective devices are correctly placed and secured.
- Only use original spare parts!

In cold weather, ice may form on the floor. Care should be taken while walking.

For the repair process of the malfunctioning product, follow the instructions given by the manufacturer of that product in the user manual.

![](_page_38_Picture_0.jpeg)

![](_page_38_Picture_1.jpeg)

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![](_page_38_Picture_4.jpeg)