

Operating Instruction

Wheels-in trailer

Part 2 - HU (750 kg / 1,3 t / 1,5 t)



en



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Your dealer

Name

Address

Telephone

Email@.....



Please enter the name of your dealer.
Please fill in the service card on the back page and send it to
Humbaur GmbH.
Ask for the handover inspection to be recorded when accepting your trailer.

Your trailer:

Model

Type (abbreviation)

Vehicle
Identification
Number (VIN)

Registration number



Please enter your trailer type and the identification.
You will find the dimensions / technical data of your trailer in the
vehicle documents.

Notes on use

This operating instruction manual must be carefully read, understood and complied with in full by anyone who is responsible for the trailer of Humbaur GmbH and its modules.

Humbaur GmbH accepts no liability for damage or failures which arise through disregard of this manual!



Read and observe the operating instruction manual with all the instructions, warnings and notes before driving for the first time!

Please note that all illustrations are representative and may differ from the actual appearance / equipment.



Also read and observe the instruction manuals for components such as axles, support devices, cable winches, etc.!

PART 2

This operating instruction manual "Wheels-in trailer / Part 2 - HU" is intended for you as the user of a ready-to-use trailer.

It provides detailed instructions for handling a wheels-in trailer and its specific accessories.

It contains supplementary information on safe operation, care / cleaning, maintenance / servicing and troubleshooting of the trailer.

PART 1

For all other general information on trailers up to 3.5 to, see the operating instruction manual, "Trailers up to 3.5 to / Part 1 - General".

This specific operating instruction manual (Part 2) for your trailer is provided on the enclosed CD. You can also download it from www.humbaur.com in the section: **Download – Operating Instructions.**

The complete technical documentation is part of the product and should be kept in the driver's cab of the traction unit for reference at all times.

Key details for the handling, operation and the requisite care and maintenance work of the trailer are referred to in this operating instruction manual, and errors can only be avoided and trouble-free operation guaranteed if you are familiar with them.

Errors excepted. The manufacturer:

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reserves the right make technical changes to the design, equipment and accessories with respect to the information and illustrations in the operating instruction manual.

As a result, no claims whatsoever can be derived from the information, illustrations and descriptions.

Obligations of the operator

The trailer may only be operated in perfect condition.

Ensure that the operating instruction manual is included with the trailer e.g. if it is sold.

Only utilise trained or instructed personnel.



Ensure that the operating instruction manual is complied with in all life cycle phases of the trailer and that the prescribed personal protective equipment is worn.

Provide the requisite operating and auxiliary materials.

Use the **keyword index** from page **5** to search for **specific** topics.



Refer to the technical documentation of the installed components for additional information.

1 Safety

You will find safety information for the correct handling of the trailer in the "Safety" chapter from page **7**.
Read this chapter before driving for the first time.

2 General information

You will find details on trailer identification in the "General information" chapter from page **11**.

3 Operation

You will find information on loading and unloading, correct load distribution and parking in the chapter on "Operation" from page **17**.

4 Operating the chassis

You will find valuable information on the operating elements of the chassis and support devices in the chapter on "Operating the chassis" from page **25**.

5 Operating the body / load securing

You will find out how to handle the body, drop sides and extensions correctly or about the equipment you can use to secure the load in the chapter on the "Body" from page **29**.

6 Electrical system

You will find information on the lighting in the chapter on the "Electrical system" from page **55**.

7 Testing, care and maintenance

You will find out more about the work required to maintain operational safety and the value of your trailer in the chapter on "Testing, care and maintenance" from page **57**.

8 Troubleshooting guide

You will find information on troubleshooting and important service addresses in the "Troubleshooting guide" from page **63**.

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1

Safety

Intended use

The following is permitted:

- Transport of bulk goods (e.g. sand, gravel, stone, etc.).
- Transport of loose load materials (e.g. wood, wood chips).
- Transport of materials and load materials as solid / packaged load units (e.g. bricks on pallets).
- Transport of large loads as a flat-bed variant, without drop sides and stanchions.
- Transport of long loads (e.g. square timber, profiles).
- Load securing on the cargo bed with lashing brackets using form and force load securing methods.

Qualification of the personnel

HUMBAUR trailers and bodies and their operating components may only be used and maintained by personnel who are aware of:

- this operating instruction manual.
- the trailer and the associated traction unit.
- the operating and maintenance instructions of the suppliers.
- the German Road Traffic Act (StVO) and German Road Traffic Licensing Regulations (StVZO).
- all the respective health and safety / accident prevention regulations as well as other safety, occupational health and road traffic regulations.
- the basic requirements of goods transport.

Reasonably foreseeable misuse

Any use extending beyond the prescribed transport applications is regarded as other than intended.

In particular, this includes:

- Driving when the side wall extension, e.g. steel mesh extension, aluminium extension, are not secured.
- Transporting of persons or animals.
- Driving with insufficient load securing.
- Driving with folded down / unsecured folding supports at the rear.
- Driving as flat-bed without drop sides, but with inserted stanchions.
- Driving with unlocked drop sides.
- Driving with side wall extensions / H-frame not screwed into stanchions.
- Non-observance of the safety instructions in the operating instruction manual "Trailers up to 3.5 to, Part 1 - General".

The manufacturer:

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rejects any damage which arises through disregard of this manual – the risks are borne solely by the user.

Liability exclusion

Any liability of the manufacturer becomes null and void if:

- the trailer and its components are altered without authorization.
- the original parts or conversion parts / accessories approved by Humbaur GmbH are replaced by other components.
- retrospective changes have been made to the trailer (e.g. new drill holes in the frame or the re-boring of existing drill holes in the frame). This is considered by Humbaur GmbH to be a structural change, and the type approval therefore becomes null and void.
- non-approved accessories or third-party spare / component parts which are not original HUMBAUR parts are attached or installed. The type approval of the trailer, possibly even the insurance cover, becomes null and void.
- care and maintenance intervals prescribed by the manufacturer are not complied with.

Any risks and liability exclusions resulting from this also exist if:

- Acceptance inspections have been carried out by inspectors / authorised experts of the technical inspection authorities or officially recognised organisations.
- Official approvals are available.

Safety first!**WARNING****Driving with folded down / unsecured drop sides / side wall extensions!**

Folded down / unsecured drop sides and side wall extensions may be torn off and flung away while driving - risk of impact / crushing!

Folded down drop sides cover the trailer lights / trailer markings – increased accident risk!

- ▶ Before driving off, check that all drop sides / side wall extensions are closed and secured.
- ▶ Remove all drop sides / side wall extensions / stanchions when using the trailer as a flat-bed.

**CAUTION****Single-axle trailer snaps open!**

Single-axle trailers can snap open during loading / unloading and parking, and crush fingers / hands / feet or collide with you.

- ▶ Only park the empty trailer on the jockey wheel or the drawbar support.
- ▶ Only couple / uncouple the trailer when it is empty.
- ▶ Make use of the folding supports during loading / unloading or couple the trailer to the towing vehicle.

Sources of danger

Take note of the following points without fail:

- Coupling and uncoupling a trailer:
Standing in the danger area is prohibited.
- Driving with unsecured support devices.
- Clearance heights on the route, while loading and unloading.
- Exceeding the permissible gross weight or one-sided overloading through incorrect loading.
- Poorly secured or unsecured goods and / or body components.
- Reversing - keep an eye on the rear area.
- Excessive twisting while manoeuvring.
- Overloading of the trailer, axles and brakes.
- Overstressing caused by fitting incorrect wheel and tyre sizes.
- Use of wheels with incorrect offsets, one-sided run-out or centrifugal imbalance.
- Overstressing as a result of reckless and inappropriate driving or handling.
- Impact and shock stress of the axles.
- Speed inappropriate for the road conditions and the loading status of the trailer, especially in bends.
- The parked trailer can tilt or sink in on soft uneven ground.
- Driving on severe inclines.
- Loading / unloading of the trailer in an area with a steep gradient.
- Failure to clean the cargo bed after every use.

In the chassis area

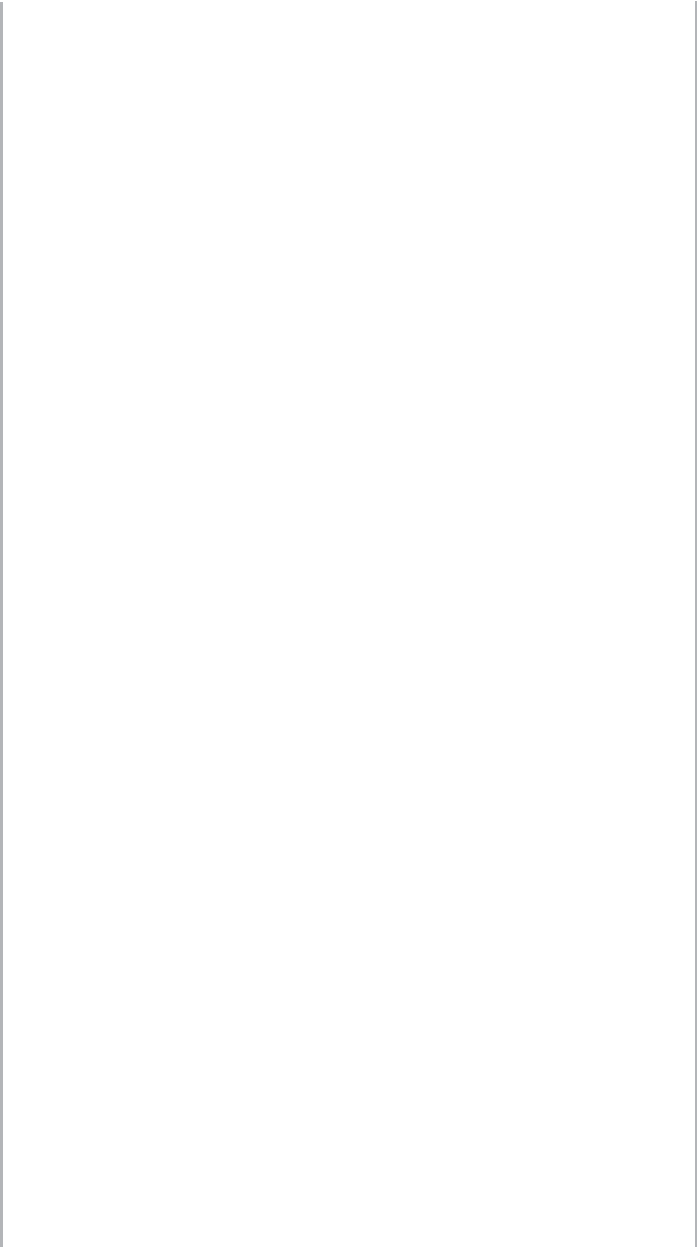
Note the following in general:

- Establish the electrical connections.
- Retract the support devices and lock them.
- Check the tyres and rims for damage.
- Check the tyre pressure, including the spare wheel.
- Check the tightening torque of the wheel nuts.
- In the case of a new trailer, re-tighten the wheel nuts after 50 km and after the first journey with a load.
- Secure the:
spare wheel / spare wheel holder, wheel chocks
- Check the trailer lights. Repair defective lights.
- Comply with the permissible gross weight.
- Check the number plate and signs.
- Check that the trailer coupling is in perfect condition.

In the body area

Close and secure all body components, such as:

- Drop sides
- Side wall extension
- Steel mesh extension
- Aluminium extension
- H-frame
- Flat cover
- Tarpaulin cover / frame
- Toolbox
- Load securing equipment

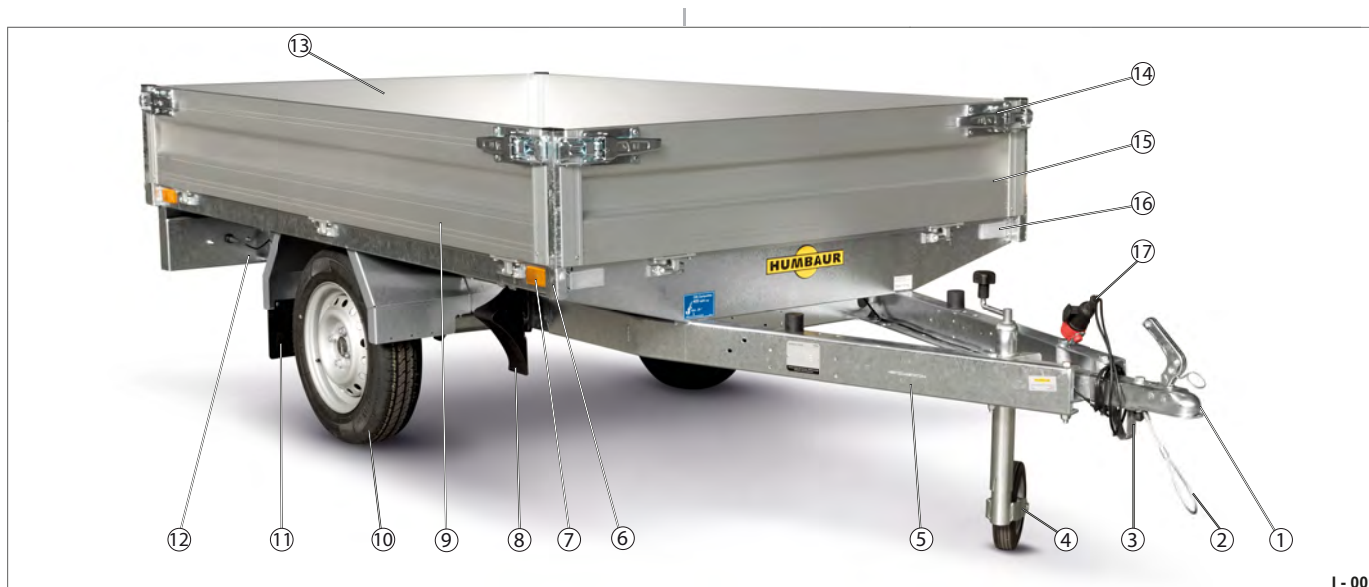




2

General information

HU wheels-in trailer



I - 001

Fig. 1 General view of the HU, unbraked

- 1 Ball coupling
- 2 Safety cable
- 3 Drawbar support
- 4 Jockey wheel
- 5 V-drawbar
- 6 Stanchion
- 7 Side reflector / yellow reflector
- 8 Wheel chock
- 9 Side drop side
- 10 Wheel (tyre)
- 11 Mudguard (with / without splash guards)
- 12 Chassis
- 13 Rear drop side
- 14 Drop side latch
- 15 Front drop side
- 16 Front reflector / white reflector
- 17 Electrical plug

The HU is equipped with anodised aluminium drop sides. All of the drop sides can be folded down and removed. The locks are attached to the outside of the drop sides. The 15 mm thick floor plate is made of multiple layers of laminated wood. The HU is equipped with a jockey wheel on the V-drawbar as standard. The HU, unbraked, with a gross weight of up to 750 kg, permits a range of applications for payloads of up to 520 kg.



I - 002

Fig. 2 General view of the HU, braked

- 17** Overrun hitch
- 18** Brake accumulator
- 19** Automatic jockey wheel
- 20** Brake linkage

The HU, braked, with a gross weight of up to 1.3 t, permits a range of applications for payloads of up to 1010 kg.

The HU, braked, with a gross weight of up to 1.5 t, permits a range of applications for payloads of up to 1210 kg.

The load is secured with the aid of 4 tie-down brackets recessed into the profile of the trailer frame.

The following optional accessories are available for the HU:

- Side wall extension
- Steel mesh extension
- Aluminium extension
- H-frame
- Cover net
- Flat cover
- Tarpaulin cover / frame
- Folding supports
- Toolbox
- Spare wheel
- Wheel shock absorbers

The tow coupling can be executed as a towing eye as an option.



I - 003

Fig. 3 Rear view

- 21** Rear reflector / red reflector
- 22** Tail light
combined with a triangular reflector,
indicator, brake light, rear fog light
optional reversing light, position lamp
- 23** Number plate holder
- 24** Underride protection
- 25** Drop side hinge

Load securing



Fig. 4 Tie-down brackets, retractable

Side wall extension



Fig. 6 Attached to stanchions

Aluminium extension



Fig. 8 Attached to stanchions

Folding supports



Fig. 5 Manually adjustable, at the rear

Steel mesh extension



Fig. 7 Attached to stanchions

Flat cover



Fig. 9 Cargo bed with flat cover

Tarpaulin cover / frame



I - 011

Fig. 10 Tarpaulin cover with a height of 1300 / 1600 mm

H-frame



I - 012

Fig. 12 Secured in stanchions on the front drop side

Toolbox



I - 013

Fig. 14 Toolbox, on the side of the chassis

Cover net



I - 014

Fig. 11 Cargo bed with cover net

Spare wheel



I - 010

Fig. 13 Spare wheel / holder on front drop side

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3

Operation



Take note of the safety / driving instructions for driving with the towing vehicle and trailer stated in the operating instruction manual "Trailers up to 3.5 to / Part 1 - General".



Prerequisites for safe driving with a trailer:

- The body must be fully closed while driving.
- All drop sides and stanchions must be removed for use of the trailer as a flat-bed.
- The rear drop side must be removed when driving with a projecting load (through-loading function).
- The load must be properly tied down / secured.
- Bulk goods must be covered (e.g. by a tarpaulin).
- The permissible gross weight and the axle loads must be complied with.
- Keep the centre of gravity of the load as low as possible: Distribute the goods evenly - avoid point / one-sided load distribution.
- Comply with the load securing guidelines pursuant to VDI 2700.



WARNING

Driving with support devices which have not been retracted and secured

The support devices (jockey wheel / folding supports) could be torn off and hurled away while driving - risk of accidents!

- ▶ Before setting off, make sure that all support devices have been retracted and secured.

Positional stability

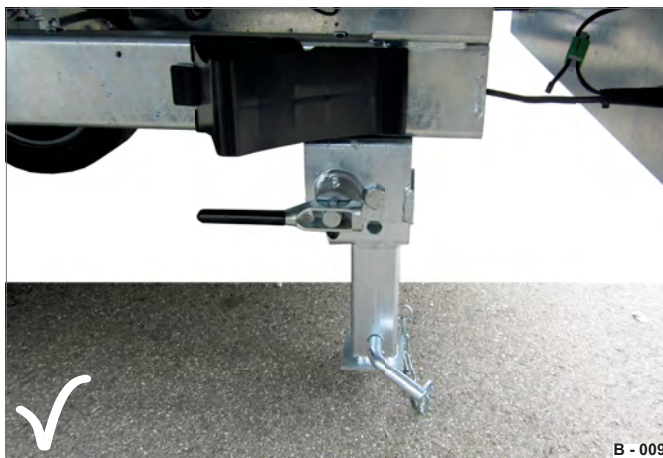


Fig. 1 Folding supports lowered

The folding supports can be used for parking / setting down the trailer with a load. The folding supports prevent the chassis from tipping to the rear.

NOTICE

Loss of stability during loading / unloading

The rear axle and the chassis could be damaged / overloaded.

- ▶ Before loading / unloading the trailer, check that the folding supports have been lowered and locked - these stabilize the trailer and relieve the axle.

Loading and unloading



WARNING



Loading / unloading with a crane

The fixing attachment could tear and the load drop - suspended loads can hit / crush people!

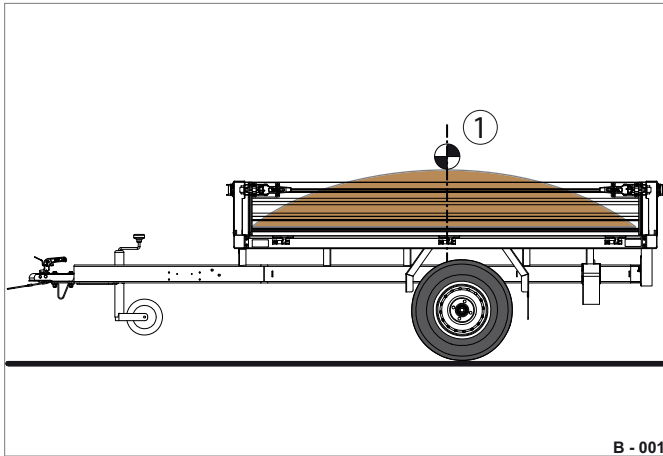


- ▶ Use .
- ▶ Never stand under suspended loads.



- ▶ Keep people out of the danger area.

Load distribution and permissible weights



B - 001

Fig. 2 Centre of gravity indication

1 Centre of gravity of the load

Stow away / distribute the load in such a way that the centre of gravity of the overall load is above the longitudinal centre line of the trailer as far as possible.

Keep this centre of gravity as low as possible.

Load your trailer within the limits of the permissible gross weight, the permissible axle loads and the permissible drawbar load.

Also aim for an even weight distribution in the case of a partial load, so that the axle is evenly loaded and a sufficient drawbar load is provided.

The maximum load capacity of the trailer can only be obtained if the overall centre of gravity of the load is within the permitted range.

Restrict point loading of the cargo bed to the permissible extent through suitable load distribution measures.

Loads	Max. weights
perm. gross weight	750 kg
Drawbar load (S)	50 kg
Unladen weight	approx. 230 kg
Load capacity	approx. 520 kg

Tab. 1 HU 752314

Loads	Max. weights
perm. gross weight	1,300 kg
Drawbar load (S)	50 kg
Unladen weight	approx. 250 kg
Load capacity	approx. 1010 kg

Tab. 2 HU 132314

Loads	Max. weights
perm. gross weight	1,500 kg
Drawbar load (S)	50 kg
Unladen weight	approx. 290 kg
Load capacity	approx. 1210 kg

Tab. 3 HU 152314

Uncoupling the trailer

In the wheels-in trailer, the wheel chocks are attached to the chassis in the front section of the trailer as standard.



WARNING



Incorrectly uncoupled trailer

The trailer could start moving and tip over. People could be struck by the trailer and run over - risk of crushing!

- ▶ Only uncouple the trailer when it is empty.
- ▶ Use wheel chocks to secure the trailer from rolling away before uncoupling.

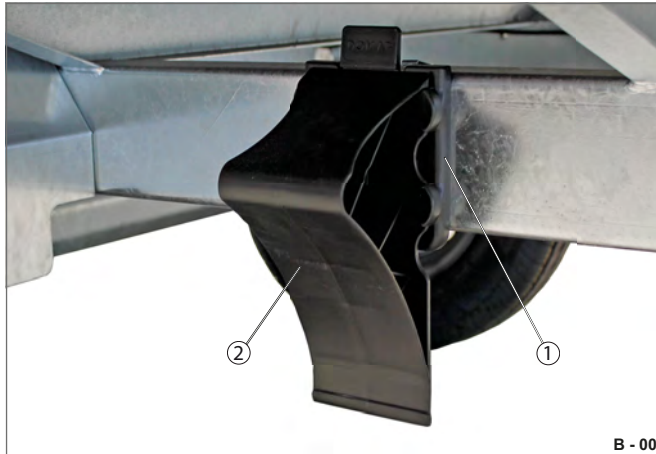


WARNING

Unsecured wheel chocks

Unsecured wheel chocks could fall off while driving - risk of accidents!

- ▶ Check that the wheel chocks are secured before driving off.
- ▶ Check the holders for damage at regular intervals.



B - 003

Fig. 3 Wheel chock in the holder

- 1 Holder
- 2 Wheel chock



Wheel chocks must always be available. Replace any lost or damaged wheel chocks immediately.



B - 002

Fig. 4 Trailer braked, parked

- 1 Hand brake lever, applied
- 2 Jockey wheel, lowered



In addition to the parking brake, the trailer must be secured with wheel chocks on slopes / gradients and when uncoupled.

Manual manoeuvring of the trailer



Fig. 5 Manual manoeuvring of the trailer

- ▶ Pull / push the trailer in the desired direction.
- ▶ Ensure that your feet do not get under the jockey wheel.



- ▶ Use .
- ▶ Park the trailer on level ground / an even surface wherever possible
 - not on a slope or on an uphill / downhill incline.
- ▶ Apply the handbrake.

Parking an unbraked trailer

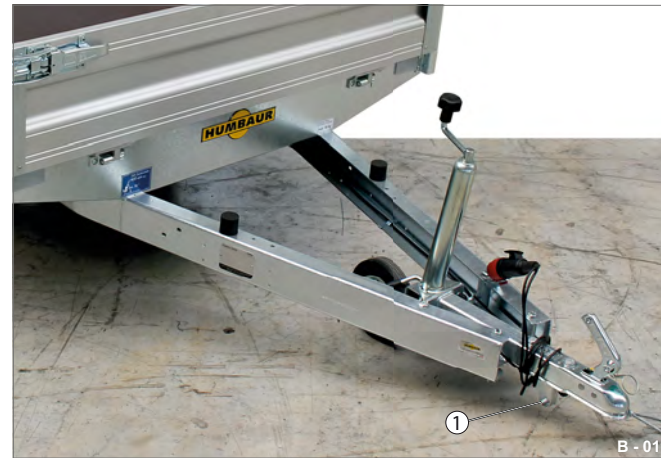


Fig. 6 Trailer, unbraked, in the parking position

1 Drawbar support

- ▶ Move the jockey wheel all way upwards as far as it will go.
- ▶ Place the trailer carefully on the drawbar support (Fig. 6 /1).

Manipulating the wheel chocks

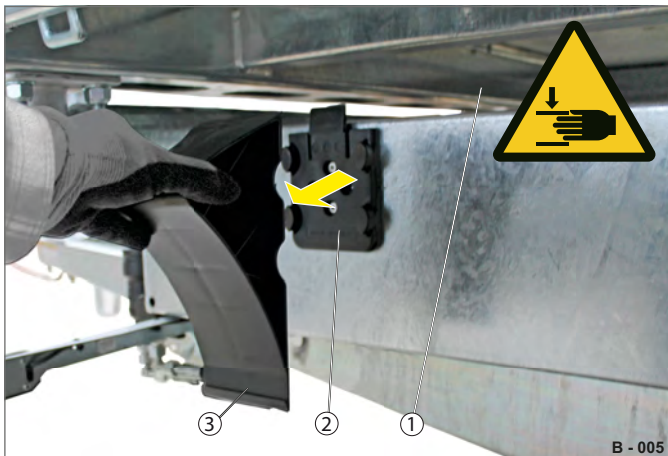


Fig. 7 Risk of crushing

- 1 Loading bridge
- 2 Holder
- 3 Wheel chock



Take note of the safety instructions for manipulating the wheel chocks in the operating instruction manual, "Trailers up to 3.5 to / Part 1 - General".



CAUTION



Removing wheel chocks

You could crush your hands / fingers when removing the wheel chocks. You could also hit your head on the chassis.



- ▶ Use .
- ▶ Manipulate the wheel chocks slowly and carefully.
- ▶ Avoid jerky movements.

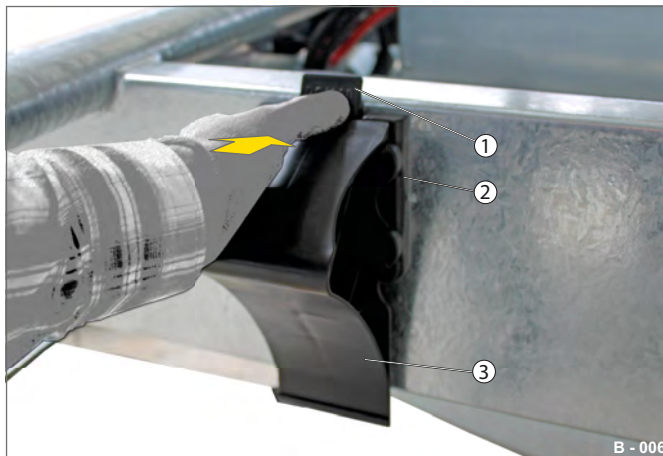


Fig. 8 Removing the wheel chock

- 1 Lever
- 2 Holder
- 3 Wheel chock

- ▶ Press the lever (Fig. 8 /1) of the holder (Fig. 8 /2).
- ▶ Remove the wheel chock (Fig. 8 /3) at the same time.
- ▶ Place the wheel chocks in the holders after use.



Fig. 9 Wheel chocks positioned

- 1 Wheel chock

- ▶ Place the complete surface of the wheel chocks (Fig. 9 /1) under the wheels. Consider the direction of inclination of the trailer (e.g. on a slope).

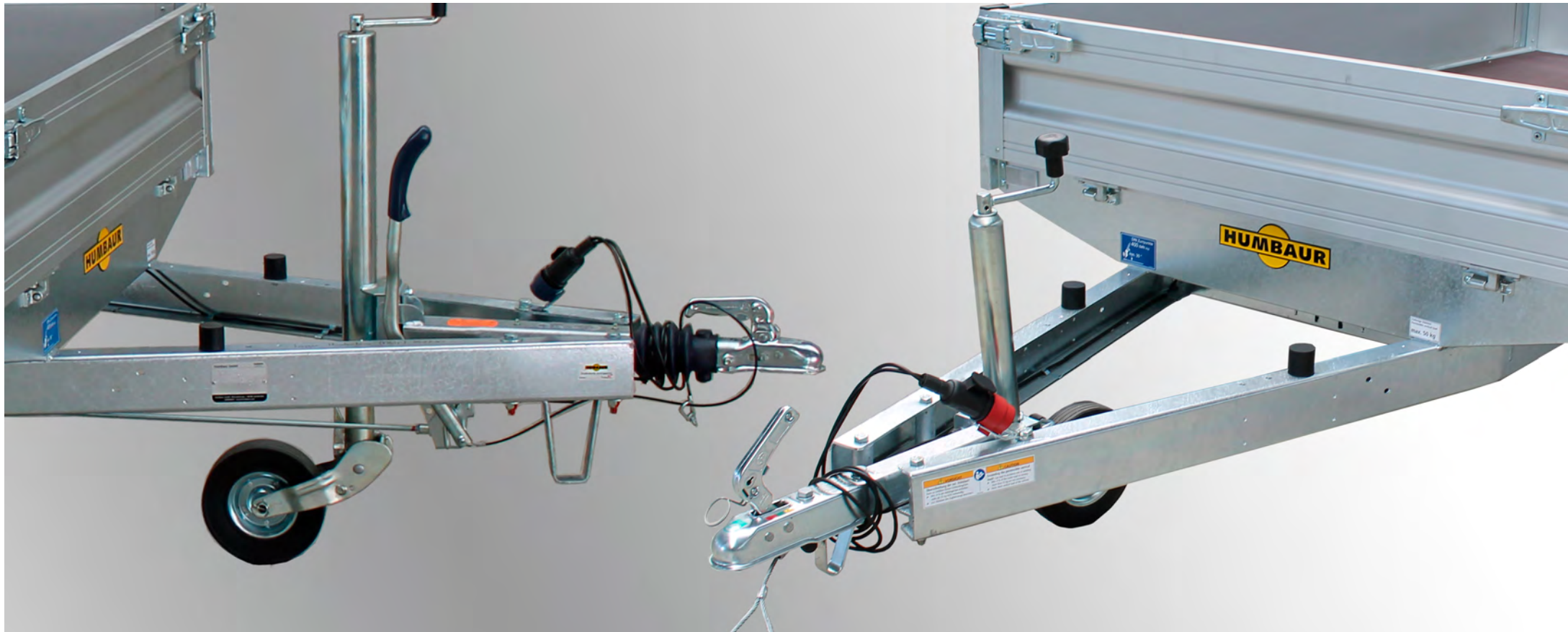
Check before departure

- Trailer has been correctly coupled.
- Electrical plug has been connected.
- Parking brake has been released.
- Folding supports have been retracted and secured.
- Jockey wheel has been raised.
- Drop sides / extensions / flaps have been closed and secured.
- Toolbox has been locked.

Check when parking

- Trailer has been correctly uncoupled.
- Parking brake has been applied.
- Wheel chocks have been positioned.
- Electrical plug has been parked.
- Drop sides / extensions / flaps have been locked.
- Toolbox has been locked.





4

Operating the chassis

Folding supports

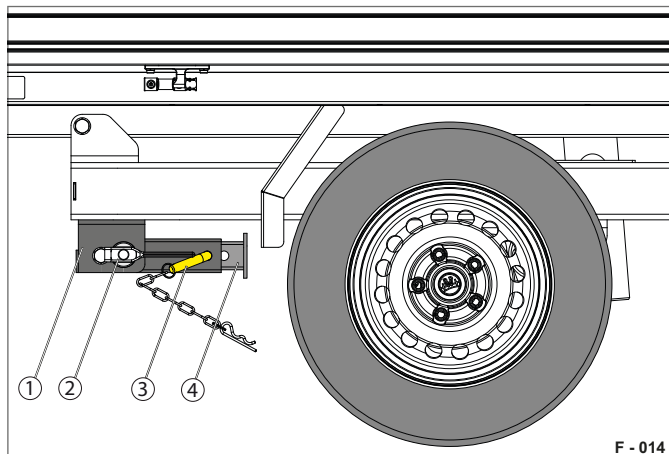


Fig. 1 Folding supports folded in at the rear (driving position)

- 1 Fastening bracket
- 2 Spring latch
- 3 Plug pin with R-clip
- 4 Adjustable support (adjustable)

The folding supports stabilize the trailer while it is being loaded and unloaded.

The folding supports relieve the weight of a loaded trailer when it is parked long-term.

The folding supports protect your trailer from damage caused when loading and unloading.

Folding down the folding supports

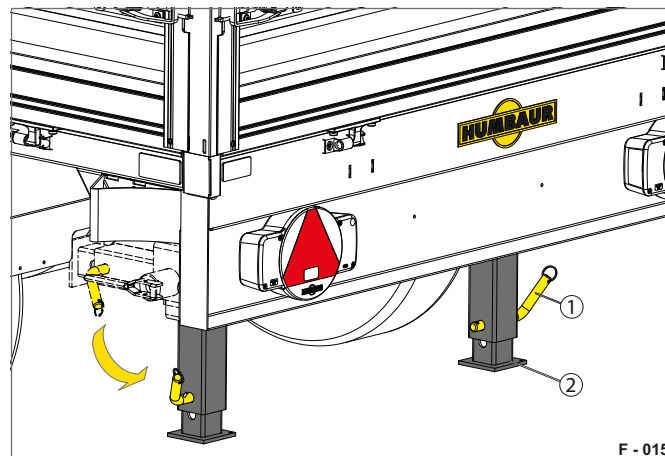


Fig. 2 Folding supports folded down

- 1 Plug pin
- 2 Adjustable support

- ▶ Open the spring latch (Fig. 3 /1).
- ▶ Fold down the folding supports (Fig. 3 /2) before loading / unloading.
- ▶ Close the spring latch.

Height adjustment

- ▶ Remove the R-clip (Fig. 1 /3) from the plug pin (Fig. 2 /1).
- ▶ Remove the plug pin from the adjustable support (Fig. 2 /2).
- ▶ Adjust the adjustable support.
- ▶ Secure the adjustable support with the plug pin in one of the holes.
- ▶ Secure the plug pin with the R-clip.

Folding up the folding supports

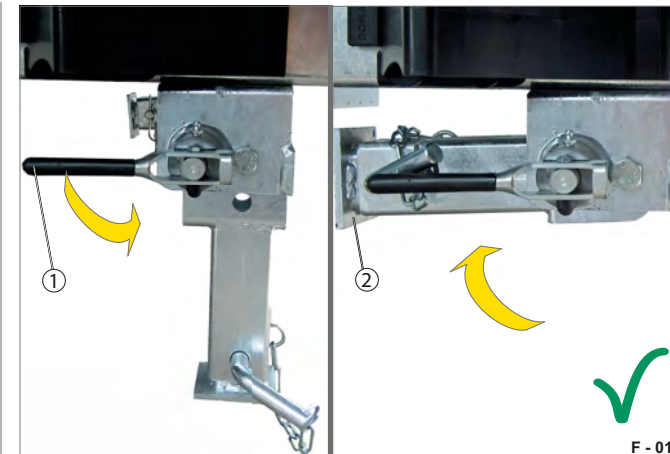


Fig. 3 Folding supports

- 1 Spring latch
- 2 Adjustable support



The folding supports must be folded up and secured before driving off.



Instructions for operating the folding supports are provided in the operating instruction manual

- ▶ Open the spring latch (Fig. 3 /1).
- ▶ Fold up the folding supports (Fig. 3 /2) before driving off.
- ▶ Close the spring latch.

Toolbox

A lockable toolbox is available as an option.

The toolbox is located on the front of the chassis on the right in the direction of travel.

The toolbox is used for stowing away lashing straps, tools, cleaning equipment, etc.

The toolbox is not waterproof.



WARNING

Unlocked toolbox

Objects could fall out while driving.

The lid could be torn off - risk of accidents!

- ▶ Check that the toolbox is closed and secured before driving off.
- ▶ Lock the toolbox to prevent unauthorised access.

Opening the toolbox

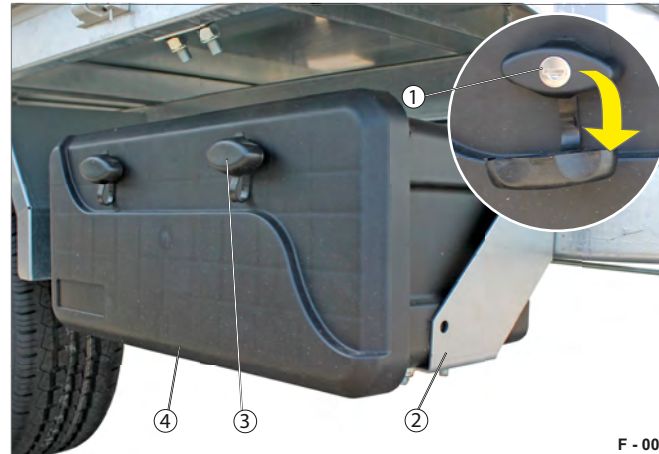


Fig. 4 Toolbox locked

- 1 Lock with lock cylinder
- 2 Fastening bracket
- 3 Cover
- 4 Lid



Please note the specified surface loading (see manufacturer's specification on the inside of the lid, approx. 30 kg).

- ▶ Fold down the covers (Fig. 4 /3) of the lock cylinders (Fig. 4 /1).
- ▶ If required, use a key (Fig. 5 /1) to open the locks (Fig. 4 /1).
- ▶ Open the locks by turning.
- ▶ Fold down the lid (Fig. 4 /4).
- ▶ Watch out for falling objects when opening the lid.

Closing the toolbox



Fig. 5 Toolbox open

- 1 Key
- 2 Toolbox
- 3 Lid

- ▶ Fold the lid (Fig. 5 /3) upwards.
- ▶ Close the locks by turning.
- ▶ If required, use the key (Fig. 5 /1) to lock the toolbox. The lid is locked.
- ▶ Close the cover (Fig. 4 /3). The toolbox has been locked and secured.

Spare wheel holder



Fig. 6 Spare wheel holder, from the inside

- 1 Mounting bolts
- 2 Front drop side

A spare wheel holder (Fig. 7 /1) is available as an option. The spare wheel holder may only be used to attach and carry a spare wheel (Fig. 7 /3).

The spare wheel holder is mounted on the front drop side (Fig. 6 /2).



No additional holes may be made in the chassis / drawbar for attachment of the spare wheel holder. The spare wheel holder / spare wheel may not be used for load securing.

A spare wheel may only be retrofitted at the provided attachment points.

Screwing the spare wheel into place



Fig. 7 Spare wheel holder with spare wheel

- 1 Spare wheel holder with wheel bolts
- 2 Spherical collar nut
- 3 Spare wheel

Carrying a spare wheel at the front of the trailer increases the drawbar load.

- ▶ Before driving off, make sure that the max. drawbar load is not exceeded.
- ▶ Carefully place the defective wheel on the wheel bolts of the spare wheel holder (Fig. 7 /1).
- ▶ Screw the wheel on tightly with the spherical collar nuts (Fig. 7 /2).
- ▶ Do not exceed a tightening torque of 80 Nm.
- ▶ Check the air pressure of the spare wheel at regular intervals.
- ▶ Check the secure attachment of the spare wheel (max. 80 Nm) at regular intervals.

NOTICE

Tightening up spare wheel nuts too tightly

The wheel rim could be deformed.

- ▶ Tighten the spare wheel nuts to a maximum of 80 Nm.



The spare wheel, spare wheel holder and securing elements must be properly secured against loss. Spare wheels transported loose (on the cargo bed) must be securely tied down.



5

Load securing / Operating the body



A - 001

Fig. 1 Body components

- 1 Front drop side
- 2 Side drop side
- 3 Rear drop side
- 4 Tension lock
- 5 Side wall hinge

The body mainly consists of:

- Drop sides, side
- Rear drop side
- Front drop side
- Tie-down brackets / lashing rings
- Drop side extension (optional)
- Steel mesh extension (optional)
- Aluminium extension (optional)
- H-frame (optional)
- Tarpaulin cover / frame (optional)
- Flat cover (optional)
- Cover net (optional)



A - 066

Fig. 2 Danger points



WARNING



Climbing on the body

The body does not provide sufficient stability for people.

The components of the body could give way or break - Falling hazard!

- ▶ Do not use the components of the body as a ladder.
- ▶ Do not climb on trailer components such as the drawbar, cargo bed, slot-in slats, wheels, etc. to handle the tarpaulin cover.
- ▶ Use a stable ladder for carrying out work on the body.



WARNING



Objects on the trailer!

Ice, snow, branches and other objects could fall from the body / cargo bed while driving - risk of accidents!

- ▶ Before setting off, make sure that there are no pools of water, ice, snow, branches or other objects on the body / cargo bed. Remove these if required.
- ▶ Use a stable ladder where required.



WARNING



Unsecured / slipped load

The load can fall off the trailer when opening the tensioning elements - crushing / impact risk!

- ▶ Ensure that the load is upright and has not slipped.
- ▶ Open the tensioning elements carefully and secure an unsecured load which has slipped.
- ▶ Open body locking mechanisms from a position outside the swivelling ranges of the body components (drop sides).

Opening and closing drop sides / locks

The drop sides enable form-fitting load securing.



Driving with unlocked drop sides is not permitted by law!

Note / comply with the following without fail when handling:

- Stand to one side of the drop side before releasing the locks.
- Release the locks in turn and hold the drop side tightly at the same time.



DANGER

Driving with open drop sides

People may be caught and dragged along.

The load could fall off - accident risk!

- ▶ Before setting off, make sure that all drop sides have been closed, inserted and secured.




CAUTION



Opening and closing drop sides and locks

Fingers / hands could be crushed when opening / closing drop sides and locks.



- ▶ Use  .
- ▶ Fold the drop sides down in a controlled way - do not allow them to fall down.
- ▶ Do not touch a drop side you intend to latch directly in the area where the drop side stanchions / locks are.
- ▶ Close the tension lock with a flat hand.



CAUTION



Drop sides under pressure from a load

The drop sides could fly open when they are being opened - impact risk!

- ▶ Check to make sure that the goods are not pressing against the drop side before unlatching the drop side locks.
- ▶ If required, reposition the load beforehand.
- ▶ Stand to the side when opening the drop side - outside the swinging range.



CAUTION



Removed drop sides

Removed drop sides could become an obstacle - trip hazard!

- ▶ Do not place removed drop sides directly in the area required for loading and unloading.
- ▶ Lay the drop sides flat on the ground - do not place them on end.

Operating the tension lock



Fig. 3 Tension lock, secured

- 1 Stanchion
- 2 Locking lug
- 3 Latch
- 4 Bolt bracket
- 5 Bolt handle

The tension locks secure the drop sides in the stanchions.

Releasing the tension lock

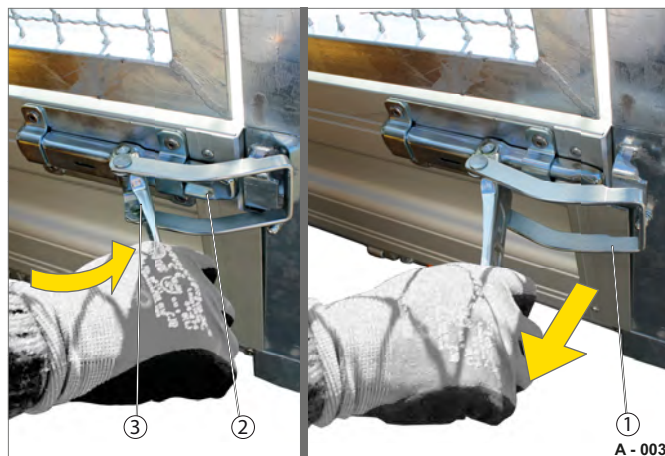


Fig. 4 Releasing the tension lock

- 1 Bolt bracket
- 2 Latch
- 3 Bolt handle

- ▶ Release the tension lock on one side.
- ▶ Pull the bolt handle (Fig. 4 /3).
The bolt bracket (Fig. 4 /1) is released.
- ▶ Swing the bolt bracket downwards.
- ▶ Release the tension lock on the other side of the drop side.
- ▶ While doing so, hold the drop side with one hand.

Locking the tension lock

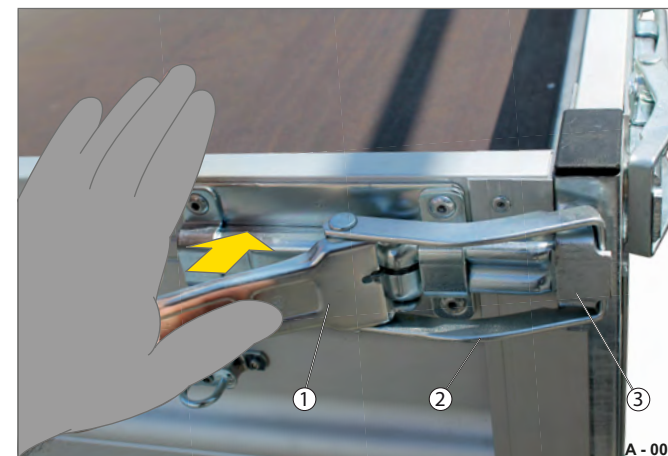
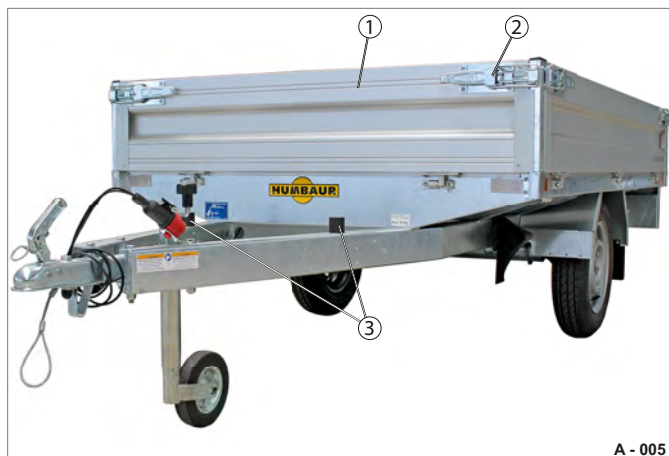


Fig. 5 Locking the tension lock

- 1 Bolt handle
- 2 Bolt bracket
- 3 Locking lug

- ▶ Place the bolt bracket (Fig. 5 /2) in the locking lug (Fig. 5 /3).
- ▶ Use a flat hand to press in the bolt handle (Fig. 5 /1) towards the drop side until it engages.
The drop side has been secured against unintentional opening while driving (Fig. 3).

Handling the front drop side



A - 005

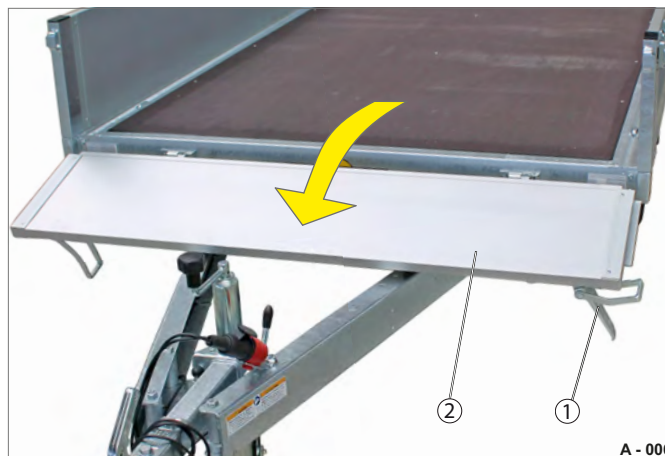
Fig. 6 Front drop side closed

- 1 Front drop side
- 2 Tension lock
- 3 Rubber pads

The front drop side (Fig. 6 /1) can be folded down and removed.

The front drop side enables form-fitting load securing.

Folding down the front drop side



A - 006

Fig. 7 Front drop side open

- 1 Tension lock
- 2 Front drop side

- ▶ Release the tension lock (Fig. 7 /1)
- see "Releasing the tension lock" on page 32).
- ▶ Carefully fold down the front drop side (Fig. 7 /2) in a controlled manner.
The front drop side rests on the rubber pads (Fig. 6 /3).

Folding up the front drop side



A - 007

Fig. 8 Front drop side closed

- 1 Tension lock
- 2 Front drop side

- ▶ Carefully fold the front drop side (Fig. 8 /2) up in a controlled manner.
- ▶ Lock the tension lock (Fig. 8 /1)
- see "Locking the tension lock" on page 32.

Handing the side drop side



Fig. 9 Side drop side closed at the side

- 1 Side drop side
- 2 Tension lock

The side drop sides (Fig. 9 /1) are movably mounted in the hinges (Fig. 10 /1).

The drop sides are secured with tension locks (Fig. 9 /2) on the left and right.

- ▶ Release the tension locks one by one.
- ▶ Keep a firm hold of the drop side when doing so.

Folding down the side drop side

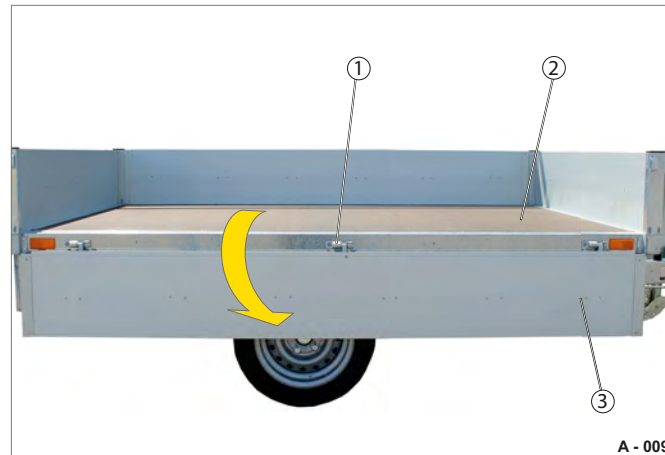


Fig. 10 Side drop side open

- 1 Drop side hinge
- 2 Cargo bed
- 3 Side drop side

- ▶ Release the tension locks
- see "Releasing the tension lock" on page 32.
- ▶ Carefully fold down the side drop side (Fig. 10 /3) in a controlled manner.

Folding up the side drop side

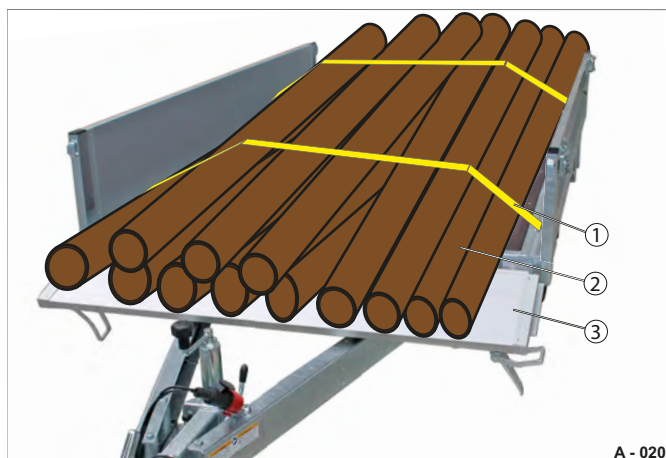


Fig. 11 Side drop side closed (driving position)

- 1 Tension lock
- 2 Side drop side

- ▶ Carefully fold the side drop side (Fig. 11 /2) up in a controlled manner.
- ▶ Lock the tension locks (Fig. 11 /1)
- see "Locking the tension lock" on page 32.

Through-loading function



A - 020

Fig. 12 Trailer with a projecting load

- 1 Lashing strap
- 2 Load
- 3 Front drop side



WARNING

Restricted swerving range – risk of collision!

Supporting the load on the front drop side and allowing it to project forwards reduces the swerving range when driving around bends - accident risk!

- ▶ When the front drop side is open, do not allow the load to project over the folded-down front drop side.
- ▶ Before driving off, check that the restricted swerving range will allow your towing vehicle to drive around bends.
- ▶ Adjust the distribution of the load (towards the middle of the drawbar) if necessary, or remove the front drop side.

The front drop side must be folded down and the rear drop side removed for through-loading.

- ▶ Fold down the front drop side.
- see "Folding down the front drop side" on page 33.
- ▶ Tie down the load at the tie-down points.
- see "Handling the tie-down points" on page 54.

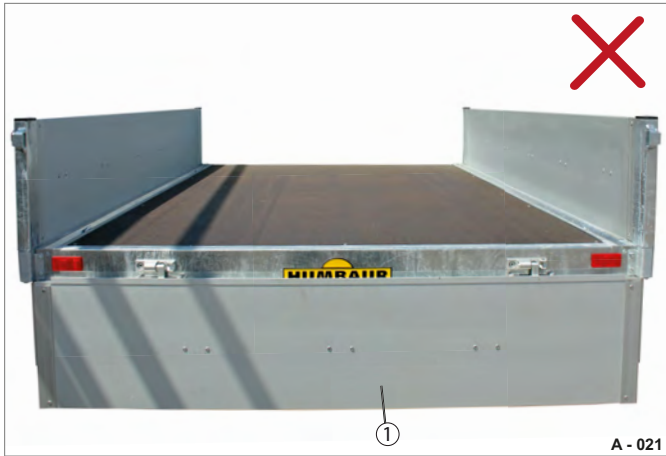


A - 067

Fig. 13 Rear drop side, closed

- 1 Rear drop side

- ▶ Remove the rear drop side
- see "Removing the drop sides" on page 38.
or
- ▶ Close the rear drop side
- see "Closing the drop sides" on page 39,
- see "Locking the tension lock" on page 32.



A - 021

Fig. 14 Negative example of through-loading

1 Rear drop side, folded down



WARNING

Transporting with the rear drop side folded down

Rear lighting is covered.

Road safety is compromised - accident risk!

- ▶ Remove the rear drop side with a projecting load.
- ▶ Mark any projecting goods.
 - Make use of the prescribed means for doing so.

Removal of the drop sides and stanchions



A - 011

Fig. 15 HU as a flat-bed trailer

Releasing the drop sides

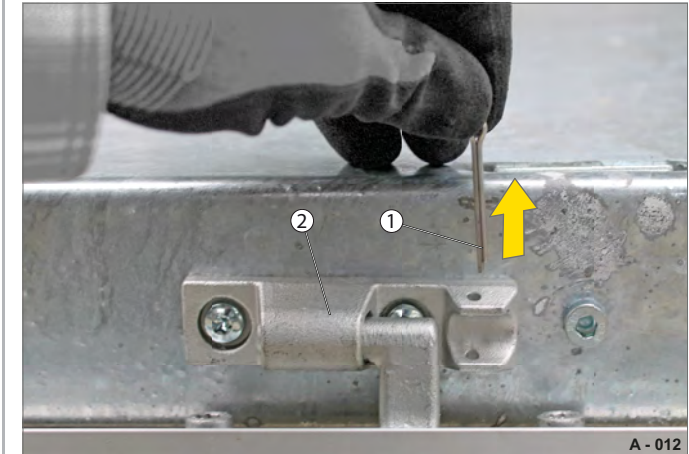


A - 022

Fig. 16 Drop sides folded down

- 1 Stanchion
- 2 Rear drop side

► Carefully fold down the drop sides (Fig. 16 /2) in a controlled manner.



A - 012

Fig. 17 Releasing the drop sides

- 1 Securing split pin
- 2 Drop side hinge

► Remove the securing split pin (Fig. 17 /1) from the drop side hinge (Fig. 17 /2) - keep it in a safe place.



Form-fitting load securing is not possible when using the trailer as a flat-bed.

Force-fitting load securing must be provided.

The drop sides and stanchions can be removed.

The trailer can be driven as a flat-bed trailer.

Removing the drop sides

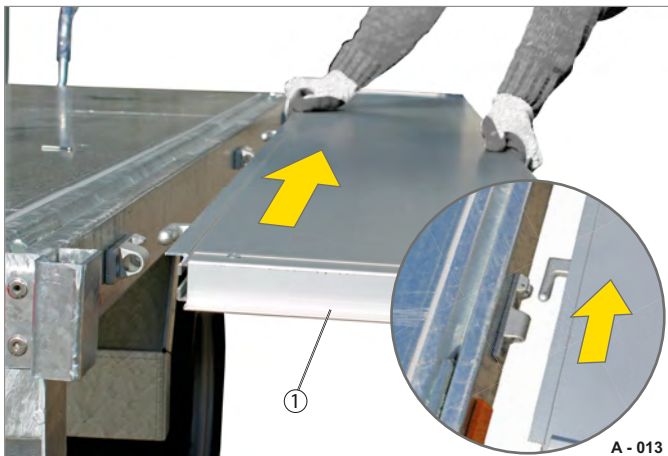


Fig. 18 Removing the drop sides

- 1 Drop side

- ▶ Hold the drop side (Fig. 18 /1) lengthwise approximately in the middle.
- ▶ Fold the drop side to a horizontal position.
- ▶ Carefully pull out the drop side from the hinges in the direction that is now unobstructed.
- ▶ Put the drop side somewhere where it is safe from damage.

Removing the stanchion

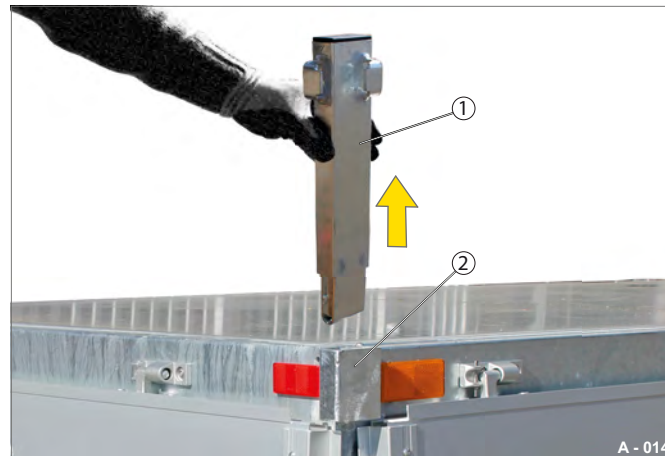


Fig. 19 Removing stanchions

- 1 Stanchion
- 2 Stanchion pocket

- ▶ Pull the stanchions (Fig. 19 /1) out of the stanchion pockets (Fig. 19 /2) .

If the stanchions are stuck:

- ▶ Release them by carefully tapping the side with a soft-head hammer.
- ▶ Store the stanchions safely to prevent damage.

Putting on the stanchions

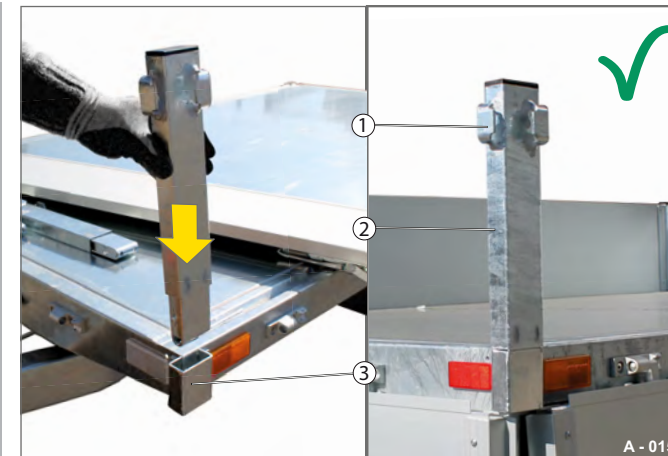


Fig. 20 Inserting the stanchions

- 1 Locking lug
- 2 Stanchion
- 3 Stanchion pocket

! All stanchions must be inserted in order to lock the drop sides!

- ▶ Insert all stanchions (Fig. 20 /2) in the stanchion brackets (Fig. 20 /3).
- Ensure that the locking lugs (Fig. 20 /1) point outwards.

If the stanchions cannot be put in by hand:

- ▶ Carefully tap the stanchions with a soft-head hammer until they go all the way in.

Fitting the drop sides

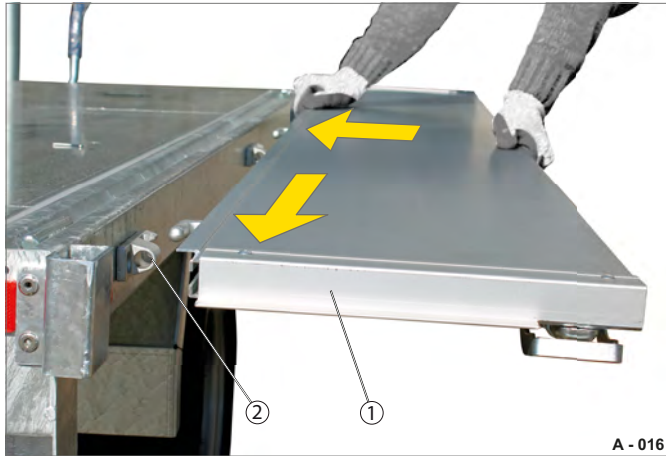


Fig. 21 Fitting the drop sides

- 1 Drop side
- 2 Drop side hinge

- ▶ Hold the drop side (Fig. 21 /1) lengthwise approximately in the middle.
- ▶ Slide the drop side on to the hinges (Fig. 21 /2) in a horizontal position.
The drop side has been fitted.

Securing the drop sides

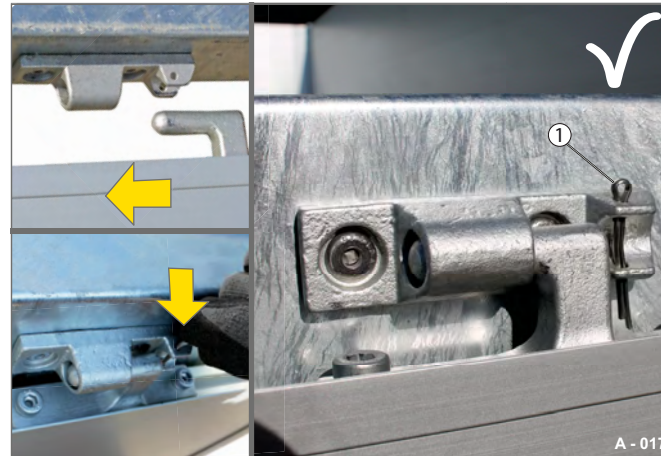


Fig. 22 Securing the drop sides

- 1 Securing split pin

**WARNING****Unsecured hinges / drop sides**

The drop side could slide off / drop off the hinges when it is folded down - risk of impact / crushing!

- ▶ Before folding the drop side down, ensure that it has been secured in one of the hinges with a securing split pin.
 - ▶ Replace any damaged / worn securing split pins.
-
- ▶ Push the securing split pin (Fig. 22 /1) into one of the hinges and spread the securing split pin slightly.
The drop side has been secured.

Closing the drop sides



Fig. 23 Fold up drop sides

- 1 Stanchion
- 2 Drop side

- ▶ Fold up the drop sides (Fig. 23 /3).
- Ensure that the tension locks are open.
- ▶ Lock the tension locks
- see "Locking the tension lock" on page 32.

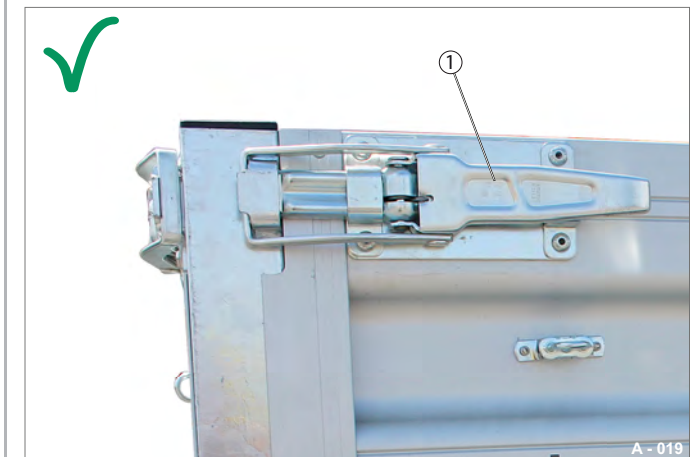


Fig. 24 Drop sides secured

- 1 Tension lock

Handling the steel mesh extension / aluminium extension / side wall extension

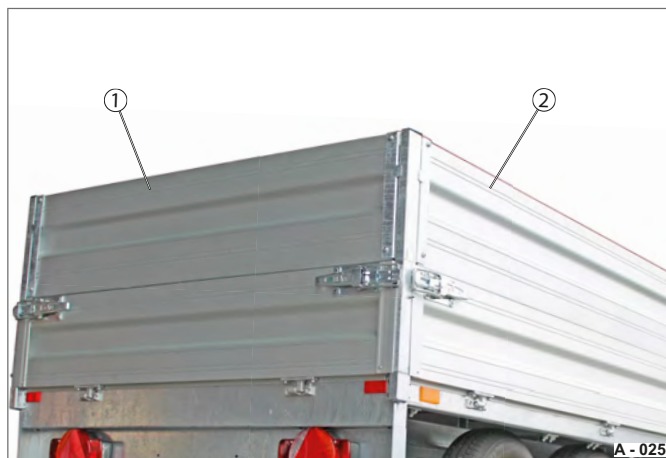


Fig. 25 Side wall extension, four-sided

- 1 Rear side wall extension
- 2 Side side wall extension

The side wall extension is 350 mm high.

The side wall extension can be removed when not in use.



Fig. 26 Steel mesh extension, four-sided

- 1 Rear drop side
- 2 Steel mesh wall, at the rear
- 3 Stanchion extension
- 4 Steel mesh wall, at the side

The steel mesh extension / aluminium extension are 620 mm high.

The extensions consist of 4 steel mesh walls / aluminium extension walls and 4 stanchion extensions.

The steel mesh extension is handled in the same way as the side wall extension.

The function of the base drop sides remains unchanged.



Read and observe the assembly instructions.



Fig. 27 Aluminium extension, four-sided

- 1 Aluminium extension wall

The aluminium extension is handled in the same way as the side wall extension.

**WARNING****Fitting / removing the extensions**

Extensions could fall off - risk of crushing!



▶ two people are required to handle them.



▶ Use

**WARNING****Driving with stanchion extensions inserted without**

stanchion extensions are not secured and could be
n off - risk of impact / accident!

move the stanchion extensions when disassembling
extensions.



WARNING

Driving with unsecured extensions.

Unsecured extensions could be thrown off while driving - risk of impact / accident!

- ▶ Screw the stanchion extensions into the stanchions of the base drop side.
- ▶ Close all locks on the base drop sides before driving off.
- ▶ Before setting off, check that all extensions and lamellar plugs are securely attached.

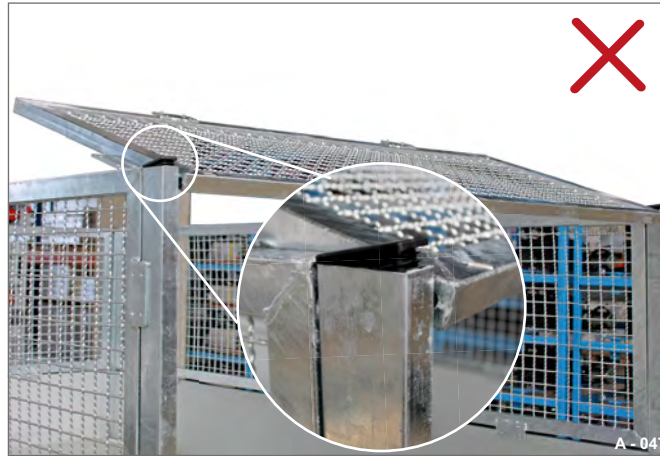


Fig. 28 Extension wall swung around



WARNING

Extension walls swung around!

Swung around extension walls can come out and fall down, which poses a risk of hitting or crushing!

- ▶ Don't swing around the extension walls.
- ▶ If required, remove the extension walls for loading / unloading.

Handling the side wall extension



Fig. 29 Side wall extension fitted

- 1 Stanchion extension
- 2 Side wall extension
- 3 Tension lock
- 4 Main drop side
- 5 Stanchion
- 6 Drop side hinge



The stanchion extensions must be secured in the stanchions of the base drop sides!



Read and observe the assembly instructions.

Removing the side wall extension

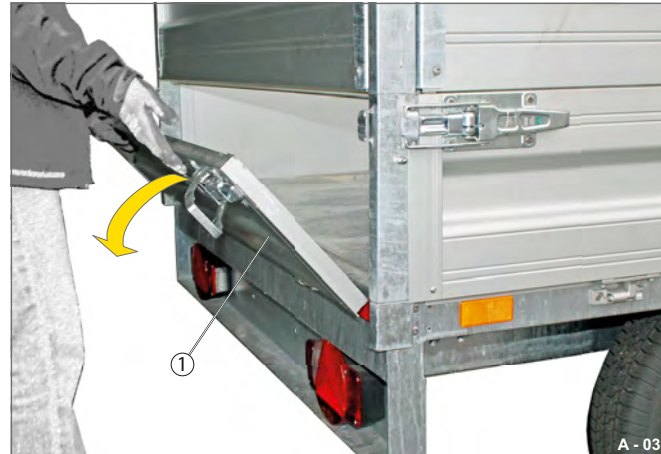


Fig. 30 Folding down the base drop side

- 1 Rear drop side

- ▶ Release and fold down the rear drop side (Fig. 30 /1)
- see "Folding down the front drop side" on page 33.

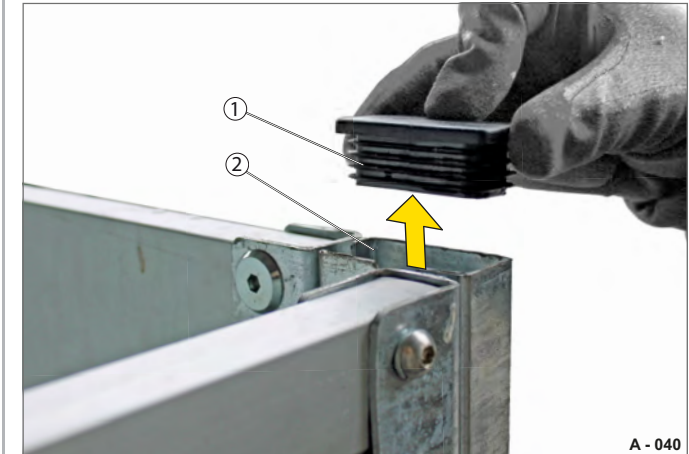


Fig. 31 Removing the lamellar plugs

- 1 Lamellar plugs
- 2 Stanchion extension

- ▶ Remove the lamellar plugs (Fig. 31 /1) from the stanchion extensions (Fig. 31 /2)
- use tools.

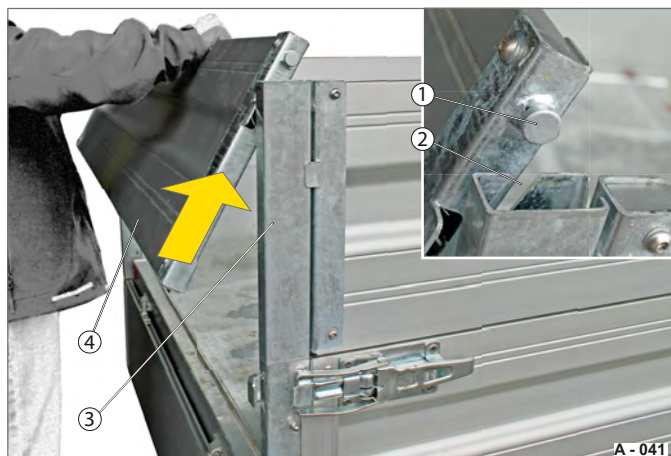


Fig. 32 Removing the side wall extension

- 1 Lug
- 2 Guide
- 3 Stanchion extension
- 4 Side wall extension

- ▶ Lift the wall of the side wall extension (Fig. 32 /4) out of the stanchion extensions (Fig. 32 /3) at an angle.

The lugs (Fig. 32 /1) will move out of the guides (Fig. 32 /2).

- ▶ Put the side wall extension (Fig. 32 /4) somewhere where it is safe from damage.
- ▶ Store the lamellar plugs (Fig. 31 /1) in a safe place or push them slightly into the stanchion extensions.



Fig. 33 Side wall extension removed

Fitting the side wall extension

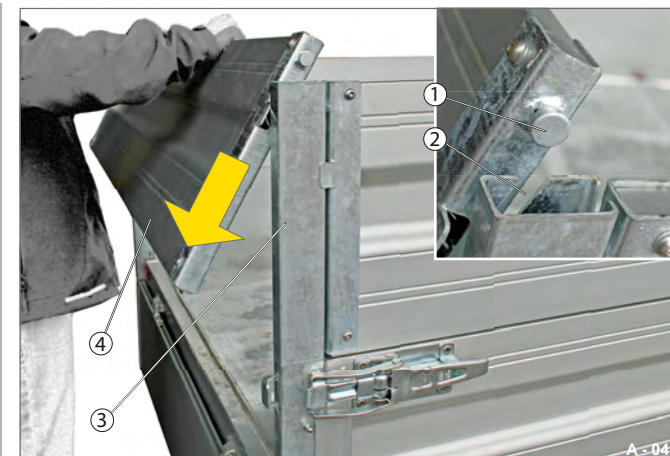


Fig. 34 Fitting the side wall extension

- 1 Lug
- 2 Guide
- 3 Stanchion extension
- 4 Side wall extension

The rear drop side must be folded down.

- ▶ Insert the side wall extension (Fig. 34 /4) in the guides (Fig. 34 /2) of the stanchion extensions (Fig. 34 /3) by means of the lugs (Fig. 34 /1).

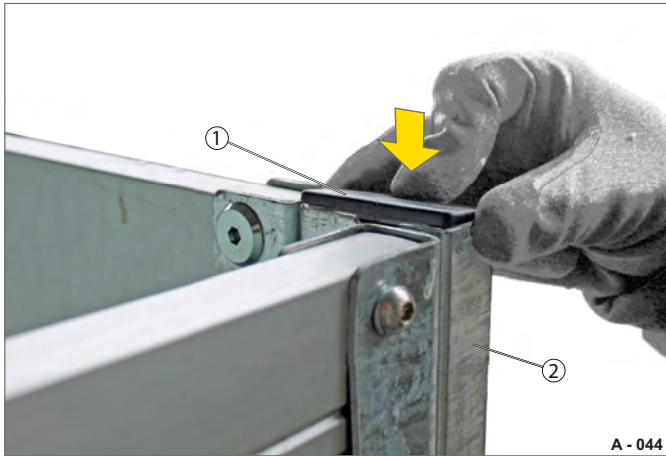


Fig. 35 Inserting the lamellar plugs

- 1 Lamellar plugs
- 2 Stanchion extension

► Insert the lamellar plugs (Fig. 35 /1) in the stanchion extensions (Fig. 35 /2) - tap them in gently.



Fig. 36 Folding up the base drop side

- 1 Tension lock
- 2 Rear drop side

► Fold up the rear drop side (Fig. 36 /2)
- see "Folding up the front drop side" on page 33.

► Lock the tension locks (Fig. 36 /1) of the rear drop side (Fig. 36 /2)
- see "Locking the tension lock" on page 32.



Fig. 37 Rear drop side / side wall extension in the driving position

Rear drop side and side wall extension have been secured.

Handling the aluminium extension / steel mesh extension



Fig. 38 Steel mesh extension in the driving position



Fig. 39 Aluminium extension, driving position

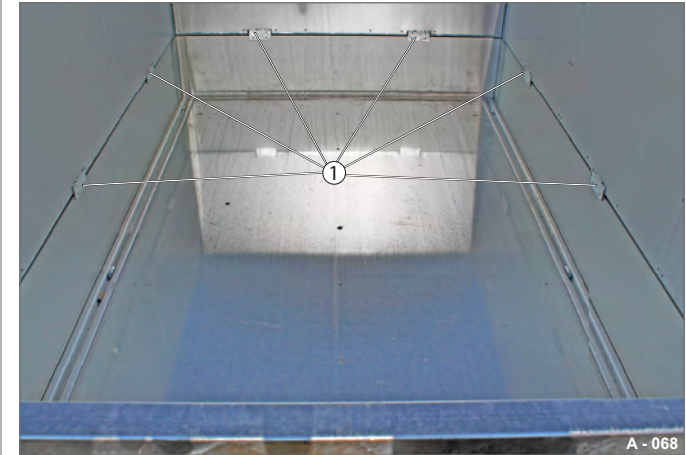


Fig. 40 Stops, inner



The aluminium extension / steel mesh extension is handled in the same way as the side wall extension - see "Handling the side wall extension" on page 42.

The inner stops prevent the extensions from swinging through.

Handling the cover net



Fig. 41 Cover net, fitted

- 1 Cover net
- 2 Drop side
- 3 Elastic cable

The cover net (Fig. 41 /1) is stretched over the drop sides (Fig. 41 /2) and secured to the round buttons (Fig. 42 /1) with an elastic cable (Fig. 41 /3).



The cover net is for securing loose load materials e.g.: light garden waste, leaves, twigs, wood chips, grass, paper, cardboard packaging, etc. which have to be prevented from flying off the cargo bed.



Fig. 42 Securing element for cover net

- 1 Round button



See separate assembly instructions for attaching the round buttons.



The cover net may only be used with closed drop sides / extensions.

The cover net is not designed for securing the drop sides / extensions.

The cover net / elastic cable may not have any tears.

**CAUTION****Unsecured / incompletely attached cover net!**

The cover net could come loose and fly around when driving. The load could be stirred up / thrown out - accident risk!

- ▶ Make sure that the cover net covers the drop sides completely and has been secured before driving off.

Attachment

- ▶ Place the cover net (Fig. 41 /1) over the cargo bed.
- ▶ Attach the elastic cable (Fig. 41 /3) to the round buttons in turn (Fig. 42 /1).
- ▶ Make sure that the cover net has been tensioned on all sides of the trailer before driving off.

Removal

- ▶ Pull the elastic cable off all the round buttons in turn.
- ▶ Fold the cover net together and stow it safely away e.g. in the toolbox.

Handling the flat cover



Fig. 43 Example: Flat cover with base drop side

- 1 Tension rope
- 2 Flat cover
- 3 Hook
- 4 Side drop side

The flat cover (Fig. 43 /2) can be stretched over the base drop side, side wall extensions, steel mesh extensions and aluminium extension walls.

The flat cover is secured by means of tension ropes (Fig. 43 /1) and hooks (Fig. 43 /3).

The lateral bracing supports the flat cover and prevents damage which could be caused by accumulation of water / load.



Fig. 44 Example: Flat cover with steel mesh extension

- 1 Flat cover
- 2 Tension rope

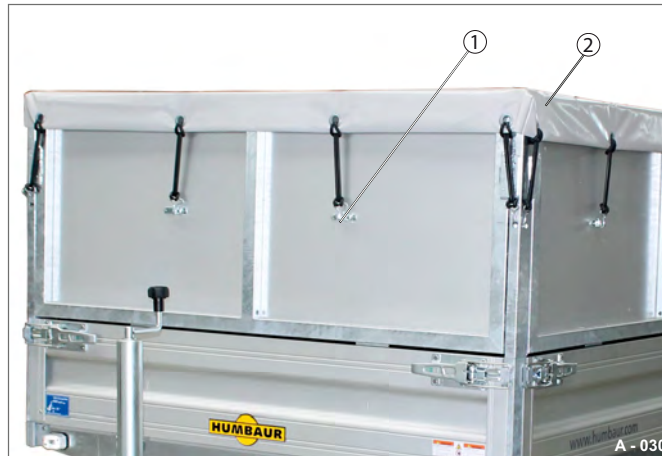


Fig. 45 Example: Flat cover with aluminium extension

- 1 Eyelet
- 2 Flat cover

Positioning the lateral bracings

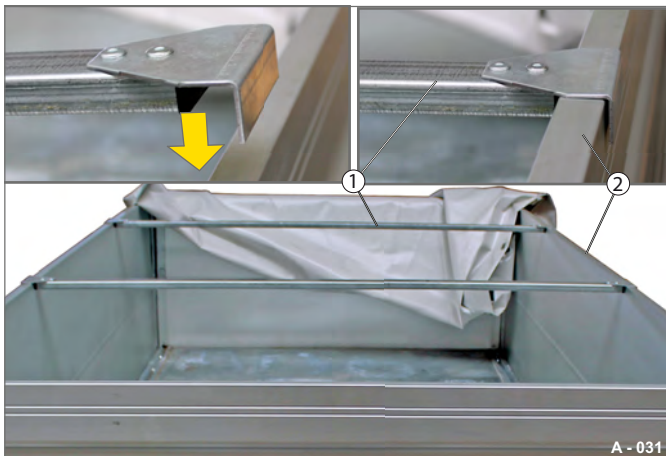


Fig. 46 Lateral bracings positioned

- 1 Lateral bracing with angle bracket
- 2 Side drop side

**WARNING****Driving with the lateral bracing inserted - without a flat cover!**

The lateral bracing could be thrown off while driving and hit people – risk of accident!

- ▶ Remove the lateral bracing(s) before driving without a flat cover.
- ▶ Insert the lateral bracing(s) (Fig. 46 /1) in the side drop sides (Fig. 46 /2) in the central area of the cargo bed.



The lateral bracings must be arranged parallel to each other at equally spaced intervals.

Preparing the flat cover



Fig. 47 Preparing a tension rope with a hook

- 1 Tension rope
- 2 Hook

- ▶ Thread the tension rope (Fig. 47 /1) through the hook (Fig. 47 /2).
- ▶ Loop the tension rope around and pull it tight at the hook.

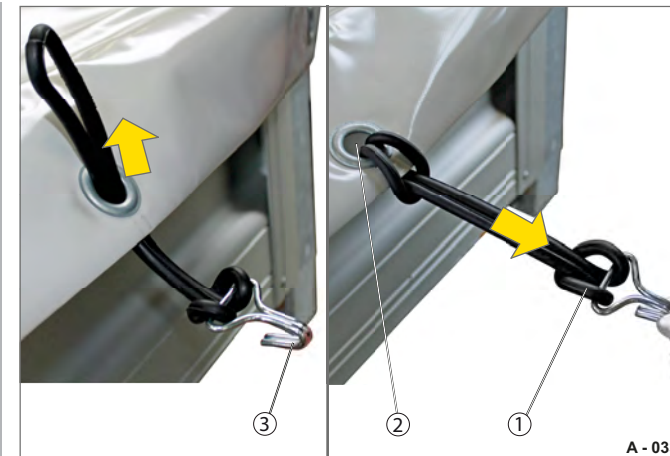


Fig. 48 Fasten the tension rope

- 1 Tension rope
- 2 Eyelet
- 3 Hook

- ▶ Stretch the flat cover across the drop sides or side wall extensions.
- ▶ Fasten the tension ropes (Fig. 48 /1) with hooks (Fig. 48 /3) in the eyelets (Fig. 48 /2) of the flat cover.
 - Thread the tension rope through the eyelet of the flat cover and loop it around.

Releasing the flat cover

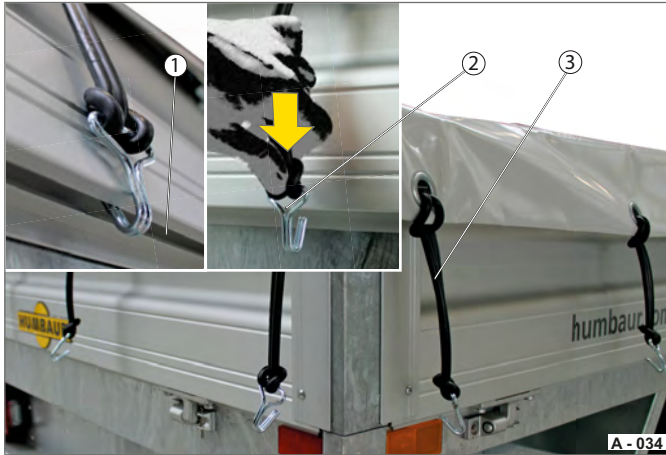


Fig. 49 Releasing the flat cover (with base drop side)

- 1 Drop side slot
- 2 Hook
- 3 Tension rope

**CAUTION****Tension ropes are under tension!**

There is a risk of injury when adjusting the tension ropes at the hooks.

- ▶ Keep a firm hold of the tension ropes when making adjustments - do not let go of the ropes while they are under tension.
- ▶ Pull the hooks (Fig. 49 /2) out of the drop side slot (Fig. 49 /3).

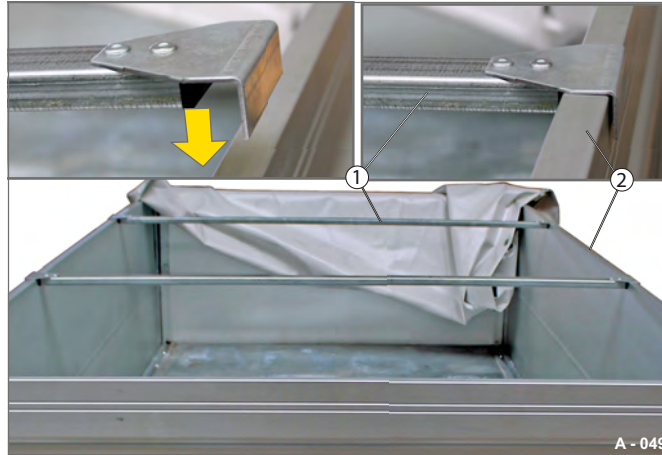


Fig. 50 Flat cover opened

- 1 Flat cover

- ▶ Open and remove the flat cover (Fig. 50 /1).
- ▶ Fold up the flat cover evenly.
- ▶ Put the flat cover somewhere where it is safe from damage.

Securing the flat cover



Fig. 51 Flat cover secured (with base drop side)

- 1 Hook
- 2 Drop side slot

- ▶ Stretch the flat cover (Fig. 50 /1) across the drop sides.
- ▶ Secure the flat cover on all sides by inserting the hooks (Fig. 51 /1) in the drop side slot (Fig. 51 /2) of the base drop sides.

The flat cover has been closed and secured.

Handling the flat cover on an aluminium extension

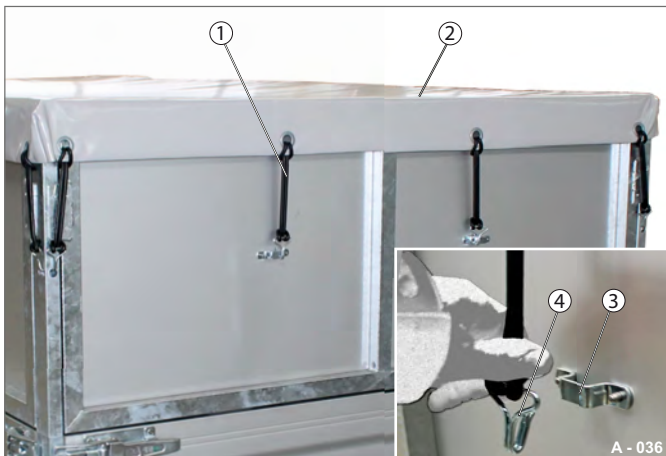


Fig. 52 Flat cover (with aluminium extension)

- 1 Tension rope
- 2 Flat cover
- 3 Eyelet
- 4 Hook

- ▶ Pull the hooks (Fig. 52 /4) out of the eyelets (Fig. 52 /3) or holes (Fig. 53 /5).
- ▶ Open and remove the flat cover (Fig. 52 /2).
- ▶ Put the flat cover somewhere where it is safe from damage.

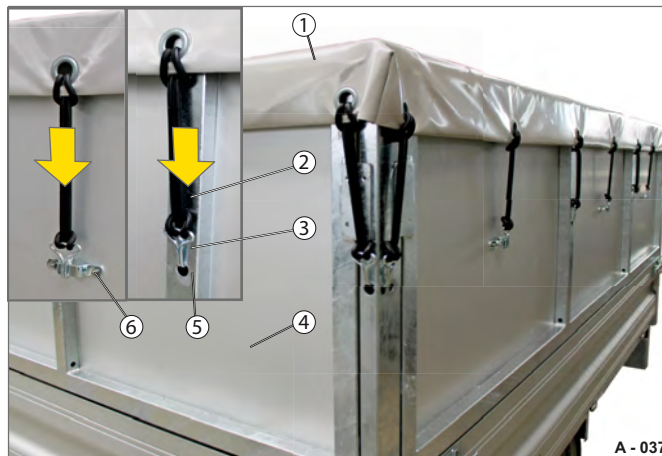


Fig. 53 Flat cover secured (driving position)

- 1 Flat cover
- 2 Tension rope
- 3 Hook
- 4 Aluminium extension walls
- 5 Holes
- 6 Eyelet

- ▶ Stretch the flat cover (Fig. 53 /1) over the aluminium extension walls (Fig. 53 /4).
 - ▶ Secure the flat cover on all sides by inserting the hooks (Fig. 53 /3) in the eyelets (Fig. 53 /6) or holes (Fig. 53 /5).
- The flat cover has been closed and secured.

Handling the flat cover on a steel mesh extension



Fig. 54 Flat cover (with steel mesh extension)

- 1 Flat cover
- 2 Steel mesh extension

The handling of the flat cover (Fig. 54 /1) with the steel mesh extension (Fig. 54 /2) is the same as with the aluminium extension.

The hooks are hooked into the steel mesh walls on all sides.

Handling the tarpaulin cover



Fig. 55 Tarpaulin cover, open at the side

- 1 Frame
- 2 Slat insert
- 3 Stanchion

The HU trailer can be manufactured with a tarpaulin cover and frame with heights of 1300 / 1600 mm as an option.



Instructions for handling the tarpaulin cover / frame are provided in the operating instruction manual, "Trailers up to 3.5 to / Part 1 - General".



Fig. 56 Tarpaulin cover, open at the rear

- 1 Slat insert
- 2 Staple



Fig. 57 Example: Loading at the rear

Securing the tarpaulin cover



Fig. 58 Tarpaulin cover, secured (driving position)

- 1 Tarpaulin cover
- 2 Belt
- 3 Staple
- 4 Drop side



Read and observe the assembly instructions.

- ▶ Secure the tarpaulin cover (Fig. 58 /1) to the drop sides on all sides (Fig. 58 /4).

Handling the H-frame



Fig. 59 H-frame mounted

- 1 H-frame (screwed)
- 2 Stanchion



Instructions for fitting / removing the H-frame are provided in the operating instruction manual "Trailers up to 3.5 to / Part 1 - General".

The H-frame is used for transporting and securing long load materials.

The H-frame (Fig. 59 /1) is inserted in the front stanchions (Fig. 59 /2) and screwed in place.

Securing a load



Fig. 60 Load securing with H-frame

- 1 Load
- 2 Tension belt
- 3 Tie-down point
- 4 Securing the loading unit



Long loads must be secured as individual loading units.

Driving with loose loads on the H-frame is prohibited.

The loading unit can also be tied down to the H-frame

- ▶ Use tension belts to tie down the load (Fig. 60 /1) to form an individual loading unit (Fig. 60 /4).
- ▶ Tie down the loading unit (Fig. 60 /2) at the tie-down points (Fig. 59 /3) with tension belts.
 - Ensure that the load cannot slide and is safely positioned / distributed.

Physical foundations

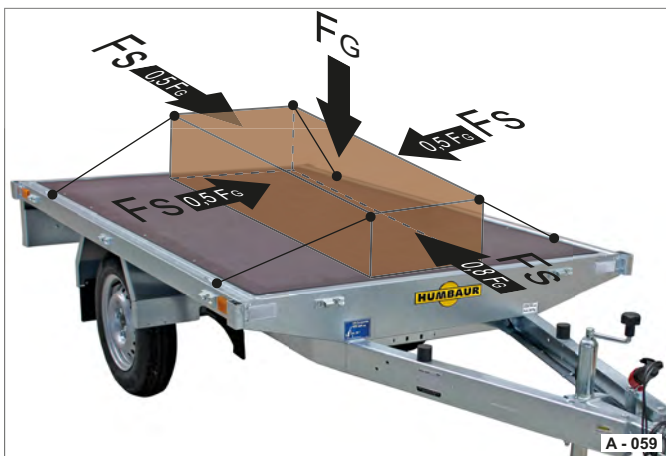


Fig. 61 Maximum inertia forces

Resulting from the dynamics of vehicle movement in road traffic
FS Load securing force,
FG Inertial force of the load

NOTICE

Poor/one-sided load distribution of the goods!

Severely uneven / point load distribution can lead to over-stressing and damage to the trailer components.

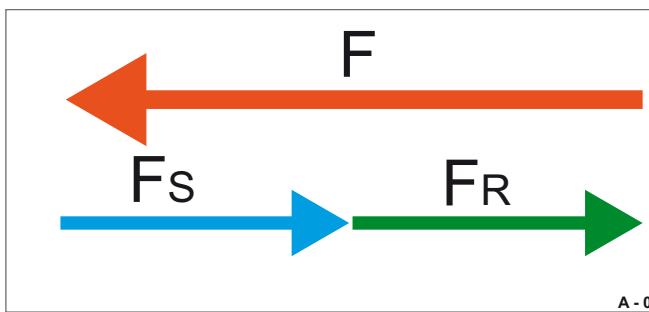
- ▶ Before loading your trailer, check which load objects are the heaviest.
- ▶ Position the heaviest objects centrally on the cargo bed in the area of the axles.
- ▶ Distribute the goods evenly over the cargo bed - avoid point / one-sided load distribution.

Forces caused by pulling away, braking and changing direction act on the load during driving.

These dynamic driving forces cause the load to slide if it is inadequately secured and unstable goods to tilt.

An appropriately adapted driving style minimises the arising forces and wear and always provides an increase in safety.

Inertia force F
 Force which counteracts a change in the state of movement



Tab. 1 Inertia force F

Example:

- Inertia force $F_G = 1,000 \text{ daN}$
- Maximum forward acceleration = 0.8 g
 (1 g = gravitational acceleration 9.81 m/s^2)

Result:

$F_G \text{ forwards} = 1,000 \text{ daN} \times 0.8 \text{ g} = 800 \text{ daN (kg)}$

The actually required load securing force F_S is reduced by the amount of frictional force F_R (between the load and the trailer floor) in the case of stable load materials.

Further information on friction-coefficient matchings can be found in the VDI 2700 guideline.

All friction-coefficient matchings apply to clean surfaces.

Tab. 2 Sample calculation

Load securing force FS:

Force which has to be absorbed by the tie-down equipment or the trailer body

Frictional force FR: Sliding friction coefficient x weight force

Calculation formula: $FS = F - FR$

Example:

- Inertia force $F_G \text{ forwards: } 800 \text{ daN}$
- Friction coefficient $\mu_o = 0.3$ (screen floor / pallet)
- **Frictional force $F_R = 0.3 \times 1,000 \text{ daN} = 300 \text{ daN}$**

Actually required load securing force
 $F_S = 1,000 \text{ daN} - 300 \text{ daN} = \underline{700 \text{ daN (kg)}}$

Tab. 3 Required load securing force (F_S)

Tie-down points



Fig. 62 Sticker for tie-down points

**WARNING****Impermissible tensile loads / lashing angles**

Tie-down equipment could break / tear.
The load is inadequately secured - accident risk!

- ▶ Comply with the maximum stated values for the force specifications.
- ▶ Use suitable tie-down equipment.
The max. possible tension values are stated on the tie-down equipment.
- ▶ Do not tie down with the tensioning equipment at an angle of less than 30°.
Attach the fixing point to the top of the load materials as far as possible.

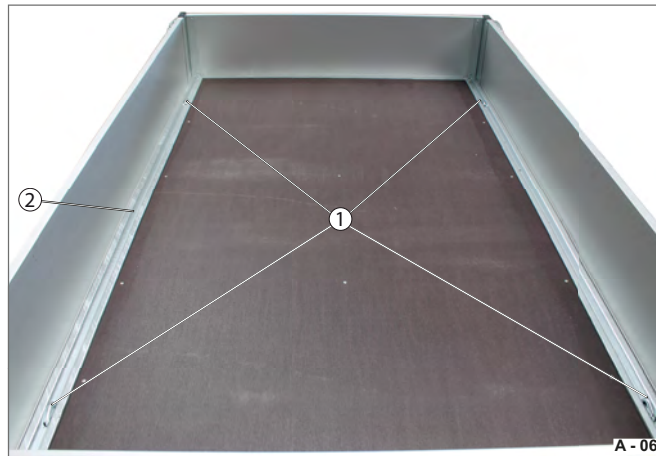


Fig. 63 Tie-down points arrangement

- 1 Tie-down brackets (2x on the right, 2x on the left)
- 2 V lashing rail

NOTICE**Exceeding the tie-down forces / falling below the lashing angle**

Tie-down points could break.

- ▶ Note the stickers on the tie-down points.
- ▶ Comply with the following specifications:
 - Maximum tension load of the tie-down points: 400 daN (kg) per tie-down bracket.
- ▶ Only use suitable / tested tie-down equipment.

Handling the tie-down points

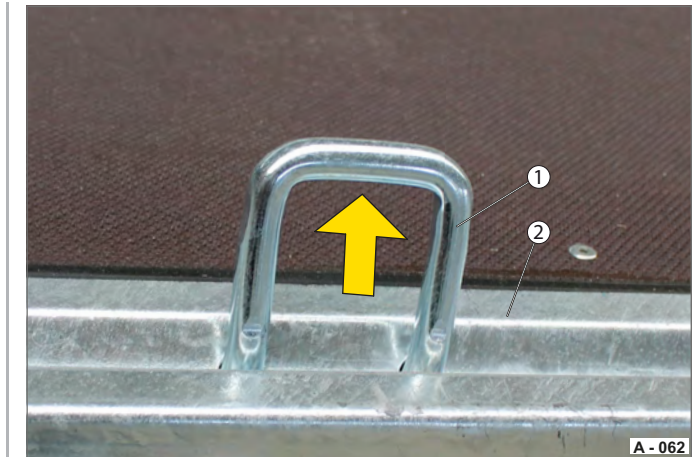


Fig. 64 Tie-down bracket lifted out

- 1 Tie-down bracket
- 2 V lashing rail

- ▶ Press the tie-down bracket (Fig. 64 /1) up from below.



Fig. 65 Tie-down bracket retracted

- 1 Tie-down bracket retracted



6

Electrical system

Lighting system / Electrical supply



Take note of the safety instructions and the instructions for the electric system in the operating instruction manual, "Trailers up to 3.5 to / Part 1 - General".

The electrical lighting system operates with 12 V as standard.



WARNING

Failure of electrical functions

The road handling and the braking distance deteriorate - accident risk!

- ▶ Check that all electrical connections have been assembled before driving off.
- ▶ Check the condition of the electrical plugs and cables before driving off.
- ▶ Do not drive with cracked or defective electrical connections.



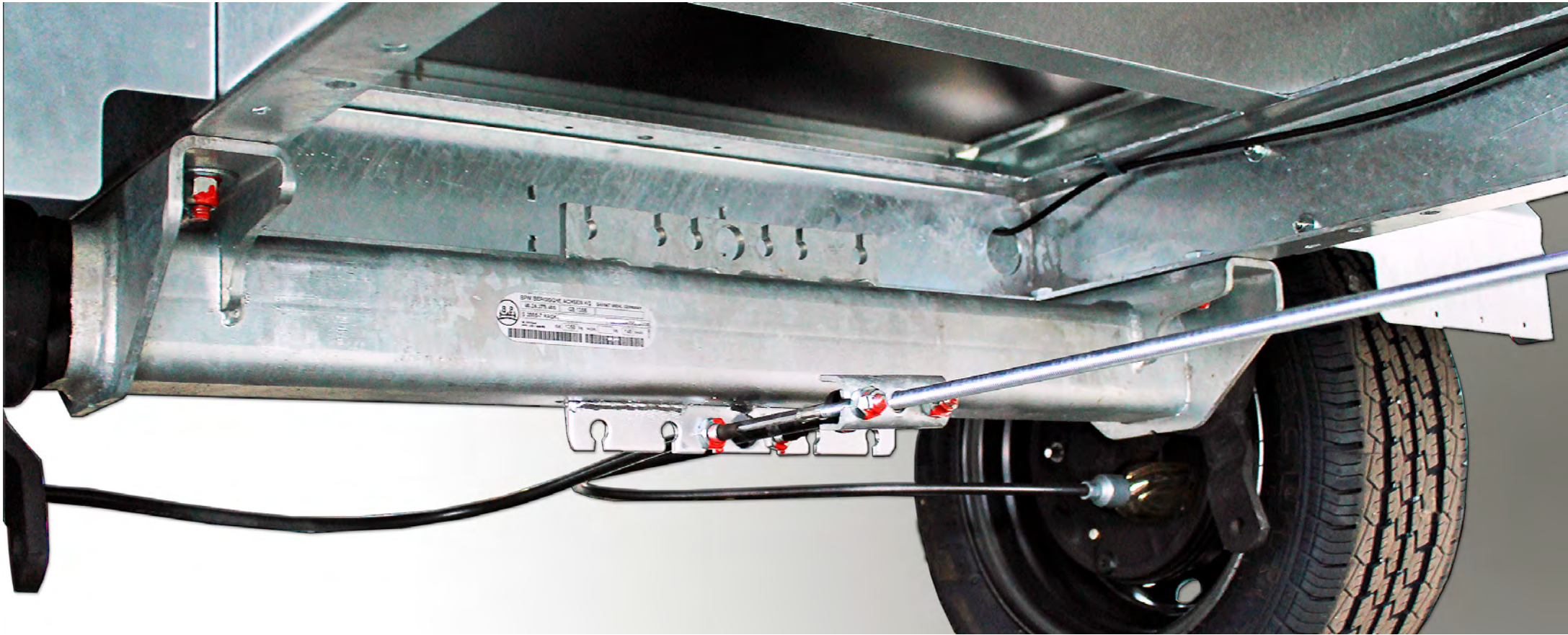
Fig. 1 Lights at the front

- 1 Front reflector



Fig. 2 Lights at the rear

- 1 Number plate light
- 2 Multi-function light
- 3 Rear reflector / red reflector
- 4 Side reflector / yellow reflector



7

Testing,
care and maintenance

Trailers must be inspected by a competent / qualified specialist for their condition for safe operation as and when required, but at least once a year.

This also applies to all components which are used for the load securing according to VDI 2700 or / and EN 12642.

All important mechanical components must be inspected and maintained at regular intervals for safety reasons.

These include:

- Axles
- Brakes
- Bolts
- Pipe connections
- Attachments



Note the maintenance regulations in the operating instruction manual "Trailers up to 3.5 to / General – Part 1".

Certain maintenance work may only be carried out by trained and qualified personnel.

The prescribed maintenance intervals must be complied with.

Proof of the HU / SP

Fig. 1 Proof of inspection (in the operating instruction manual "Trailers up to 3.5 to / Part 1 - General)

HU = General inspection

SP = Safety inspection

- ▶ Enter the implemented HU / SP in the proof of inspection (Section 29, sub-section 12 of the StVZO (German Licensing Regulations)).
- ▶ Keep the latest inspection report (HU) and the latest test record (SP) at least until the next inspection / test (Section 29, sub-section 10 of the StVZO).
- ▶ Keep the inspection log book as proof until the trailer is finally taken out of service (Section 29, sub-section 13 of the StVZO).

Maintenance of axles / wheels / overrun hitch

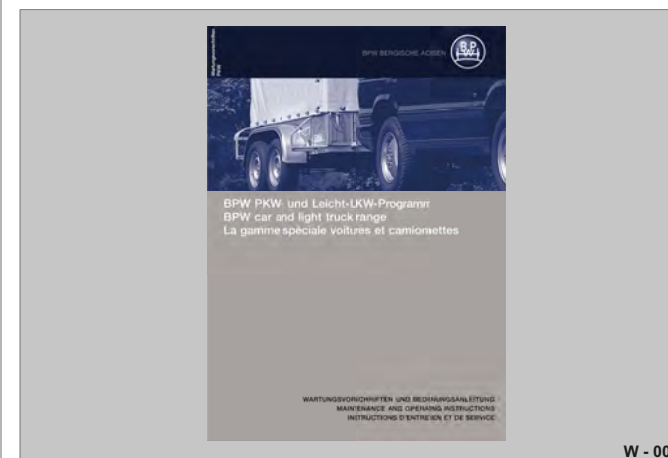


Fig. 2 Maintenance / operating instruction manual: Safety components

- ▶ Carry out the prescribed visual inspections and maintenance work or have them carried out by qualified specialist workshops.
- ▶ Have the inspections documented in the service booklet.

Checking the wheels / tyres



Fig. 3 Checking the wheels / tyres

- 1 Steel rim
- 2 Tyres (as selected by the manufacturer)

► Check the tyre pressure / tread depth on all wheels incl. the spare wheel (Fig. 4 /2) on a regular basis and before long journeys.

Tyre type	p max. in bar
145 / 80 R13	3.0
195 / 50 R13C	6.5

Tab. 1 Tyre pressure / tyre size

Refer to this table for the correct tyre pressure.

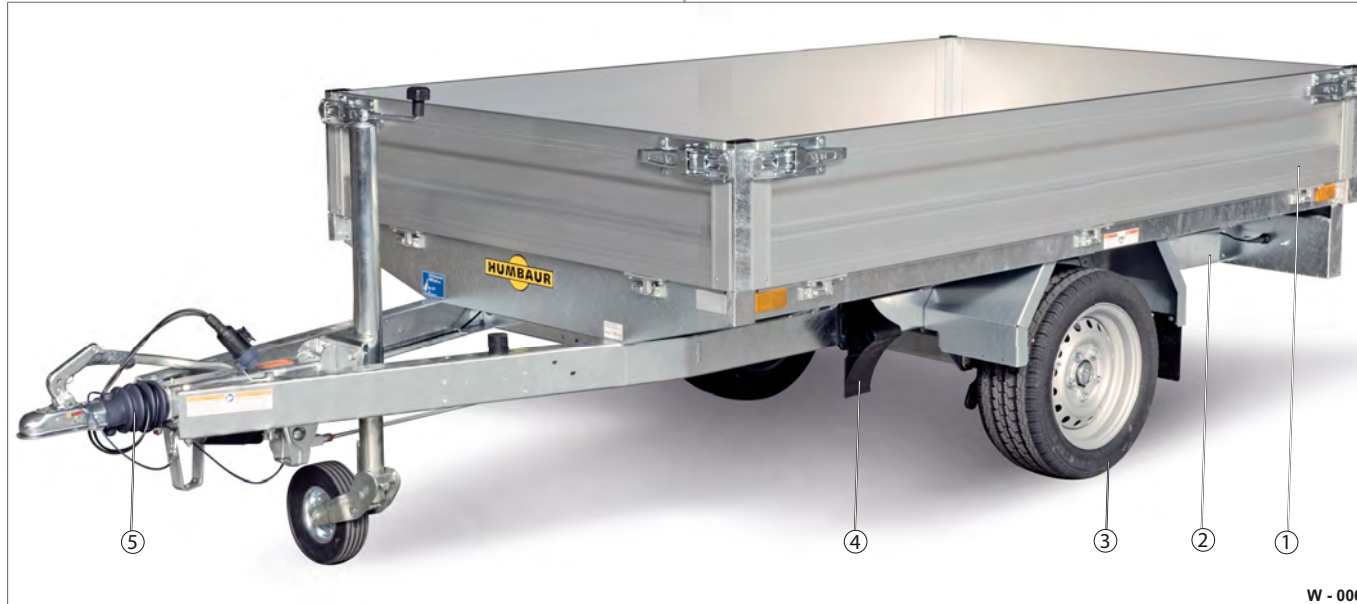


Fig. 4 Check the spare wheel holder

- 1 Spherical collar nut
- 2 Spare wheel

► Use a torque wrench (80 Nm) to check that the spherical collar nuts (Fig. 4 /1) of the spare wheel holder are secure.

Trailer materials



W - 006

Fig. 5 Materials / surfaces

- 1 Aluminium, anodised
- 2 Steel, galvanised
- 3 Soft rubber
- 4 Plastic
- 5 Rubber (hoses)

The trailers are assembled from various materials.

Always take note of the specific features for care of the materials / surfaces.

Cleaning the trailer / cargo bed



Fig. 6 Cleaning the chassis / loading bridge

- 1 Tie-down points / V lashing rail
- 2 Cargo bed
- 3 Drop side



The drop sides can be opened or removed for easier cleaning of the cargo bed.

The cargo bed should be cleaned after any transport of bulk goods.





WARNING



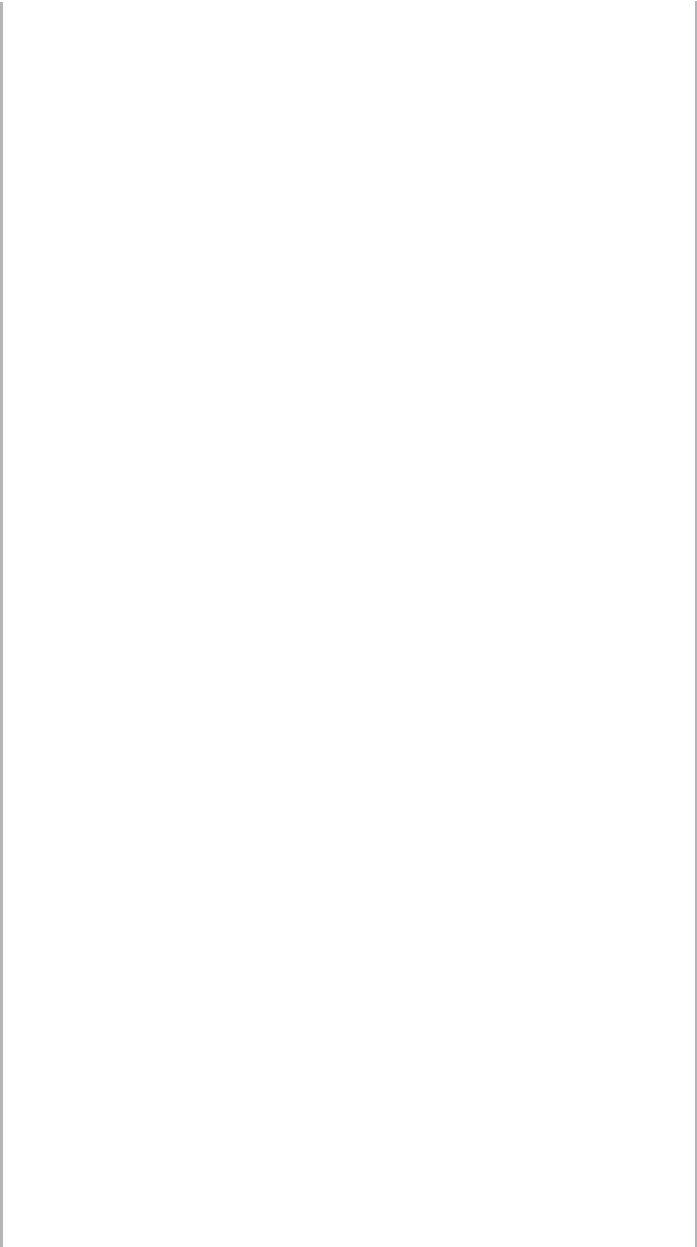
Wet / smooth components during cleaning!

You could slip – risk of falling!



- ▶ Use  ,  .
 - ▶ Do not climb on the trailer components to clean the cargo bed.
 - ▶ Use a stable ladder for the cleaning work.
-
- ▶ Open and remove the drop sides (Fig. 6 /3)
 - see “Folding down the side drop side” on page 34.
 - see “Removing the drop sides” on page 38

- ▶ Remove coarse debris such as grit, sand and twigs from the cargo bed / latches / drop side hinges (Fig. 6 /1/2) with a broom.
- ▶ Rinse off the cargo bed (Fig. 6 /2) with a high-pressure cleaner.
- ▶ Allow the chassis and the cargo bed to dry completely after cleaning work.





8

Troubleshooting guide

Action in the case of faults

This section contains information on possible faults in the trailer. The information should facilitate the search for the fault source and enable it to be rectified to the extent that the next service station of Humbaur GmbH can be reached.

Faults which occur as a consequence of failing to comply with the operating instruction manual or as a result of a lack of maintenance are not considered.

Unfortunately we cannot cover all the problems which may occur here.

In the case of major faults, please notify the **Humbaur Service** (see contact addresses stated below).



Refer to the maintenance regulations in the operating instruction manual, "Trailers up to 3.5 to" / General – Part 1" for the possible causes of faults.



WARNING

Improper troubleshooting

Improper troubleshooting can cause components to fail - accident risk!

- Have faults rectified only by a qualified specialist workshop.



WARNING

Unsecured trailer / unexpected movement

Going under the chassis when troubleshooting - risk of crushing if the trailer starts to move unexpectedly.

- Make sure that the trailer is secured by wheel chocks / wooden blocks, so that it cannot roll away.

Humbaur Service

Any warranty claims become invalid if the trailer or its modules are altered or disassembled without our previous written agreement.

Technical customer service

tel.: +49 821 24929 0

fax.: +49 821 24929 540

email: service@humbaur.com

Humbaur Service Partners

can be found at www.humbaur.com
under Dealers/Service > Service/Repairs

Address of the manufacturer

Humbaur GmbH

Mercedesring 1

86368 Gersthofen (Germany)

tel.: +49 821 24929 0

fax.: +49 821 24929 100

www.humbaur.com

info@humbaur.com

Spare parts



Only use original Humbaur spare parts!

Spare parts can be obtained stating the **VIN** and the part designation as follows:

- Online, email, telephone

Contact parts logistics

tel.: +49 821 24929 0

fax.: +49 821 24929 200

email: parts@humbaur.com

We wish you
a pleasant & safe
journey

MACHT'S MÖGLICH



www.humbaur.com

Safety note!

The trailer may only be used with express compliance with all road traffic, professional association and load securing regulations.

All illustrations are representative and may show special equipment - they are not binding. Deviations and modifications are subject to the model type. We assume no responsibility for printing or other errors or omissions. Subject to technical modifications.

All specifications are approximate values and relate to a series vehicle without accessories. Copying prohibited. Printed in Germany.

Date: V01/2019

