

Operating instructions **BLITZLADER 2 WITH AIR SUSPENSION**



[illegible]

Foreword

Congratulations on your new Blitzlader 2 with air suspension

Dear Customer,

we are pleased that you have purchased a **Blitzlader 2 with air suspension** as your new car trans- porter.

With the **Blitzlader 2 with air suspension**, you have chosen a highly professional machine that sets standards in the areas of technology, ease of operation and performance. Thanks to the air-suspended chassis and the standard disc brakes, you will be safe and comfortable on the road.

We want you to be able to use your new vehicle effectively for a long time. That's why we focus on high quality and durability in the technical systems, materials and workmanship.

Like any technical device, your **Blitzlader 2 with air suspension** and its superstructure require a minimum of care and maintenance We will support you in this.

Please have the required function checks carried out annually at our factory or at an authorized sales partner. We also recommend this with regard to the legal warranty and the maintenance of the EDER warranty of 24 months with a mileage limit of 120,000 km.

We thank you for your trust and wish you always a good and accident-free journey.



Peter Eder
(Management)

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1 General information

1. Manufacturer

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2. Important notes

Operating instructions

You should read these operating instructions and any additional instructions carefully before starting up the car transporter and its additional technical equipment. The operating manual must always be kept in the car transporter. Please also be sure to read the operating manual of the base vehicle.

Scope of equipment

These operating instructions and any supplementary instructions describe the scope of equipment intended at the time of printing. We reserve the right to make changes in the interest of technical progress and improvement. Illustrations are for information only and may differ from the original.

Attention

We expressly point out that we accept no liability whatsoever for damage and malfunctions resulting from non-observance of these operating instructions.

Directional information

All directional information (left, right, front, rear) in these operating instructions always refers to the direction of travel of the car transporter, unless otherwise explained.

Approval

The registration of the car transporter is country-specific. Please inquire how and where you can acquire a registration for your car transporter.

For Germany:

You will need to insure your car carrier and obtain a roadworthiness permit before you are allowed to participate in road traffic.

BEACHTEN

The loss of vehicle documents must be reported to the police.

Main inspections

The regulations for general inspections are country-specific. Please find out when a general inspection is necessary and where you can have a general inspection performed.

Driving license

Depending on the country, a specific vehicle license is sometimes required for driving a car transporter.

StVO

Find out about the country-specific requirements.

3. Special equipment

Equipment marked with a (*) star symbol is part of the optional equipment.

4. Supplementary documents

The EU directives valid at the time of production apply to the car transporter. In addition, the following must be observed:

- The operating instructions of the base vehicle
- The operating instructions of the additional technical equipment e.g. cable winch
- The binding rules and regulations applicable in the respective country of use and at the place of use.
- The nationally applicable accident prevention regulations
- The road traffic regulations
- The recognized rules for safe and professional work

1.5 Liability and warranty

BEACHTEN

We expressly point out that we do not accept any liability for damage and malfunctions resulting from non-observance of these operating instructions.

If injury to persons or damage to goods should occur as a result of non-compliance with the regulations and instructions in this operating manual, this circumstance releases EDER from any obligation to pay compensation (see "Warranty conditions/warranty processing", page 88).

6. Changes

Changes in these operating instructions can be made without further notice.

The latest version can be obtained from the manufacturer. Updated operating instructions are not subsequently supplied.

www.algema-fitzel.de

7. Storage advice

These operating instructions are an integral part of the product and must be available in full at all times.

A missing operating manual or missing pages must be replaced immediately.

8. Copyright

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2 Security

1. General safety instructions

The car transporter is intended **exclusively for transporting motor vehicles up to the permissible total weight of the car transporter** (see "Intended use", page 14 and see "Foreseeable misuse", page 14).

The car transporter and necessary accessories may only be used in technically perfect condition and in accordance with their intended use.

Safety and warning signs must always be clearly visible and legible.

The corresponding EU directives apply to the assembly. In addition, the binding rules and regulations applicable in the respective country of use and at the place of use must be observed (see "Supplementary documents", page 8).

The load must always be adequately secured against slipping and rolling. Tools and aids must be stowed safely. Loose objects on the plateau must be removed (see "Loading and unloading", page 16).

BEACHT

During the journey, it must be possible to observe the road behind at all times through two exterior mirrors. Driving the car transporter is only permitted with a valid and appropriate driver's license. Familiarize yourself with the driving and braking behavior of the car transporter in difficult road and weather conditions, e.g. downhill stretches, uneven road surfaces, storms, crosswinds and snow.


2.2 Requirements for the personnel


- The car transporter may only be operated by appropriately trained, reliable personnel and/or specialists.
- Driving the car transporter is allowed only with a valid and appropriate driver's license.
- The persons entrusted with the operation of the autotransporter must have read and understood this operating manual, in particular the safety instructions, and must be in a suitable mental and physical condition before starting work. Failure to observe these safety instructions may result in danger to life and limb and/or impairment of the autotransporter or other damage to property.


2.3 Explanation of the safety instructions in these operating instructions

These operating instructions contain information that must be observed to protect persons from injury and to avoid damage to property.

Depending on the degree of hazard, the notes are presented as follows:


	Places marked with this sign indicate that death or serious injury will occur if the corresponding precautionary measures are not observed!
--	--

	Places marked with this symbol indicate that death or serious injury may occur if the corresponding precautionary measures are not observed!
--	---

	Places marked with this sign indicate that slight physical injury may occur if the corresponding precautionary measures are not observed!
--	---

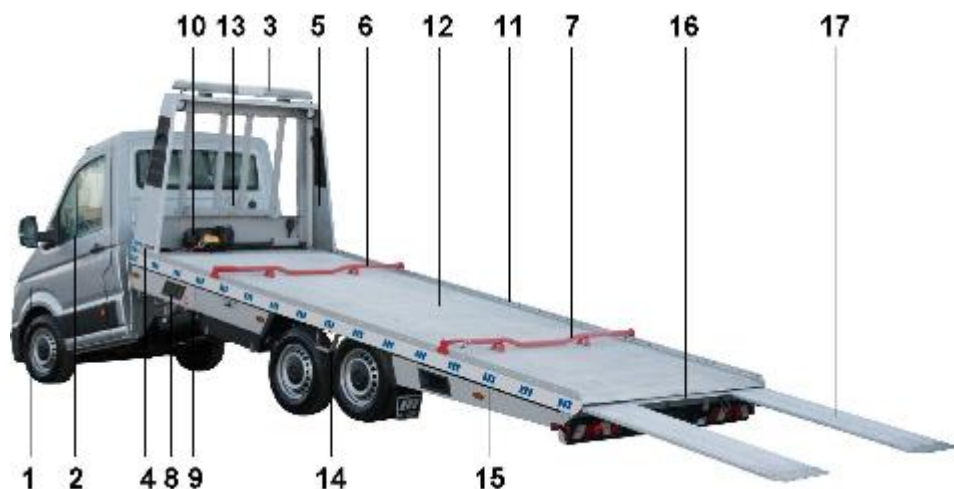
The text of a safety notice is divided into:

Signal board with signal word	Danger source! <ul style="list-style-type: none">► Consequence of non-compliance<ul style="list-style-type: none">° Measures for avoidance
-------------------------------------	---

	Points marked with this symbol indicate further information and application tips. This symbol does not indicate any safety instructions.
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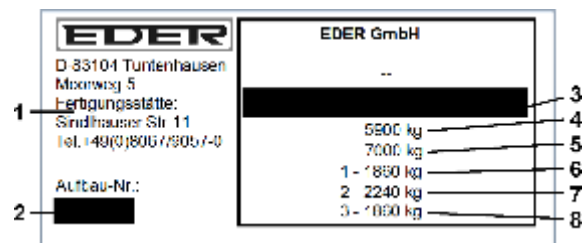
3 Description

1. Overview



- 1 Base vehicle
- 2 Touch panel in the driver's
- 3 cab Warning console*
- 4 Filling valve Air
- 5 spring Flyer*
- 6 Adjustable front wheel stop
- 7 Adjustable rear wheel stop
- 8 Manual control panel for plateau, ramps and winch
- 9 Operation of lift axis*.
- 10 Electric winch*
- 11 Aluminum perforated
- 12 railing Plateau
- 13 Loading ball on loading
- 14 platform air spring
- 15 Spare wheel (2 pieces if
- 16 necessary*) Center ramp*
- 17 (retracted) Drive-up ramps
- 18 Trailer hitch* (not shown) Optional
- (*) equipment

Type plate inside in the area of the left B-pillar



- 1 Manufacturer
- 2 body number
- 3 Vehicle identification number
- 4 Permissible total weight Total
- 5 train weight
- 6 Axle load axle 1
- 7 Axle load axle 2
- 8 Axle load axle 3

3.2 General description

The **Blitzlader 2** car transporter **with air suspension** is available with the following base vehicles:

- VW Crafter/MAN TGE with front- or rear-wheel drive and single cab
 - VW Crafter/MAN TGE with front- or rear-wheel drive and crew cab
 - Mercedes Sprinter with rear-wheel drive and single cab
 - Mercedes Sprinter with rear-wheel drive and double cab
 - Ford Transit with rear-wheel drive and single cab
 - Opel Movano/Renault Master with front-wheel drive and single cab
- The frame with rear axle is expertly separated from the base vehicle behind the driver's cab so that only the power car remains. The plug-in units with a pivot point for the plateau are flanged to this.
 - The plateau consists of a sturdy steel frame and a transversely planked aluminum loading surface. At the pivot point, the plateau is connected to the slide-in modules of the powerhead.
 - The plateau is tipped up by an electrohydraulic tipping shear. The longitudinal axis of the vehicle is bent at the pivot point between the plateau and the power car.
 - The electrohydraulically extendable drive-up ramps form an inclined plane with the plateau when tilted, on which the vehicle to be transported is moved up or down at a drive-up angle of approx. 10°.

- By means of the cable winch*, the vehicle to be transported can be pulled over the drive-up ramps onto the plateau during loading.
- An adjustable wheel stop and a railing are used to secure the load.
- For an increased payload, the car transporter is equipped with a tandem chassis from our own production at the rear. The original rear axle of the basic vehicle is integrated into the chassis as a second axle.
- For empty runs, the third axle can be lifted as an option.
- Optimum ride comfort thanks to air suspension on the rear axles.

3. Intended use

The car transporter is designed exclusively for transporting motor vehicles up to the permissible total weight of the car transporter.

All safety regulations must be observed and all safety-relevant values must be complied with in accordance with the respective technical data.

Any other use beyond this is considered improper. EDER is not liable for any damage resulting from this.

Intended use also includes compliance with the maintenance obligation (see "Care and maintenance", page 65).

4. Foreseeable misapplication

BEACHT

EDER is not liable for personal injury or property damage caused by misuse.

Misapplications include, but are not limited to, the following actions/applications:

- Transporting people and/or animals
- Transporting objects/goods that are not listed under "Intended use", page 14.
- Loading with too high payload
- Driving with poorly/unsecured load
- Exceeding the maximum speed limit
- Driving at inappropriate speed in bad weather conditions
- Driving with apparent parts wear
- Driving in damaged condition
- Driving with defective lighting
- Driving with tilted cargo bed
- Using the loading area as a lifting device
- Exceeding the max. drawbar load or the trailer load

- Use of unauthorized spare parts or accessories
- Structural or technical modifications not approved by the manufacturer
- Maintenance of safety-relevant components by laypersons
- Removing or obscuring the nameplate
- Leaving/renting the car transporter without handing over the operating manual and instruction in its operation.
- Use of the winch* for purposes other than loading and unloading the vehicle to be transported.

4 Operation and use

1. Loading and unloading

1. Safety instructions for loading and unloading



Danger of accident due to moving traffic!

- ▶ The loading or unloading point is not sufficiently secured.
- ▶ During loading and unloading, the car transporter's lighting may be obscured by the load.
- ▶ The car transporter is recognized poorly or too late by other road users.

- Watch out for yourself or other people and vehicles.

Secure the loading area with the hazard warning lights on, the warning console* switched on and the warning triangle. If necessary, enlist the help of another person to secure the area.

- Wear high-visibility vests.



Loading and unloading on slopes and uneven ground!

- ▶ The car transporter may start moving uncontrollably or tip over.
The car transporter can be damaged (e.g. frame damage).
- ▶
 - Firmly apply the parking brake.
 - If possible, load and unload the car transporter on firm horizontal ground or secure it with chocks.



Too high structure!

Loads that are too high can be torn off and cause accidents during passages with limited height (e.g. tunnels, underpasses).

- ▶ The max. permissible total height must not be exceeded. This must be checked before driving off.
 - Pay attention to traffic signs with information on the maximum permissible vehicle height.



Load protruding beyond the loading area!

- ▶ Increased risk of accident, potential hazard.
 - ▶ Increased swing radius.
 - Comply with country-specific regulations.
 - Do not exceed max. permissible values for protruding load to the front/rear/side.
 - Make protruding cargo recognizable.
-



Excessive overtravel weight on the drive-up ramps!

- ▶ Risk of injury from breaking ramps and falling loads.
 - An access ramp may be loaded with a maximum wheel load of 950 kg.
-



Operating the drive-up ramps!

- ▶ Bruising of the hands, bumping of the feet.
 - Wear protective gloves and safety shoes.
 - Do not stand behind the drive-up ramps.
-



Tilting plateau during loading and unloading!

- ▶ Crushing of body parts on the moving parts of the transporter.
 - ▶ Risk of injury due to slipping load and tilting platform.
 - Observe tilting movement of the plateau.
 - Make sure that no body parts are located between or under the moving parts.
 - No other persons may be in the area of the moving parts.
-



Slippery plateau due to wetness, slipperiness and pollution!

- ▶ Slipping, falling off the plateau.
 - Take particular care when stepping on the plateau in wet, damp and slippery conditions.
 - Remove snow, ice and dirt before entering the plateau.
 - Enter plateau only with suitable shoes.
 - Enter and leave the plateau only via the lowered stern.
-



Unsecured or poorly secured load!

- ▶ The load can shift, roll away or be thrown from the car carrier while driving.
 - Secure the load properly (see "Securing the loaded vehicle", page 23).
 - Safely stow tools and supplies.
 - Remove loose objects on the plateau.
 - Always check the adjustable wheel stop for tight fit.
 - Observe national regulations on load securing.
 - Check load securing after a distance of approx. 50 km and during breaks in the journey, retighten if necessary.
-



Unsuitable, defective or incorrectly used lashing equipment!

- ▶ The safety belts can tear, the load can shift during the journey, roll away or be thrown from the car transporter.
 - Only use certified safety harnesses (TÜV,GS).
 - Use suitable safety belts (see "Securing the loaded vehicle", page 23).
 - Check the securing straps for damage before lashing. Max.
 - Observe lashing forces and min. lashing angle.
-

**Work with the winch*!**

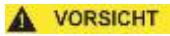
- ▶ Danger of crushing on the rotating drum of the cable winch or on the cable hook.
- ▶ The rope may break.
- ▶ Persons can be injured by the tensioning rope when pulling the winch.
- ▶ People can trip over the taut rope.
 - Do not use damaged ropes.
 - Do not reach into the drum of the cable winch when the freewheel is deactivated.
 - No persons may be behind the vehicle to be loaded or unloaded as long as the vehicle is held by the rope.
 - No persons are allowed on the plateau, in the area of the drive-up ramps and generally between the winch and the vehicle to be transported when a load is applied to the rope.
 - Wear work gloves when working with the rope.
 - When pulling, always make sure that the rope is wound neatly onto the drum.

**Defective hydraulic parts!**

- ▶ Risk of injury from a hydraulic fluid escaping at high pressure. Hydraulically moving parts can yield unexpectedly in the event of leakage.
 - ▶ leakage.
 - Never reach for lines and screw connections that are leaking.
 - In the event of leakage, secure hydraulically moving parts against unforeseen movement before reaching into the danger zone.
- Have defective hydraulic parts replaced immediately by a specialist workshop.

**Cargo drags across the plateau!**

- ▶ Damage to the car transporter.
 - Only load vehicles that can roll or use shunting rollers.
 - Remove or secure hanging components before loading.

**Lack of personal protective equipment!**

- ▶ Squeezing/crushing of hands, fingers and feet.
 - Wear personal protective equipment such as protective gloves and safety shoes during the entire loading and unloading process.

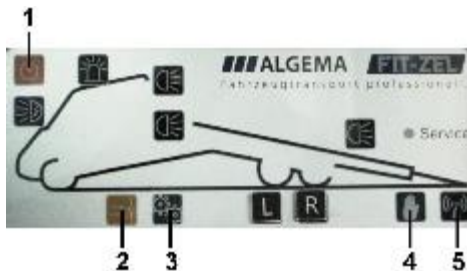
4.1.2 Loading and unloading point

- Load and unload away from moving traffic whenever possible.
- Secure the loading point against moving traffic with hazard warning lights, activated rotating beacon* and warning triangle. If necessary, enlist the help of another person to provide security.
- Wear a high-visibility vest.
- Place the car transporter on as level and firm a surface as possible.
- Secure the car transporter against rolling away with the parking brake and, if necessary, with wheel chocks.

4.1.3 Tilt plateau operation

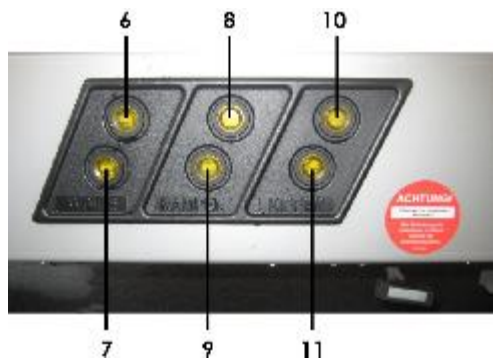
Tipping up and down as well as extending and retracting the loading ramps is done electrohydraulically. The electrohydraulics are installed in the right front toolbox under the platform.

The touch panel for operating the body functions and the additional lighting is installed on the dashboard in the driver's area. The exact installation situation varies depending on the base vehicle.



Touch panel in the driver's cab:

1. Main button
2. Control lamp set up functions
3. Hydraulic pump indicator light
4. Button manual control
5. Button radio remote control



Hand control panel outside left:

6. Cable winch unwind
7. Rope winch roll up
8. Ramps from
9. Ramps on
10. Plateau on
11. Plateau from

- The parking brake of the car transporter must be applied and the ignition switched on so that the body functions can be activated. If necessary, additionally secure the car transporter with wheel chocks.
- To avoid discharging the vehicle batteries, it is recommended to leave the vehicle engine running until the charging or discharging process is completed.
- Make sure that the trailer coupling* at the rear is removed.
- Activate the setup functions by pressing the main key (1) on the touch panel. The control lamp for the set-up functions (2) must light up.
- After activating the setup functions, the manual control is automatically active. The Manual control button (4) and the buttons (6-11) on the manual control panel light up. If the radio remote control is to be used, it can be activated by pressing the radio remote control button (5) or directly by pressing the green Start button on the radio remote control panel.

control system (see "Radio remote control*", page 42).

The illumination of the keys (6-11) on the manual control panel goes out when the radio remote control is active.

- If you want to switch back to manual control, press the Manual control key (4). The following description in this section refers to operation with the manual control. Operation with the radio remote control makes sense.
- All keys (6-11) on the manual control panel must remain pressed while the function is being activated. If the key is released, the function stops. Always release the keys when the selected function has reached its end position and no further movement can be detected.
- Extend the drive-up ramps completely using the Ramps off button (8) until the end position is reached and the movement stops. The drive-up ramps hang down by approx. 10° in the end position. The flexible suspension of the drive-up ramps allows you to compensate for uneven floors.
- Next, the plateau can be tilted up by pressing the Plateau button (10). The tipping process stops automatically as soon as the tipping sensors at the lower rear end of the plateau touch the ground. Alternatively, the sensor end position tilt scissors stops the tipping when the vehicle is on uneven ground and the tilt scissors are at the stop before the tilt sensors reach the ground.
- The vehicle can then be loaded or unloaded and secured, (see 4.1.4 "Securing the loaded vehicle" to 4.1.9 "Trailer transport with loading ball* on the loading area"). For loading or unloading with the rope winch*, the rope can be unrolled with the Unroll rope winch button (6) and rolled up with the Roll up rope winch button (7).
- The plateau is tilted down with the Plateau down key (11). Make sure that at the end of the tilting process the tilting shear moves over the dead center and pulls the plateau down safely. This process is associated with an audible click, which should be perceived by the operator.
- You can then retract the ramps completely using the Ramps on (9) button.
- As soon as the plateau and the ramps are in the drive position again, the body functions can be deactivated with the main switch (1). Alternatively, the body functions deactivate themselves when the parking brake is released (immediately) or the ignition is switched off (approx. 60 sec. follow-up time).



VORSICHT

Driving with the plateau not fully tilted or with the ramps not fully retracted!

- Damage may occur to the plateau, the tipping shear, the slide-in modules or the drive-up ramps.
- Flowing traffic could be endangered.
 - The plateau must always be fully tilted and the drive-up ramps fully retracted before starting to drive.

BEACHTEN

If the plateau is not fully tilted, a warning tone sounds in the driver's cab for approx. 20 seconds when the parking brake is released. There is **no** warning tone for loading ramps that are not fully retracted.

BEACHTEN

When the parking brake is released, the overrun functions are deactivated immediately. If the ignition is extinguished, the open functions are deactivated after approx. 60 seconds. run-on time.

BEACHTEN

There is no automatic switch-off for the hydraulic functions except for tipping. As soon as the movement stops, the button must be released. If the electrohydraulics work against a large resistance for a long time, there is a risk of damage due to overheating.

BEACHTEN

The battery voltage is not monitored during operation of the electrohydraulics. Due to the high current demand, the vehicle batteries may be discharged when the engine is not running and the electrohydraulics are operated frequently. It is recommended to keep the engine running during the charging and discharging process.

4.1.4 Securing the loaded vehicle

- Determine the position of the front wheel stop, depending on the wheelbase, the overhangs and the axle load distribution of the vehicle to be transported.
- With the turnbuckle open, hook the wheel stop into the holes in the railing on the side opposite the turnbuckle using the pins. The turnbuckle must point forwards.
- Align the wheel stop exactly transverse to the direction of travel and close the turnbuckle so that the pins of the wheel stop are fixed in the holes of the railing.



**WARNING****The wheel stop is not fastened properly!**

- ▶ The wheel stop can come loose while driving.
 - Make sure that the pins of the wheel stop are fixed in the holes of the railing.
 - The turnbuckle must be able to be closed above the dead center with a decently strong hand pressure, but without force. If necessary, change the setting of the turnbuckle by screwing the eyelet in or out further.

- Load the vehicle to be transported (see "Loading without winch*", page 25 or "Loading with winch*", page 26). We recommend driving the vehicle forwards onto the car transporter.
- The loaded vehicle must be centered on the plateau in relation to the center longitudinal axis of the car transporter and the parking brake must be applied. The lowest gear must be engaged or, in the case of an automatic transmission, the selector lever must be in the P position. The wheels of the front axle must be in contact with the front wheel stop.
- Fasten the second wheel stop in the same way as the front wheel stop immediately behind the rear axle. The turnbuckle must point to the rear.
- A trapezoidal wheel securing strap must be attached at an angle of approx. 45° to **all** wheels of the loaded vehicle above the center of the wheel and pretensioned by means of a ratchet (see illustrations below).

BEACHT

Please also refer to the separate instructions for the harness wheel securing straps.

- After a distance of approx. 50 km, the pretension of the trapezoidal wheel lock belts must be checked and retightened if necessary.



4.1.5 Loading without rope winch*.



Get out of the loaded vehicle!

- ▶ Fall from the plateau.
 - When getting out of the loaded vehicle, hold on to the handles provided for this purpose in the area of the driver's door, on the door frame or on the roof.
 - Leave the plateau in the tilted-up state to the rear.
 - If necessary, close the driver's door of the loaded vehicle after tipping it off the ground.



Unintended rolling back or acceleration of the vehicle to be loaded!

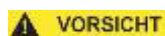
- ▶ People can be hit or run over.
 - No persons are allowed on the platform, the ramps or behind the car transporter during loading.



The loaded vehicle is positioned incorrectly!

- ▶ Axle loads of the car transporter are exceeded.
- ▶ The car transporter can no longer be steered safely enough due to an underloaded front axle.
 - **The** loaded vehicle must be positioned in such a way that the permissible axle loads of the car transporter are not exceeded.
 - To ensure steerability, the front axle load of the car transporter must be more than approx. 30% of the actual weight of the loaded car transporter.

- Secure the loading point (see "Loading and unloading point", page 20).
- Extend the drive-up ramps and tilt the plateau (see "Operating the tilt plateau", page 21).
- Check the position of the front wheel stop and change it if necessary (see "Securing the loaded vehicle", page 23).
- Slowly drive the vehicle onto the plateau in the center of the car transporter's central longitudinal axis until the front wheels are in contact with the wheel stop.

**Non-adapted steering movements during loading!**

- ▶ The vehicle to be loaded may fall from the drive-up ramps or from the plateau.
 - Drive the vehicle straight onto the car transporter, if necessary call in a guide.
-
- On the loaded vehicle, apply the parking brake and engage the lowest gear or, in the case of automatic transmission, move the selector lever to the P position.
 - Tilt the plateau and retract the drive-up ramps (see "Tilt plateau operation", page 21).
 - Secure the loaded vehicle (see "Securing the loaded vehicle", page 23).

4.1.6 Loading with cable winch*.**Get out of the loaded vehicle!**

- ▶ Fall from the plateau.
 - When getting out of the loaded vehicle, hold on to the handles provided for this purpose in the area of the driver's door, on the door frame or on the roof.
 - Leave the plateau in the tilted-up state to the rear.
 - If necessary, close the driver's door of the loaded vehicle after tipping it off the ground.

**Unintentional rolling back or acceleration of the vehicle to be loaded!**

- ▶ People can be hit or run over.
 - No persons are allowed on the platform, the ramps or behind the car transporter during loading.

**The loaded vehicle is positioned incorrectly!**

- ▶ Axle loads of the car transporter are exceeded.
- ▶ The car transporter can no longer be steered safely enough due to an underloaded front axle.
 - The loaded vehicle must be positioned so that the permissible axle loads of the car transporter are not exceeded.
 - To ensure steerability, the front axle load of the car transporter must be more than approx. 30% of the actual weight of the loaded car transporter.

**The rope is damaged!**

- ▶ Injuries caused by the rope.
- ▶ The rope may break.
 - Wear work gloves.
 - Damaged ropes must not be used (see "Checking steel ropes ", page 72).



Also observe the separate operating instructions for the cable winch and the safety notes under "Safety notes for loading and unloading", page 16.



The installation situation of the cable winch may differ from the original installation instructions of the cable winch. For a straight pull and for rope shearing, the rope is always wound up from above, observing the prescribed direction of rotation of the rope winch.

Winch operation:**Cable winch:**

1. Freewheel
2. Detent bar
3. Handle
4. Storage eyelet
5. Plug cable remote control

- The cable winch* is operated as standard on the manual control panel on the outside left of the plateau (see "Tilt plateau operation", page 21). The body must be activated. The rope is unwound from the drum with the "Unwind rope winch (6)" button and wound up with the "Wind rope winch (7)" button.
- The cable remote control supplied by the winch manufacturer is only required for emergency operation. The cable remote control is stowed in the tool box* or lo- se enclosed.
- Details on operating the winch can be found in the operating instructions for the winch.
- Alternatively, the cable winch can be operated with the radio remote control* (see "Radio remote control*", page 42).

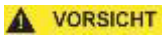
Moving the winch:

The cable must run parallel to the direction of travel of the car transporter (max. 4° oblique pull), if necessary you must align the cable winch as follows:

- Release the locking of the cable winch by turning the locking bolt (2) by 180°.
- Move the cable winch on the handle (3) in 125 mm increments to the desired position. The pin of the locking bolt (2) must be congruent with a hole.
- Lock the cable winch by turning the locking bolt (2) by 180° again. The pin of the locking bolt must engage in the hole below it.

Loading:

- Secure the loading point (see "Loading and unloading point", page 20).
- Extend the drive-up ramps and tilt the plateau (see "Operating the tilt plateau", page 21).
- Check the position of the front wheel stop and change it if necessary (see "Securing the loaded vehicle", page 23).
- Release the rope hook from the storage eye (4) and pull the rope from the drum with the freewheel (1) activated.
- Attach the rope hook to the vehicle to be loaded and deactivate the freewheel (1). Pull the rope firmly again to ensure that the freewheel clutch is correctly engaged.

**VORSICHT****The overrunning clutch does not engage correctly when the overrunning clutch of the rope winch is deactivated!**

- ▶ The drum may rotate uncontrollably when a load is applied and the coupling will be damaged.
 - After deactivating the freewheel, pull the rope again firmly so that the freewheel clutch engages securely.
 - Do not operate the freewheel under load.

BEACHT

At least 5 rope windings must remain on the drum to be able to hold the nominal load.

BEACHT

To attach the rope hook to the vehicle to be towed, observe the operating instructions for the vehicle.

- The vehicle can now be pulled slowly onto the plateau with the winch centered on the longitudinal center axis of the car transporter until the front wheels come to rest against the wheel stop. Observe the position of the steered wheels and correct them if necessary. Make sure that the rope is wound neatly onto the drum.

**VORSICHT****Non-adapted steering movements during loading!**

- ▶ The vehicle to be loaded may fall from the ramps or from the plateau.
 - Pull the vehicle straight onto the car transporter, if necessary call in a guide.
- On the loaded vehicle, apply the parking brake and engage the lowest gear or, in the case of automatic transmission, move the selector lever to the P position.
- Tilt the plateau and retract the drive-up ramps (see "Tilt plateau operation", page 21).

- Secure the loaded vehicle (see "Securing the loaded vehicle", page 23).
- Detach the rope hook from the loaded vehicle and hook it into the storage eye (4).
- Pull in the rope until it hangs loosely.
- Finally, activate the freewheel of the cable winch.

⚠ VORSICHT**The winch is used for lashing the vehicle!**

- Vehicle or cable winch may be damaged.

Never use the winch to tie down the vehicle.

BEACHT

After loading, reactivate the winch freewheel. If the winch freewheel remains deactivated, unintentional operation (e.g. radio remote control in the trouser pocket) may cause damage to the winch, the storage eyelet or the loaded vehicle!

BEACHT

The battery voltage is not monitored during winch operation. Due to the high current demand of the cable winch, the vehicle batteries may be discharged after a short time when the engine is not running.



A figure-of-eight sling is supplied with every car transporter with winch. The figure-of-eight sling serves as an aid if the hook of the cable winch cannot be easily attached to the vehicle to be loaded. To do this, pass the sling through the towing eye or a load-bearing part of the vehicle to be loaded. If necessary, slightly compress the loops of the sling. Then hook both loops into the hook of the cable winch as shown.

⚠ VORSICHT**The figure-of-eight loop is damaged!**

- Injuries caused by the figure-of-eight
- sling The figure-of-eight sling can tear.
 - **The** same criteria apply as for the rope of the rope winch (see "Checking steel ropes ", page 72).

4.1.7 Unloading without rope winch*.



Get in the loaded vehicle!

- ▶ Fall from the plateau.
 - If necessary, open the driver's door of the loaded vehicle from the ground before tipping it up.
 - Enter the plateau in the upturned state and from behind.
 - When entering the loaded vehicle, hold on to the designated handholds in the area of the driver's door, on the door frame or on the roof.



Unintentional rolling back or acceleration of the vehicle to be unloaded!

- ▶ People can be hit or run over.
 - During unloading, no persons are allowed on the plateau, the drive-up ramps or behind the car transporter.

- Secure the unloading point (see "Loading and unloading point", page 20).
- Before unloading, check again that the parking brake is applied on the loaded vehicle and that the lowest gear is engaged or, in the case of an automatic transmission, that the selector lever is in the P position.
- Loosen the safety belts.
- Remove the rear wheel stop.
- Extend the drive-up ramps and tilt the plateau (see "Operating the tilt plateau", page 21).
- Completely lower the vehicle to be unloaded from the plateau. If visibility to the rear is obstructed, a guide may be required.



Non-adapted steering movements during unloading!

- ▶ The vehicle to be unloaded may fall from the ramps or from the plateau.
 - Drive the vehicle straight from the car transporter, if necessary call in a guide.

- Tilt the plateau and retract the drive-up ramps (see "Tilt plateau operation", page 21).

4.1.8 Unloading with rope winch*.

**WARNING****Get in the loaded vehicle!**

- ▶ Fall from the plateau.
 - If necessary, open the driver's door of the loaded vehicle from the ground before tipping.
 - Enter the plateau in the upturned state and from behind.
 - When entering the loaded vehicle, hold on to the designated handholds in the area of the driver's door, on the door frame or on the roof.

**WARNING****Unintentional rolling back or acceleration of the vehicle to be unloaded!**

- ▶ People can be hit or run over.
 - During unloading, no persons are allowed on the plateau, the drive-up ramps or behind the car transporter.

**WARNING****The rope is damaged!**

- Injuries caused by the rope.
- ▶ The rope may break.
- ▶
 - Wear work gloves.
 - Damaged ropes must not be used (see "Checking steel ropes ", page 72).

BEACHT

Also observe the separate operating instructions for the cable winch and the safety notes under "[Safety notes for loading and unloading](#)", page 16.

Winch operation:

See "[Loading with cable winch](#)", page 26.

Unload:

- Secure the unloading point (see "Loading and unloading point", page 20).
- Before unloading, check again that the parking brake is applied on the loaded vehicle and that the lowest gear is engaged or, in the case of an automatic transmission, that the selector lever is in the P position.
- Check the position of the winch and move it if necessary (see "[Loading with the cable winch](#)", page 26).

- Release the rope hook from the storage eye and pull it off the drum when the freewheel is activated.
- Attach the rope hook to the vehicle to be unloaded and deactivate the freewheel. Pull the rope firmly again to ensure that the freewheel clutch is correctly engaged.



The overrunning clutch does not engage correctly when the overrunning clutch of the rope winch is deactivated!

- ▶ The drum may rotate uncontrollably when a load is applied and the coupling will be damaged.
 - After deactivating the freewheel, pull the rope again firmly so that the freewheel clutch engages securely.
 - Do not operate the freewheel under load.

BEACHT

To attach the rope hook to the vehicle to be towed, observe the operating instructions for the vehicle.

- Tighten the cable winch until the cable is taut.
- Loosen the safety belts.
- Remove the rear wheel stop.
- Extend the drive-up ramps and tilt the plateau (see "Operating the tilt plateau", page 21).
- The vehicle to be unloaded can now be slowly lowered from the plateau with the aid of the cable winch. Observe the position of the steered wheels and correct them if necessary.



Non-adapted steering movements during unloading!

- ▶ The vehicle to be unloaded may fall from the ramps or from the plateau.
 - Lower the vehicle straight from the car transporter, if necessary call in a guide.

BEACHT

At least 5 rope windings must remain on the drum to be able to hold the nominal load.

- Secure the unloading vehicle against rolling away.
- Detach the rope hook from the unloaded vehicle and hook it into the storage eye.
- Pull in the rope until it loosely sags. Make sure that the rope is wound neatly onto the drum.

- Activate the freewheel of the cable winch.
- Tilt the plateau and retract the drive-up ramps (see "Tilt plateau operation", page 21).

BEACHTEN

After loading, reactivate the winch freewheel. If the winch freewheel remains deactivated, unintentional operation (e.g. radio remote control in the trouser pocket) may cause damage to the winch, the storage eyelet or the loaded vehicle!

BEACHTEN

The battery voltage is not monitored during winch operation. Due to the high current demand of the cable winch, the vehicle batteries may be discharged after a short time when the motor is not running.

4.1.9 Trailer transport with loading ball* on the loading area

A loading ball* (50 mm ball head) and a 13-pin trailer socket* are optionally mounted on the front of the platform for transporting trailers.

- Load the trailer with the cable winch (see "Loading with cable winch*", page 26).
- Hook the trailer's coupling ball onto the loading ball and lock it. Connect the lighting plug of the trailer to the 13-pin trailer socket*.
- In addition, secure the trailer to its wheels on the plateau (see "Securing the loaded vehicle", page 23) and apply the parking brake on trailers with overrun brakes.
- Unloading is performed in reverse order (see "Unloading with the cable winch*", page 32).
- Only the rear lights (parking lights) are active on the 13-pin trailer socket.



BEACHTEN

Also observe the operating instructions of the trailer for the correct locking of the coupling head.

BEACHTEN

The permissible static drawbar load on the loading ball is limited to 130 kg for trailers with overrun brakes and 75 kg for trailers without brakes. The actual weight of the trailer must not exceed 750 kg for trailers with overrun brakes and 400 kg for trailers without brakes.

BEACHTEN

The trailer must be properly lashed to the wheels. The loading ball is not designed to fully absorb the horizontal forces due to braking and acceleration.

4.2 Checking before starting the journey

Before leaving with the car transporter, the following points must be checked and corrected if necessary:

- Ensure that the warning triangle, wheel chocks for the car transporter, warning vests, safety belts, wheel stops and the radio remote control* are on board the car transporter and securely stowed.
- Remove loose objects from the plateau.
- Check harness wheel securing straps for tight fit and tension.
- Check wheel stops for tight fit.
- The rope hook must be hooked into the storage eye, the latching bolt for moving the rope winch must be locked in a hole and the freewheel must be activated.
- The parking brake of the loaded vehicle must be applied and the lowest gear engaged or, in the case of automatic transmission, the selector lever must be in the P position.
- Ensure that the plateau is completely tilted down.
- The drive-up ramps and the center ramp* must be completely retracted.
- Visual inspection of the tires and chassis.
- The body functions must be switched off (switches off automatically when the parking brake is released).
- Close and lock the tool box* (see "Tool box*", page 49).
- Functional check of the lighting equipment on the car transporter.
- The working lights and the surrounding lights in the front and rear must be off for driving on public roads (switch off automatically at a speed of approx. 10 km/h).
- Trailer operation*: Check that the detachable ball bar and the towing ball coupling, the lighting equipment and the breakaway cable on the trailer are properly locked. When operating the trailer, observe the relevant safety instructions (see "Attaching the trailer coupling*", page 38) and the relevant operating instructions for the trailer.

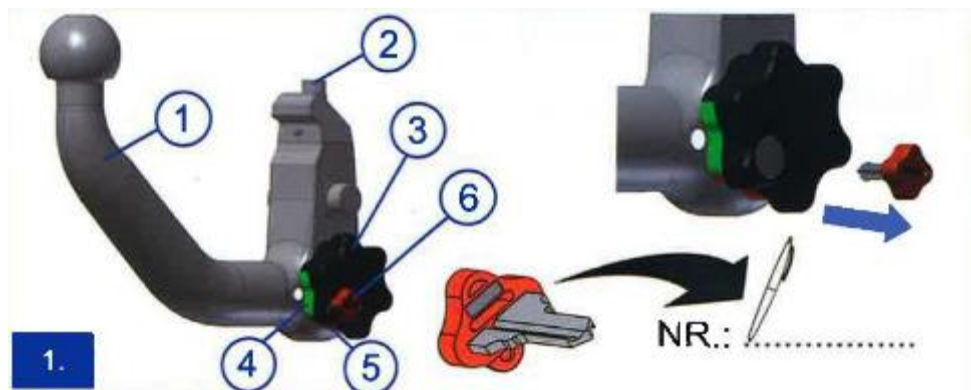
4.3 Attaching the trailer coupling*.

BEACHTEN

These operating instructions only contain brief instructions for assembly. A detailed description can be found in the enclosed operating instructions for the trailer coupling. The operating instructions for the trailer coupling must be observed.



Mounting for ball bar at the bottom of the rear of the car transporter.

**Trailer hitch:**

1. Ball bar
2. Locking bolt
3. Handwheel
4. Green area
5. Red area
6. Lock cylinder with key

- To install the trailer hitch, the mounts on the car transporter and the ball bar must be clean and undamaged.
- The locking cylinder must be unlocked. It must not be possible to remove the key when it is unlocked. If necessary, unlock the locking cylinder.



- Before mounting, check that the ball bar is tensioned. The locking bolt must be completely retracted in the tensioned state [2.2].



- If the ball bar is not tensioned, pull the handwheel and turn it to the right in the pulled position [2.3]. The white marking must be in the red area.
- In the clamped state, press the ball bar into the holder until the ball bar engages. Then lock the locking cylinder and remove the key [2.4].

**The ball bar is not mounted correctly!**

- ▶ The ball bar can come loose during travel.

After mounting the ball bar, check carefully that the white marking is in the green area, the handwheel is in contact with the ball bar without any gap, the locking cylinder is locked and the ball bar has no play in the holder.

**Use of additional tools or aids when mounting the ball bar!**

- ▶ The ball bar could be damaged and come loose during trailer operation.
 - Do not use any additional tools or aids to mount the ball bar.
 - Clean the ball bar, the locking mechanism and the receptacle if the ball bar cannot be mounted by hand.
 - If it is not possible to install the ball bar without tools or auxiliary equipment, the trailer coupling must be repaired by a specialist workshop.
-

**The plateau is tilted up with the ball bar mounted!**

- ▶ The ball bar hits the ground and the plateau cannot be tilted completely.
 - ▶ The plateau and the trailer coupling could be damaged.
 - Always remove the trailer coupling when it is not needed.
 - Before tilting up the plateau, check that the ball bar is dismantled.
-

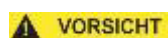
4.4 Radio remote control*

- After switching on the setup functions on the touch panel (see "Tilt plateau operation", page 21), wait approx. 3-4 seconds (system self-diagnosis). Then press the Start key (1). Alternatively, the radio remote control can also be activated by pressing the Radio remote control button on the touch panel.
- The radio remote control is active when the radio remote control button on the touch panel lights up and the LED function indicators of the radio remote control flash (see separate operating instructions for radio remote control).
- After the last command received, the radio remote control remains active for approx. five minutes. It then switches off again. **This is done by automatically activating the emergency stop function.**
- Press the desired keys (2-4, 6-8) on the radio remote control to activate the corresponding output on the receiver. The functions are analogous to the manual control panel (see "Tilt plateau operation", page 21). The buttons must remain pressed during the work process.
- To deactivate the radio remote control, press the Stop button (4). The button is designed as an **emergency stop function**. In this state, all functions are switched off. To reactivate the setup functions, see the "Emergency stop function" section.



Radio remote control:

1. Start
2. Rope winch roll up
3. Plateau from
4. Ramps on
5. Stop (emergency stop)
6. Cable winch unwind
7. Plateau on
8. Ramps from



The buttons of the radio remote control are actuated unintentionally!

- ▶ Unintentional operation may result in damage to property or personal injury.
 - Always keep an eye on the radio remote control when it is activated.
 - Do not keep the radio remote control in your trouser or jacket pocket.
 - Do not place any objects on the radio remote control.

Deactivate the radio remote control by switching to manual control on the touch panel if the radio remote control is not required.



The danger zone cannot be seen when operating the radio remote control!

- ▶ Property damage and personal injury may occur.
 - Only operate the radio remote control when you can see the danger zone around the plateau and the drive-up ramps.
-

BEACHT

If an LED radio indicator on the upper edge of the radio remote control lights up or flashes **red** when one of the keys is pressed, the batteries of the radio remote control must be replaced. Changing the batteries is not part of these operating instructions.

BEACHT

Also observe the enclosed separate operating instructions for the radio remote control.

Other versions of the radio remote control 8-channel radio remote control*:

An 8-channel radio control system is optionally available instead of the 6-channel radio control system shown (not illustrated). Channels 1 to 6, the Start and Stop buttons and the emergency stop function have the same functions as the 6-channel radio remote control described. In addition, the rotating beacons* and worklights* can be switched on and off using the buttons on channels 7 and 8 (see "Rotating beacon*", worklights* and ambient lighting front* and rear*", page 46).

**Radio remote control:**

Emergency stop mushroom
start

Stop (emergency stop)

1. Rope winch roll up
2. Cable winch unwind
3. Tilt superstructure
4. Tilt up superstructure
5. Tilt up ramp
6. Tilt ramp
7. not occupied
8. not occupied

**Radio remote control:**

Emergency stop mushroom

Start (press and hold for 3s to activate the radio)

Stop - simple stop (press and hold for 3s to deactivate the radio)

1. Rope winch roll up
2. Cable winch unwind
3. Tilt plateau
4. Tilt up plateau
5. Extend ramps
6. Drive in ramps
7. Lift axle*
8. Simple pressure <1s - Switch to worklight on or off.
- long press >3s - rotating beacon on or off

Emergency stop function:

For safety reasons, the emergency stop function of the Stop/Emergency stop mushroom pushbutton including the deactivation of all functions is mandatory. The emergency stop function is activated automatically by pressing the Stop/Emergency stop mushroom button or if no command is received for approx. five minutes. There are two ways to reset the setup functions after activating the emergency stop function:

Possibility 1:

- Body functions in the driver's cab deactivated
- Switch off the ignition of the base vehicle.
- Switch on the ignition of the base vehicle.
- Activate body functions in the driver's cab. The hand control panel on the outside left is active.
- If you want to continue working with the radio remote control, activate the radio remote control either on the touch panel or with the Start button (1).

Possibility 2:

- Body functions in the driver's cab deactivated
- Activate body functions in the driver's cab. The hand control panel on the outside left is active.
- Briefly actuate a function on the manual control panel at least once.
- If you want to continue working with the radio remote control, activate the radio remote control either on the touch panel or with the Start button (1).

See also "Tilt plateau operation", page 21.

BEACHT

If the emergency stop function has been activated, the manual control panel is also no longer active without a reset.

4.5 Lighting

1. Lighting according to StVZO

The lighting in accordance with the German Road Traffic Licensing Regulations (StVZO) is part of the base vehicle or is fully connected to the base vehicle. Thus, the operation of the lighting according to StVZO is carried out exclusively by the base vehicle and is not part of these operating instructions.

2. Rotating beacon*, worklights* and ambient lighting front* and rear*.



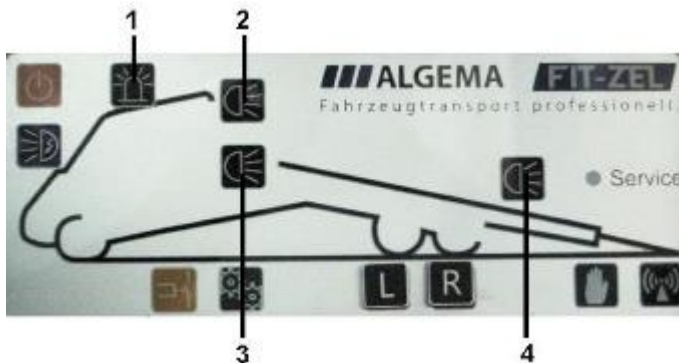
Warning console* with integrated rotating beacons, worklights and taillights. Additional working lights* on the Flyer*.



Front ambient lighting



Rear ambient lighting



Touch panel in the driver's cab:

1. Button rotating beacon
2. Pushbutton working headlight
3. Front ambient lighting button
4. Rear ambient lighting button

- The rotating beacons, the worklights and the ambient lighting at the front and rear must be switched separately on the touch panel. The ignition of the base vehicle must be on for this. If one of these lights is active, the corresponding button in the touch panel is also backlit.
- The lighting equipment described in this chapter can be operated independently of the parking brake. However, they go out approx. 10 minutes after the ignition of the base vehicle has been switched off.
- The rotating beacons can also be operated while driving.
- From a speed of approx. 10 km/h, the worklights and front ambient lighting switch off automatically and also remain off when the speed drops below this level.

- The rear ambient lighting lights up if the Rear ambient lighting button (4) is actuated and **reverse gear is** engaged. If reverse gear is de-activated, the rear ambient lighting goes out but switches back on as soon as reverse gear is engaged again. If a speed of approx. 10 km/h is exceeded, the rear ambient lighting remains permanently off.
- The warning console with integrated worklights also include LED tail, brake and turn signal lights.

**Danger of glare!**

- ▶ While driving, the worklights can dazzle or at least irritate traffic behind.
 - The working lights must be switched off while driving on public roads.

BEACHT

The rear ambient lighting is primarily intended as a maneuvering aid when reversing. The rear ambient lighting cannot be used when the vehicle is stationary and the engine is running.

BEACHT

The country-specific regulations must be observed when operating the rotating beacons.

BEACHT

The battery voltage is not monitored when operating the rotating beacons, the worklights or the ambient lighting. Due to the current demand, the vehicle batteries may discharge when the engine is not running and the vehicle is operated for a longer period of time.

4.6 Toolbox*

BEACHTEN

The front toolbox on the right side of the vehicle is standard. The control unit and the electrohydraulics are installed in the toolbox. It is **not used** for stowing equipment of the car transporter.

- Optional tool boxes can be mounted under the plateau on the left and right side of the vehicle.
- The lid of the toolbox is closed by a rotary handle with an integrated lock cylinder. The handle can be turned 90° to the left to open.
- It must not be possible to turn the rotary knob when it is locked.

VORSICHT**The tool box can come loose while driving!**

- ▶ If the toolboxes have not been closed properly or if external influences act on the rotary handle, the lid may open unintentionally while driving and the contents may fall onto the road.
 - The lock cylinder in the rotary handle of the lid must always be locked before starting to drive on public roads.



4.7 Center ramp*

The center ramp is used for loading and unloading tricycles, trailers with a jockey wheel or vehicles with a very narrow track. When the center ramp is extended or pulled out, a continuous ramp is created across almost the entire width of the platform.



1. Operating handle
2. Middle ramp
3. Plateau

- When the center ramp (2) is deactivated, the operating handle (1) is turned to the left (as shown). The standard drive-up ramps can be used as described under "Operating the tilting platform", page 21, without affecting the center ramp (2).
- To activate the center ramp (2), the side drive-up ramps must be completely retracted. If the center ramp (2) is activated with the drive-up ramps partially or completely extended, the actuating mechanism does not engage until the center ramp is completely retracted.
- The center ramp (2) is activated by turning the operating handle (1) 180° counterclockwise as far as it will go.
- The center ramp (2) now extends and retracts synchronously with the side loading ramps.
- To deactivate the center ramp, the drive-up and center ramps must be fully retracted. The operating handle (1) must be turned clockwise by 180° until it is against the stop.
- The center ramp is thus deactivated and locked in the retracted position.

BEACHTEN

The center ramp must be fully retracted when deactivating. If the center ramp is deactivated when the drive-up and center ramps are not fully retracted, functional failures and damage to the actuating mechanism may occur.

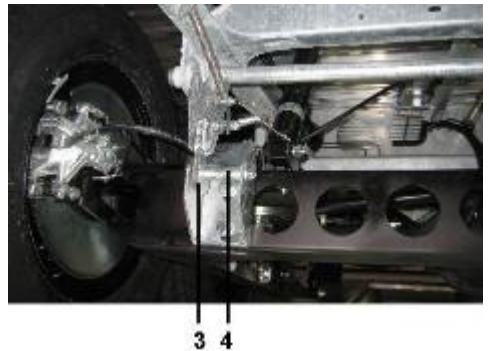


The actuating mechanism is damaged!

- ▶ The center ramp can slide backwards during travel and fall out of the ramp shaft.
 - Before starting to drive, check that the operating mechanism holds the ramps securely by pulling once firmly on the center ramp.
- If the actuating mechanism is defective, it must be repaired or the center ramp must be additionally secured or dismantled.

4.8 Lift axis*

The car transporter is optionally equipped with a manual lift axle function for the third axle. This allows the third axle to be lifted during empty runs, reducing tire wear and fuel consumption. In addition, the traction of the drive axle is improved during empty runs and slippery road conditions, since a higher proportion of the weight rests on the second axle. The cable handle for lifting the third axle is located directly next to the hand control panel on the outside left.



1. Hand control panel
2. Rope pull handle
3. Catch hook
4. Air-termination rod



Lifting the third axle with a loaded car transporter!

- ▶ The axis construction can be overloaded and damaged.
 - Lifting of the third axle is only permitted with an unloaded truck.

Lift third axis:

- Lifting the third axle is only allowed with an unloaded car transporter.
- To lift the third axis, the plateau must be fully tilted up. Therefore, it is recommended to lift the axis immediately during unloading.
- To lift the axis when it is tilted up, pull the cable handle (2) firmly and hold the cable handle (2).
- While the rope pull handle (2) is being pulled, the Plateau down button must be pressed on the manual control panel (1) or on the active radio remote control* (see "Tilt plateau operation", page 21).
- The tilting movement of the plateau causes a catch hook (3) to engage in the arresting tube (4) and thus take the third axis up with it. There is one arresting hook and one arresting tube each on the left and right.
- Observe the third axis during tipping. As soon as the wheel of the third axis no longer touches the ground, the rope pull handle (2) can be released.

Lower the third axis:

- To lower the third axis, the plateau must be completely tilted up again. To do this, press the Plateau up button on the manual control panel (1) or on the radio remote control*.
- Due to the strong pendulum motion of the tandem undercarriage during tipping, the arresting hook is released from the arresting tube with the aid of a tension spring after the wheels of the third axle touch the ground. This releases the third axle without further action. During tipping, the third axle remains on the ground.
- If the third axis is to be lifted again after tipping up, the rope pull handle (2) must be pulled during tipping down as described above.

4.9 Emergency operation

4.9.1 Emergency operation of electrohydraulics

In the event of a failure of the electrohydraulics, the hydraulic functions plateau up and down and drive ramps in and out can also be operated with a hand pump. The emergency control is located in the right front toolbox under the plateau.



Emergency operation electrohydraulics:

1. Hand pump
2. Pull valve button drive-up ramp
(top) = extend drive-up ramps
Press = retract drive-up ramps
3. Pull valve knob plateau
(down) = tilt plateau up
Press = tilt plateau
down
4. Pump lever



Pull press

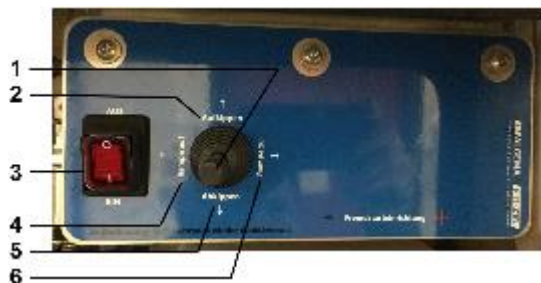
- To change from "pull" to "push" on the valve knob, turn the valve knob slightly to the right.
- To change from "push" to "pull" on the valve knob, turn the valve knob slightly to the left.
- Remove the pump lever (4) from the holder and insert it into the receptacle provided for this purpose in the upper part of the hand pump (1).
- With one hand, pull or push the appropriate valve knob (2 or 3) for the desired function as far as it will go. At the same time, use the second hand to operate the hand pump by moving the pump lever (4) up and down.
- **Important: The** valve knob must be pulled or pressed to the stop at all times during the procedure.
- After the procedure, stow the pump lever back in the holder provided for this purpose.

BEACHT

The hazard warnings for operating the tilting platform also apply in emergency operation (see "Operating the tilting platform", page 21).

2. Emergency operation electrohydraulics (cross lever)

If the radio remote control for the electrohydraulics is lost or defective, the hydraulic functions "Tilt plateau up and down" and "Ramp open and closed" can also be operated with an emergency control. This is located in the right front toolbox under the plateau.



Emergency operation electrohydraulics:

1. Operating lever
2. Tilt up plateau
3. Main switch
4. Ramp on
5. Tilt plateau
6. Ramp to

- To use the emergency operation, it is necessary to turn on the main switch by pressing it to position "I".
- After the procedure, it is mandatory to turn off the main switch to position "O" again.

BEACHTEN

The hazard warnings for operating the tilting platform also apply in emergency mode "Tilting platform operation".

4.9.3 Emergency operation of the cable winch



Emergency operation winch:

1. connector cable remote control

- For emergency operation of the cable winch, it is necessary that the body functions are activated by pressing the main button on the touch panel (see "Tilt plateau operation", page 21) and that an electrical voltage is applied to the cable winch.
- Plug the cable remote control of the cable winch into the cable remote control plug (1).
- The cable remote control is stowed in the tool box* or enclosed loose.
- Details on operating the winch can be found in the operating instructions for the winch.

10. Spare wheel*

1. Spare wheel removal

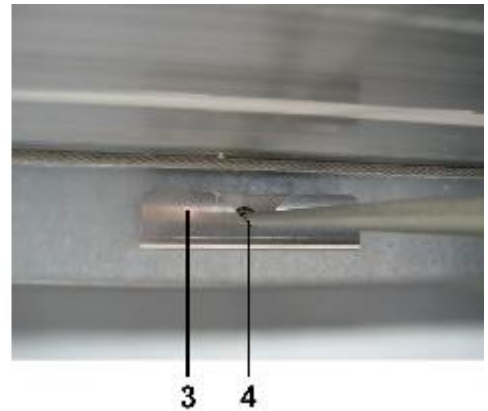
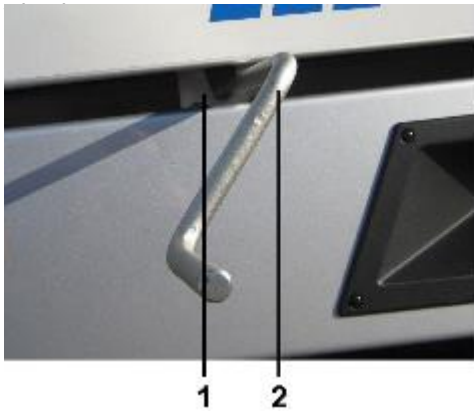
Your car transporter is equipped with at least one, optionally two, spare wheel holders in the rear part of the platform. A crank handle is required to remove the spare wheel*. The crank is stowed in the right-hand toolbox* or is supplied loose.



Spare



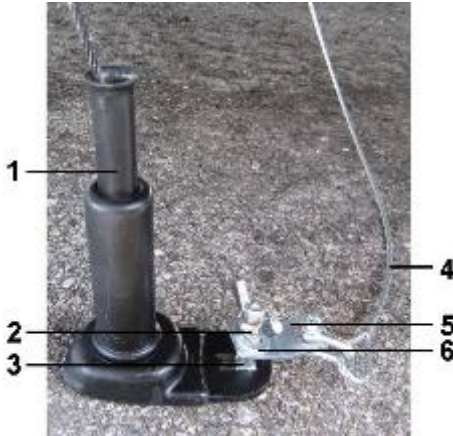
Crank



Crank holders

1. Crank guide outside
2. Crank
3. Crank guide inside
4. Crank holder in spare wheel winch

- At the side in the area of the spare wheel, under the plateau, there is an outer (1) and an inner crank guide (3). Push the flat end of the crank (2) from the outside through the crank guide until the flat end of the crank engages in the crank holder of the spare wheel winch (4).
- Lower the spare wheel to the ground by turning the crank (2) counterclockwise. Turn the crank until the spare wheel can be pulled out from under the car transporter as far as possible.



Spare wheel mounting:

1. Rim mount
2. Wing nut
3. carriage bolt
4. Catch rope
5. Catch rope bag
6. Washer

Threading the rim mount through from the rim of the spare wheel

- Remove the spare wheel by unscrewing the wing nut (2) from the carriage bolt (3). Afterwards, the washer (6) and the catch rope tab (5) of the arresting wire (4) can be removed.
- Thread the loosened rim mount (1) out of the rim of the spare wheel.

After changing the wheel, the remaining wheel can be stowed again. Proceed as follows to do this:



- Thread the rim adapter through the center hole of the rim.
 - Guide the carriage bolt from behind through the rim seat and a wheel bolt hole of the rim. It must no longer be possible to turn the carriage bolt in the rim seat.
 - Then place the safety rope lug and washer on the carriage bolt as shown and screw on the wing nut. Tighten the wing nut firmly, but without tools. All parts must now be firmly connected to each other.
 - Finally, turn the crank clockwise to pull the remaining wheel up again. The spare wheel has reached the end position as soon as the resistance on the crank increases significantly. Make sure that the safety rope is not pinched and damaged.
- Before departure, pull the crank out of the crank guides and stow it safely.

⚠ WARNING

The spare wheel can be lost while driving. There is a risk of accident!

- ▶ The spare wheel mounting or the arresting cable are damaged.
- ▶ The wing nut is not tightened correctly.
 - Proceed carefully when stowing the spare wheel. Make sure that the wing nut is sufficiently tightened and holds the wheel securely on the rim mount.
 - When stowing the spare wheel or the remaining wheel, make sure that the spare wheel mounting and the arresting cable are undamaged.

BEACHT

The easiest way to mount the spare wheel attachment to the remaining wheel is to set up the wheel as shown in the photos.

4.10.2 Wheel change

Eder GmbH does not supply any on-board tools for a flat tire as standard. It is necessary to use the on-board tool of the base vehicle or to procure the tool externally.

- **Changing wheels with a loaded vehicle is not permitted.** Unload the car transporter if necessary.
- Secure the car transporter against rolling away by engaging the parking brake and the lowest gear or, in the case of automatic transmission, by moving the selector lever to the P position.



- Lift the defective wheel. It is recommended to use a maneuvering jack with a load capacity of approx. 2000 kg for this purpose, as shown in the photo.
- Jacks with a rubberized contact surface are advantageous. Alternatively, a piece of anti-slip mat or similar can be placed on the support surface of the jack.
- The jack must be placed under the longitudinal tube between the two rear axles as shown. The jack must be positioned exactly in the center under the pivot point of the air spring bellows.
- Loosen the wheel bolts with a suitable tool by approx. half a turn before pumping up the jack.
- Then pump up the jack until both wheels of the affected side are approx. 3 cm above the ground.
- Completely loosen the wheel bolts of the defective wheel.
- Remove wheel from hub and place new wheel on hub.
- Tighten the wheel bolts. Refer to the operating manual of the base vehicle for the tightening torque. The tightening torque is identical on both rear axles. The wheel bolts must be tightened crosswise.

- Then stow the jack, tools and the defective wheel.
- Check the tightening torque of the wheel bolts again after 50 km.



The car transporter can slip off the car lifter during the wheel change!

- ▶ Persons lying under the car transporter can be crushed.
 - Use jacks with a rubberized support surface or place a suitable anti-slip mat on the support surface of the jack.
 - When lifting, make sure that the support surface of the jack does not slip. This can happen, especially in the case of a tilting trolley jack, due to the circular movements of the lifting arm.

Never lie down under the car transporter during the wheel change.
 - Do not reach further under the car transporter than absolutely necessary for the wheel change.



The wheel bolts are not tightened with the correct torque!

- ▶ The wheel may come off after the wheel change.
- ▶ The rim, wheel bolt or wheel hub may be damaged.
 - Tighten the wheel bolts with a torque wrench. Refer to the operating manual of the base vehicle for the tightening torque. It is identical for both rear axles.

If no torque wrench is available when changing the wheel, the tightening torque must be checked as quickly as possible in a suitable workshop.

Wheel change with loaded car transporter!



- ▶ The axles or wheels can be overloaded and damaged.
 - The wheel change with loaded car transporter is not allowed.

Unload the car transporter before changing the wheel.

Flowing traffic when changing wheels on public roads!



- ▶ Accidents with personal injury and property damage may occur.
 - Protect yourself adequately against moving traffic.

The identical measures must be applied as for loading and unloading (see "Loading and unloading point", page 20).
-

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Changing the wheels on the front axle is not part of these operating instructions. Please refer to the operating instructions for the base vehicle.

4.11 Additional equipment case lighting-ventilation*.



Position of the switch- to the left of the steering wheel



Switch left (case ventilation), right (coffer lighting)

The operation of the additional pannier lighting and pannier lighting is located to the left of the steering wheel.

The case lighting, as well as the case ventilation, can be switched on and off by pressing the respective switch.

The case lighting is only to be used when the vehicle is stationary (risk of dazzling other road users).

In case of prolonged operation of the lighting or ventilation, it is recommended to use it with the engine running, the vehicle battery will be discharged during use.

**Danger of glare!**

- ▶ During the journey, the luggage lighting can dazzle or irritate other traffic.
 - The case lighting must be switched off while driving on public roads.

BEACHTEN

The battery voltage is not monitored during operation of the case lighting or case ventilation. Due to the current demand, the vehicle batteries may be discharged when the engine is not running and the vehicle is operated for a longer period of time.

4.12 Other specific additional equipment

If other specific additional equipment is installed on your car transporter, please refer to the additional sheets enclosed with this operating manual or ask a sales representative.

5 Care and maintenance

1. Maintenance obligation

Intended use of the car carrier also includes:

- The regular visual inspection for damage, dirt and wear.
- The functional test of the car transporter and the individual components.
- The regular lubrication.
- The readjustment/tightening of loosened screw connections.
- The repair of worn, defective components by authorized specialist or service personnel of the manufacturer or by specialist workshops.

5.2 Overview of the maintenance to be performed regularly

BEACHTEN

The responsibility for performing the following maintenance lies with the operator of the auto transporter.

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The maintenance work and the maintenance intervals for the base vehicle can be found in the separate operating instructions for the base vehicle.

Interval	Measure	further information
Initial check after 50 km	Check wheel nuts for tight fit, retighten if necessary.	see "Checking the tires and wheels", page 69
Daily/before departure	Check all components for wear, deformation, corrosion, cleanliness and tight fit of all fasteners.	Visual and functional test
	Check the safety belts and wheel stops for damage.	Visual and functional test
	Check wheels and tires for damage/wear/aging.	Visual inspection
	Check the lighting system.	Functional test of rear lights, marker lights and side marker lights
	Check the service and parking brake for function.	Functional test of the brake system

Interval	Measure	further information
Weekly	Check tire pressure (incl. spare wheel), adjust recommended tire pressure if necessary.	see "Checking the tires and wheels", page 69
	Check spring bellows of rear axles and air lines.	Visual and functional check, whistling due to leaks, see "Air suspension", page 70
	Shock absorbers and axles.	Visual inspection, tightness and damage
	Tilt sensors at the rear lower end of the plateau	Free movement and function, see "Lubricating and greasing moving parts", page 79.
	Check oil level and top up if necessary	see "Checking the oil level and changing the oil", page 77
	Check the function of the cable winch*.	Visual and functional test
	Check the rope of the rope winch* for corrosion, dirt and rope damage, replace the rope if necessary.	See "Checking the steel wire ropes ", page 72 and separate anchoring of the wire rope winch.
Semi-annually or every 10,000 km	Clean, lubricate or spray moving parts.	See "Lubricating and greasing of operating parts", page 79
	Checking the electrical wiring, insulation and electrical connections.	Visual inspection
	Brake discs and pads on the rear axles.	Visual inspection for strength and smell Axis 2: See operating instructions for basic vehicle Axis 3: Wear limit Brake disc: 13 mm Brake pad: 4 mm
	Check plateau and chassis for damage.	Visual and functional test
Annual	Have the cable winch* checked by a competent person.	See also separate operating instructions for the cable winch.

Interval	Measure	further information
	Oil change hydraulic system.	see "Checking the oil level and changing the oil", page 77

5.3 Safety instructions for maintenance and cleaning



Operating materials and cleaning agents!

- ▶ Oils and fats can cause allergic reactions.
 - Wear protective clothing (skin, eye, hand and foot protection).
 - Avoid any skin contact with solvents and lubricants.
 - Use protective creams.



Missing or dirty safety and warning signs!

- ▶ Personal injury or property damage due to incorrect operation due to lack of information.
 - Keep safety and warning signs clean, visible and legible at all times.



Maintenance on the hydraulics!

- ▶ Risk of injury from a hydraulic fluid escaping at high pressure.
- ▶ Hydraulically moving parts can yield unexpectedly due to leakage.
 - Never touch lines and screw connections that are leaking.
 - In the event of leakage, secure hydraulically moving parts against unforeseen movement before reaching into the danger zone.
 - Do not disassemble any hydraulic parts that are under pressure.

**VORSICHT****Environmentally harmful substances such as oil, grease, acid, brake dust!**

- ▶ These substances can enter the environment, e.g. groundwater, during cleaning.
 - Comply with country-specific environmental protection conditions.
 - Cleaning of the car transporter only on a suitable washing place.

Fluids, in particular hydraulic oils and also engine oils, as well as lubricants and liquefied or compressed gaseous products may only be collected in suitable containers and disposed of in accordance with regulations (in accordance with EC Directive 2008/98/EC and national regulations). Label contents with appropriate warnings.
- Dispose of protective clothing in sealable plastic bags after wearing.

**VORSICHT****Unsuitable cleaning agents such as chemicals, salt, acids and bases!**

- ▶ Surface coating/materials can be attacked or disrupted.
 - Do not use abrasive, aggressive cleaning agents such as benzene, steel wool, wire brushes, sandpaper, etc.
 - Do not clean brake and hydraulic hoses with gasoline, benzene, petroleum or mineral oils.
 - Only use weakly acidic to weakly alkaline cleaning agents with a pH value of 6-10.
 - Use only soft clean cloth rags or brushes.
 - Only use care products approved for the respective material.

**VORSICHT****Use of a high-pressure cleaner/steam jet device!**

- ▶ Damage or destruction of components and surfaces due to excessive pressure, excessive water temperature.
 - Observe the operating instructions of the cleaning device.
 - Do not hold the water jet on one point longer.
 - Do not shine directly on sensitive components, e.g. lighting system, plug, cable, ball coupling, signage, stickers, etc.

4. Inspections and maintenance to be performed

1. Testing the tires and wheels

BEACHTEN

Even with little-used car transporters, the tires are subject to an aging process due to weather influences such as sunlight, cold, etc. Check the condition of the tires/wheels regularly. We recommend changing the tires after 6 years.

- ▶ Sight the tires all around.
 - Watch out for cracks or foreign bodies.
- ▶ Check the tire pressure. Information on the required tire pressure can be found below in this operating manual or on the sticker on the car transporter.
 - Top up with air if necessary.
- ▶ Check the tread depth of the tire (minimum tread depth in Germany according to StVO 1.6 mm, a minimum tread depth of 4 mm is recommended).
 - Replace the tire if necessary.
- ▶ Check that all wheel bolts are tight.
 - If necessary, tighten all wheel bolts crosswise with a torque wrench.

Tightening torque of wheel bolts (identical for both rear axles): See operating instructions for base vehicle.

BEACHTEN

The values for the tightening torque of the wheel bolts may vary slightly depending on the base vehicle and rim design. If no values are available for the base vehicle, a tightening torque of 200 Nm can be assumed as an average value.

Tire pressure on the rear axles (identical for both rear axles): See operating instructions for base vehicle.

BEACHTEN

The values for tire pressure may vary slightly depending on tire size and base vehicle. If no values of the base vehicle are available, a tire pressure of 4.5 bar can be assumed as an average value.

5.4.2 Air suspension

The car transporter is equipped with an uncontrolled air suspension on the rear axle. One spring bellows is mounted on each side. The spring bellows is mounted on the tandem chassis in an oscillating manner. The left and right bellows are not connected to each other.

Check the pressure in the spring bellows.

- The pressure in the spring bellows must be checked weekly or after the pressure monitoring system has responded and corrected if necessary.
- The filling connections are located at the front left of the plateau next to the winch*, one filling connection each for the left and right side.
- The inflation connections are commercially available tire inflation connections.
- The filling pressure is at **empty** plateau (empty weight of the car transporter) and to be checked with the axle **not lifted**.



**Filling pressure of the spring
bellows with empty weight and
unlifted axle: 3.0 bar**

Filling connections Spring bellows:

1. Left side
2. Right side

⚠ WARNING

The filling pressure at empty weight is exceeded!

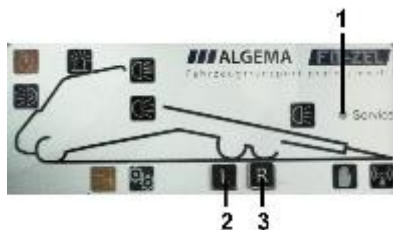
- If the filling pressure is too high, the bellows may burst during operation and with high loads.
 - ° Make sure that the filling pressure is not exceeded.

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To reduce diffusion from the spring bellows, it is recommended to fill the spring bellows with pure nitrogen or a tire inflation gas.

Pressure monitoring spring bellows

For safety reasons, the pressure of the uncontrolled air suspension is monitored. The left and right sides are monitored separately.



- If the pressure in one of the two bellows falls below 2.5 bar, the service lamp (1) flashes.
- In addition, "L" (2) or "R" (3) indicates on which side the pressure is too low.
- If the pressure in one of the spring bellows is too low, an additional warning tone sounds for approx. 10 seconds when the ignition is switched on.

Touch panel in the driver's cab:

1. Service lamp
2. Left side
3. Right side

5.4.3 Checking steel ropes

Ropes must be inspected at least once a year by a qualified person. Depending on use, a weekly inspection is recommended.

With regard to safety, ropes must be discarded in good time. This must be done if the following damage is detected:

- Breakage of a stranded wire (Fig. 1)
- Crushes (Fig. 2)
- Loop formation
- Kinks and notches (clasps) (Fig. 3)
- Basket formation (Fig. 4)
- Wire breaks in large numbers (Fig. 5)



Fig. 1 and 2



Fig. 3 and 4



Fig. 5

BEACHTEN

Repair work may only be carried out by specialist and service personnel authorized by the manufacturer. Unauthorized repair work by the operator is not permitted! In case of unlawful interference with the machine, all warranty and liability claims against the manufacturer are void.

Please also refer to the separate operating instructions for the cable winch.

5.4.4 Checking the plastic rope

Optionally, the winches can also be equipped with a plastic rope .

Ropes must be inspected at least once a year by a qualified person. Depending on use, a weekly inspection is recommended.

Attention must be paid to the following damage patterns.



Undamaged rope of normal diameter, suitable for use

If the rope cross-section is reduced by more than 10% due to wear. **The rope must be replaced!**

A single strand emerges completely.

Reduction of the rope cross-section by more than 10% due to wear. **The rope must be replaced!**

fibers have buckled and a slight chiming can be seen. This condition is not permanent and can usually be remedied by stretching the rope.

Two rope strands lying next to each other have snapped.

The rope must be replaced!

5.4.5 Changing illuminants

All standard taillights, the marker lights, license plate lighting, reflectors and the 13-pin trailer socket* are integrated in a taillight bar.



Illuminant (from the outside to the inside):

Lighting	Base	Illuminant	Power/Voltage
Marker light	-	LED	12 V
Flashing light	BAU15s	PY21 W	21 W / 12 V
Taillight Brake light	BAY15d	P21/5W	21/5 W / 12 V
Reversing light	BA15s	P21W	21 W / 12 V
Rear fog light	BA15s	P21W	21 W / 12 V
License plate light	SV8.5-8	Soffitte	5 W / 12 V

Changing the illuminant

- Unscrew the spreading disc with a Phillips screwdriver.
- Press the lamp with the bayonet catch into the holder, turn it slightly to the left and remove it from the holder.
- Insert new lamp in reverse order.
- Screw the diffusing lens back on.

License plate lighting:

- Unscrew the cap with integrated diffusing lens using a Phillips screwdriver.
- Remove the lamp from the holder by pressing back the spring plates.
- Insert new bulb and screw cap back on.

The bulbs of the marker lights and side marker lights cannot be changed because they are LED technology.

Changing individual lamps on the rotating beacon*, the worklights* and the ambient lighting is also not part of the operating instructions.

5.4.6 Checking the oil level and changing the oil

The oil tank of the electrohydraulics is located in the right front toolbox under the plateau.



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Only use **HLP22 hydraulic oil based on mineral oil according to DIN 51524**. Other hydraulic oils and fluids can lead to functional impairments and damage.

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If the oil level in the oil tank is too high, small quantities of hydraulic oil may escape from the ventilation integrated in the cover of the filler opening when the tank is tipped open.

Oil level:

- Check the oil level once a week. To do this, park the vehicle on a horizontal surface. The plateau must be completely tipped down.
- As a rule, the oil level can be seen through the slightly transparent tank without having to unscrew the cap.
- The oil tank should be filled with hydraulic oil up to approx. two centimeters below the lower edge of the filler opening.
- If the oil level is too low, unscrew the cover of the filler opening and top up with hydraulic oil HLP22 according to DIN 51524 using a suitable funnel.
- Then screw the lid back in hand-tight.

Oil change:

- Change the oil once a year.
- First unscrew the cap of the filler opening so that there is no underpressure in the oil tank.
- Place a suitable aid (funnel, trough, drip pan) under the drain plug.
- Carefully open the drain plug and slowly drain the oil. It is normal that a small amount of hydraulic oil remains in the tank.
- The used oil must be collected and disposed of properly.
- Then tighten the drain plug again. It is sufficient if the screw is hand-tightened. The screw and the immediate vicinity should be cleaned of residues before filling up with new hydraulic oil, so that possible leaks at the drain plug can be detected immediately.
- Using a suitable funnel, refill hydraulic oil HLP22 according to DIN 51524 until the oil tank is filled to approx. two centimeters below the lower edge of the filler opening. The changed oil quantity is approx. three liters.
- Then screw the lid back in hand-tight.
- Remove any possible contamination and check the tightness of the drain plug again.

5.4.7 Lubricating and greasing moving parts

The tilting bearings are equipped with maintenance-free plain bearings. Regular lubrication or greasing of the parts is not necessary. Likewise, all joints on the tandem running gear is equipped with maintenance-free rubber bushings or plain bearings.

To ensure the proper functioning of the drive-up ramps, the center ramp*, the tilt sensors and the tilt scissors, some maintenance points must be lubricated regularly.



Support roller at the stern and part of the lateral support surface on the railing under the drive-up ramp



Guide roller at the end of the ramp

- The lateral contact surfaces of the drive-up ramps (4x) and the center ramp* (2x) in the area of the railing and the frame must be sprayed with a service spray suitable for aluminum and plastic.
- The support rollers at the rear under the drive-up ramps (4x) and the center ramp* (4x) must be sprayed with a service spray suitable for aluminum and plastic. Make sure that the spray has good creeping properties and can penetrate laterally between the support rollers and frame.
- Spray the guide rollers at the end of the drive-up ramps (4x) and the center ramp* (2x) with a service spray suitable for aluminum and plastic. Make sure that the spray has good creeping properties and can penetrate laterally between the guide rollers and guide carriages.
- Lightly grease the stainless steel cable to reduce friction on the deflection pulleys. The deflection rollers are equipped with a maintenance-free plain bearing.



Center ramp actuation mechanism*

- For the center ramp*, lubricate the actuating mechanism at the end of the center ramp and under the plateau with a suitable service spray with good creeping properties. Make sure that all moving parts are free to move and that all tension springs are present.



Tilt sensor with rocker switch at the lower rear end of the plateau

- For the tilt sensors (2x), lubricate the rotary axis of the switching rocker with a suitable service spray with good creeping properties. Make sure that the rocker switch is free to move and that the tension springs are present.

Insert picture of grease nipples on the tilt shear

Tilt shear

- The 3 grease nipples on the tilt shear must be lubricated regularly with a suitable grease.

5.5 Cleaning

BEACHTEN

To prevent damage to property, it is necessary to clean the car transporter regularly. The intervals for this depend on the degree of use, the operating environment and the degree of contamination.

BEACHTEN

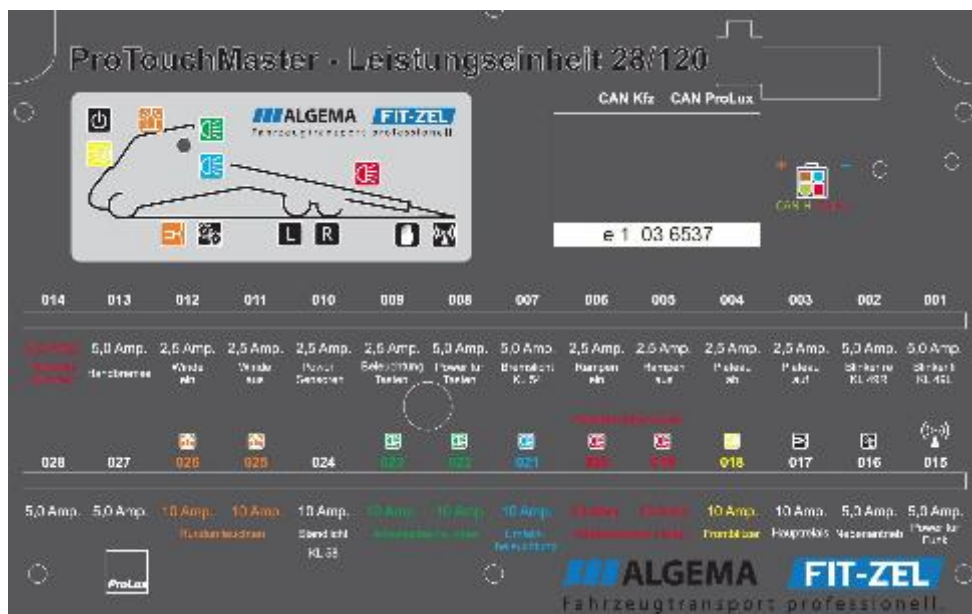
If possible, clean the new car transporter only with clear, cold water during the first months of use.

- Clean aluminum surfaces with water and neutral detergent.
- After the cleaning work, check whether the lubrication/oil points are sufficiently lubricated/oiled (see "Lubricating and greasing moving parts", page 79).
- After cleaning work, check that all safety and warning signs are clean, clearly visible and legible.
- Remove leaked oil/grease with a rag.
- Check the condition, completeness and adhesion of seals and thaw them out if necessary.

5.6 Power unit and fuse

5.6.1 Power unit

The electric power unit with integrated control is also installed in the area of the electrohydraulics in the right front toolbox under the plateau.



- The power unit occupies 28 outputs, which are assigned according to the illustration on the power unit.
- Two status LEDs are installed for each output:

Green: Output is active

Red: Short circuit or overload on the output

BEACHTEN

Due to modifications in the interest of technical progress and improvement, the actual labeling of the power unit may differ from the labeling shown in the operating instructions.

BEACHTEN

Besides the power unit, there are no separate fuses for the outputs. If a red status LED lights up on the power unit as soon as a function of the control unit has been activated, a specialist workshop authorized by us must be contacted.

5.6.2 Fuses

On the part of Eder-GmbH, only two fuses are installed in the car transporter, which can lead to a malfunction in case of failure:

Supply winch and electrohydraulics: 250/300 A Supply
power unit/central electrics: 40 A

Fuse installation position:

Mercedes Sprinter:

- 250 A:** Original tap on the base vehicle under the driver's seat. The driver's seat must be removed for access.
- 40 A:** In front of the driver's seat under the floor in the area of the main battery of the base vehicle.



1



2



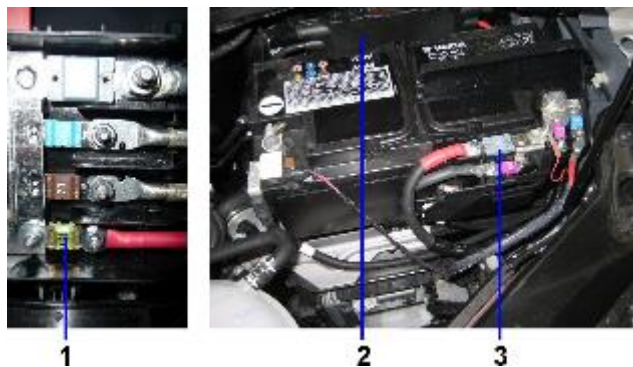
3

- 1 Fuse box fuse 250 A under driver's seat
- 2 Fuse 250 A in the fuse box (without connection cable)
- 3 Fuse 40 A in the fuse box next to the battery

VW Crafter/MAN TGE:

300 A: Original tap on the base vehicle for additional consumers at the front of the secondary battery in the engine compartment left.

40 A: Behind the second battery in the engine compartment on the left. The second battery must be removed for access.



- 1 Fuse 40 A (fuse box open)
- 2 Fuse box fuse 40 A
- 3 Fuse 300 A (fuse box open)

Ford Transit:

250 A: At the rear of the original battery box of the base vehicle, under the driver's seat.

40 A: On the left side of the original battery box of the base vehicle under the driver's seat.



1 Connection fuse 40 A (fuse in battery box)

2 Fuse box fuse 250 A

BEACHTÉ

Also note the labels indicating the location of the fuses.

BEACHTÉ

If your base vehicle is not included in the operating instructions or the installation situation of the fuses deviates from the description, contact Eder GmbH if necessary.

6 Disposal

The owner is obliged to dispose of the car transporter and all associated components in accordance with the country-specific disposal regulations.

Electrical scrap



Devices marked with this symbol are subject to the European Directive 2012/19/EU.

All electronic and electrical waste must be disposed of separately from household waste.

Check with your city government (local council, municipality) to find out how to dispose of old equipment in an environmentally friendly manner.

Batteries



Batteries may contain toxic heavy metals and are subject to hazardous waste treatment.

Dispose of used batteries at an appropriate collection point.

Hydraulic oil

Hydraulic oil must be disposed of properly. Observe the regional regulations.

Used tires

Dispose of used tires in accordance with regional regulations.

7 Additional information

1. Warranty conditions/warranty processing

Warranty conditions

1. Eder GmbH guarantees that the new vehicle will be free of defects in material and workmanship for a period of 24 months with a mileage limit of 120,000 km - 10 years on the frame - after delivery to the first purchaser, unless otherwise stated below.
2. The warranty covers only original **EDER spare parts**. For third-party parts installed or removed by us, the warranty conditions of the respective manufacturer apply, which we represent for 6 months. If the manufacturer is unsuccessfully claimed, we assign the warranty claims due to us to the customer.
3. If there is a defect, the company **EDER** must be informed about it and release the repair. The elimination of the defect is carried out at our discretion by free repair or replacement parts delivery. Replaced parts become our property free of charge. If the defect is remedied by a workshop authorized by us, we will reimburse the labor and material costs required for the purpose of rework according to the specified time, the applicable wage reimbursement rate of **EDER GmbH** and the net material value.
4. Warranty Exclusions:

No warranty is given without regard to contributory causes of damage:

- a. due to an accident, i.e. an event that has a direct external impact by mechanical force, as well as for consequential damage resulting from accidental damage that has not been repaired.
- b. caused by extreme wear and tear or overstressing, e.g. overloading (if the vehicle has been subjected to higher gross vehicle weight, axle or trailer loads than those specified by the manufacturer).
- c. for which a third party as manufacturer, supplier, from a repair order or from another warranty promise is liable or has to be liable.
- d. due to wear and tear and damage caused by negligence or improper handling or by external influences for which we are not responsible. Furthermore, no compensation for material and labor costs will be paid for wear parts. Wearing parts include brake parts, cardan shaft, wheel loader, tires, shock absorbers, tipping shears, tarpaulin frame and tarpaulins.
- e. the warranty is further voided if maintenance work has not been performed and proven according to the maintenance list.
- f. incurred because the damage was not reported immediately and the vehicle was not made available for repair.

5. The notice of defect must be received by us in writing, completely and legibly on the appropriate **EDER form** immediately after discovery of the defect before expiration of the warranty period.
6. The warranty is void if the vehicle has been modified by a third party or by the installation of parts of a third party origin and if the claimed defect is in the original context of the modification.
7. Warranty services do not extend the warranty period and do not initiate a new warranty period.
8. Other claims, in particular claims for damages - for whatever legal reason - are excluded, unless we are guilty of intent or gross negligence.
9. Warranty services will only be performed in Tuntenhausen - or after consultation with the company **EDER GmbH** at an authorized workshop. Any transport costs, downtime costs and costs for a loaner vehicle incurred in the process shall always be borne by the recipient of the service.

7.2 Guide for complaints and warranty service

1. Warranty request

The warranty application can be downloaded from our website under Downloads, or you can request it from us by fax or e-mail. Fill out the warranty application as completely as possible. (Short description of the damage and possible causes).

Submit the completed warranty claim by e-mail or fax to your responsible contact person.

Pictures and other important information, which serve to clarify the facts, are to be sent along as attachments.

If you have any questions, please contact the respective contact person.

2. Contact

Tel.: +49 8067 18156-26

E-mail: garantie@algema.de

3. Processing

After receipt of the warranty application, it will be checked. If the application is filled out correctly and the requirements for a warranty are met, **EDER** GmbH will release the repair. If the application is rejected, the customer will be informed of the rejection and the reasons for it. If the repair is very urgent, the further procedure can also be coordinated by telephone with **EDER** GmbH. The written warranty application must be submitted subsequently.

In case of necessary longer processing times (possibly queries and examination by suppliers) of the application and in case of unclarities, the incurred repair and replacement part costs are to be borne by the client (customer) first. If repairs are started prematurely, there is a risk that the costs incurred will not be reimbursed. When inquiring about a warranty, always state the body number.

4. Elimination of defects

After the repair approval by **EDER** GmbH, the repair of the damage can be started. Hidden defects or further damages, which are detected during the repair work, have to be reported immediately for repair approval. Replaced parts are to be kept together with the assembly number for 4 weeks and sent to the factory in Tuntenhausen upon request by **EDER** GmbH, or will then be picked up by our parcel service on behalf of **EDER** GmbH. If no parts are requested by **EDER** GmbH after this period, they can be disposed of in a professional and environmentally friendly manner. The spare parts required for the rectification of defects are to be obtained exclusively from **EDER** GmbH.

7.3 Quality notes

The following aspects are not defects:

- Humidity
- Light scratches
- Optically modified surfaces
- Pressure points on the railing due to slings

1. Humidity

Because tarpaulin frames, toolboxes and attachments are not thermally insulated, condensation can form under tarpaulin covers, in toolboxes and in attachments.

Water can enter at openings such as doors, flaps and lids.

2. Light scratches

During the production of our superstructure, **EDER** GmbH takes care not to scratch surfaces.

However, since the assembly is a handmade product, slight scratches on surfaces may occur during assembly. These scratches do not affect the function and are therefore not a reason for complaint.

3. Optically modified surfaces

Aluminum profiles may differ slightly in color. The discoloration is due to the material and does not affect the use and safety of the vehicle and is therefore not a reason for complaint.

Aluminum parts are not resistant to certain aggressive chemical substances such as acids.

Road salt in winter or aggressive soiling must be washed off thoroughly with clear water immediately after the end of the journey.

Due to their material properties, rubber surfaces can shrink slightly over time.

Each equipment operator enters the maintenance work performed here and confirms it with date and signature. The scope of the maintenance work can be found in the table (see "Overview of the maintenance to be performed regularly", page 65).

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7.5 Troubleshooting assistance

Error	Cause	Remedy	Chapter
Control does not respond or does not respond to several functions	Fuse defective	Check fuses	see "Fuses", page 84
Body functions cannot be switched on at the touch panel in the driver's cab.	Parking brake not applied	Activate parking brake	See "Tilt plateau operation", page 21
	Ignition of the car transporter off	Switch on ignition	See "Tilt plateau operation", page 21
Plateau does not tilt up or does not tilt up completely	Discharge vehicle battery	Start the engine, if necessary start it externally	Operating instructions base vehicle
	Set-up functions are not switched on	Switching on the setup functions on the touch panel	See "Tilt plateau operation", page 21
	Function for manual control or radio remote control not selected correctly	Activate the function of the manual control or radio remote control as desired.	See "Tilt plateau operation", page 21
	The sensor end position tilt shear switches off the electro-hydraulics	Check settings, control LEDs must not light up as long as the tilting shear has not yet reached the end position.	see pictures below sensors
	The tilt sensors switch off the electrohydraulics even though the rear of the plateau does not touch the ground.	Check free movement and setting, control LEDs on the sensor must not light up as long as the plateau on the board is not yet in place.	see "Lubricating and greasing moving parts", page 79 see pictures below sensors
	Oil level of electro-hydraulics too low	Check oil level and top up if necessary	see "Checking the oil level and oil change", page 77

Error	Cause	Remedy	Chapter
	Check status LEDs on power unit	Status LEDs No. 03, 08 or 15, 10, 13, 16 and 17 must be green, contact specialist workshop if necessary.	see "Power unit", page 83
	Defect cannot be found or remedied	Tipping up by hand in emergency operation	See "Emergency operation of electrohydraulics", page 54
Plateau does not tilt	Discharge vehicle battery	Start the engine, if necessary start it externally	Operating instructions base vehicle
	Set-up functions are not switched on	Switching on the setup functions on the touch panel	See "Tilt plateau operation ", page 21
	Function for manual control or radio remote control not selected correctly	Activate the manual control or radio remote control function as desired.	See "Tilt plateau operation ", page 21
	Oil level of electrohydraulics too low	Check oil level and top up if necessary	see "Checking the oil level and oil change", page 77
	Check status LEDs on power unit	Status LEDs No. 04, 08 or 15, 10, 13, 16 and 17 must be green, contact specialist workshop if necessary.	see "Power unit", page 83
	Defect cannot be found or remedied	Tipping up by hand in emergency operation	See "Emergency operation of electrohydraulics", page 54
Electrohydraulics do not switch off during tipping, possibly lifts out the rear axle when the plateau touches the ground.	The tilt sensors do not switch off Plateau	Check free movement and setting, control LEDs on the sensor must light up when the rocker switch is in contact with the sensor.	see "Lubricating and greasing moving parts", page 79

Error	Cause	Remedy	Chapter
	Shift paddles at the end of the plateau do not touch the floor	Only load and unload the autotransporter on level ground.	see "Safety instructions for loading and unloading", page 16
Ramps can no longer be moved in or out with the electrohydraulics	Discharge vehicle battery	Start the engine, if necessary start it externally	Operating instructions base vehicle
	Set-up functions are not switched on	Switching on the setup functions on the touch panel	See "Tilt plateau operation", page 21
	Function for manual control or radio remote control not selected correctly	Activate the manual control or radio remote control function as desired.	See "Tilt plateau operation", page 21
	Oil level of electrohydraulics too low	Check oil level and top up if necessary	see "Checking the oil level and oil change", page 77
	Check status LEDs on power unit	Status LEDs No. 05 or 06, 08 or 15, 10, 13, 16 and 17 must be green, contact specialist workshop if necessary	see "Power unit", page 83
	Defect cannot be found or repaired	Retract or extend drive-up ramps by hand in emergency mode	See "Emergency operation of electrohydraulics", page 54
Cable winch does not work	Discharge vehicle battery	Start the engine, if necessary start it externally	Operating instructions base vehicle
	Set-up functions are not switched on	Switching on the setup functions on the touch panel	See "Tilt plateau operation", page 21
	Check status LEDs on power unit	Status LEDs no. 11 or 12, 08 or 15, 10, 13, 16 and 17 must be green, contact specialist workshop if necessary	see "Power unit", page 83

Error	Cause	Remedy	Chapter
	Freewheel activated	Deactivating the freewheel on the rope winch	Operating instructions of the winch
	Buttons on the manual control panel and on the radio remote control do not respond	Use the enclosed cable remote control of the cable winch as an emergency operation.	See "Emergency operation of rope winch", page 56
Warning tone sounds when parking brake is released	Plateau is not full-constantly tilted down	Tilt the plateau completely until the tilting shear has passed the dead center.	See "Tilt plateau operation ", page 21
	Sensor tilt shear closed does not respond, although the plateau is completely tilted down	Check the setting, control LEDs on the sensor must light up when the plateau is completely tilted down.	see pictures below sensors
Service lamp on the touch panel lights up in conjunction with the "Left side" or "Right side" display A warning tone sounds when the ignition is switched	Air pressure in air suspension too low	Check air pressure and check if necessary	See "Air suspension," page 70
	Checking the status LED on the power unit	Status LED no. 10 must be green, contact specialist workshop if necessary.	see "Power unit", page 83
Manual control re- does not act	Set-up functions are not switched on	Switching on the setup functions on the touch panel	See "Tilt plateau operation ", page 21
	Function for manual control not selected	Activate the function of the manual control on the touch panel.	See "Tilt plateau operation ", page 21
	Status LED on power unit lights up red	Status LED no. 08 must be green, contact specialist workshop if necessary.	see "Power unit", page 83
Radio remote control does not respond	Set-up functions are not switched on	Switching on the setup functions on the touch panel	See "Tilt plateau operation ", page 21

Error	Cause	Remedy	Chapter
	Function for radio remote control not selected	Activate the radio remote control function on the touch panel or on the radio remote control.	see "Tilt plateau operation ", Page 21 see "Radio remote control*", page 42
	No connection to the receiver	Reduce distance, change position	-
	Batteries of the sender	Change batteries	Operating instructions for the radio remote control system
	Status LED on power unit lights up red	Status LED no. 15 must be green, contact specialist workshop if necessary.	see "Power unit", page 83
	For further information, refer to the separate operating instructions for the radio remote control.		
Electrohydraulics starts immediately and performs a function as soon as the body functions on the touch panel are switched on.	Clamp the pushbutton to the manual control unit	Operate all buttons on the manual control and ensure that they are free to move.	-
Lighting according to StVZO on rear light bar defective	Bulb defective	Change illuminant	See "Changing lamps", page 74
	Fuse defective	Check fuses on the construction vehicle and replace if necessary.	Operating instructions base vehicle
Rotating beacon does not work	Check status LEDs on power unit	Status LEDs no. 25 and 26 must be green, if necessary contact truss instead of	see "Power unit", page 83
Work lights do not work	Check status LEDs on power unit	Status LEDs no. 22 and 23 must be green, if necessary contact truss instead of	see "Power unit", page 83

Error	Cause	Remedy	Chapter
Front ambient lighting does not work	Status LEDs on power unit illuminated red	Status LED no. 21 must be green, contact specialist workshop if necessary.	see "Power unit", page 83
Rear ambient lighting does not work	Do not engage reverse gear	Reverse gear must be engaged Attention, the rear ambient lighting cannot be used when the vehicle is stationary and the engine is running.	see "All-round lighting*", worklights* and ambient lighting front* and rear**", page 46
	Check status LEDs on power unit	Status LEDs no. 19 and 20 must be green, if necessary contact truss instead of	see "Power unit", page 83
Additional rear lights in the warning console do not function	Status LEDs on power unit light up red	Status LEDs No. 01, 02, 07 and 24 must be green, contact specialist workshop if necessary.	see "Power unit", page 83
Trailer lighting for the relay ball on the plateau does not light up	Status LEDs on power unit light up red	Status LED no. 24 must be green, contact specialist workshop if necessary.	see "Power unit", page 83
Trailer light of the trailer hitch at the rear does not light up	Fuse defective	Check fuses on the construction vehicle and replace if necessary.	Operating instructions base vehicle

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To check the control LEDs on the sensors, look straight at the LEDs. If the viewing angle is too oblique, the LEDs cannot be detected.

Images sensors

Tilt sensor at the rear lower end of the plateau



Sensor end position tipping shear attached to the side of the tipping shear



Sensor tilt scissors closed at the rear between the side cheeks of the tilt scissors

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9 Notes

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EDER Vehicle construction

Quality by conviction

For more than 30 years, the name EDER has been guaranteeing and vehicles for car transport have been high-quality, technically innovative and practice-oriented solutions. These are known and used throughout Europe under the names ALGEMA and FIT-ZEL. On this basis, solutions are created time and again that shape the technical development in the market segment. Two examples are the development of the lift axle for trailers and the articulated lightning loader in the field of transport vehicles.



With the vehicles and trailers of the ALGEMA and FIT-ZEL brands, standards are still being set today in the areas of payload, ease of use, driving behaviour, functionality and design. In the interest of the customers, emphasis is placed on creating added value, such as availability with consistently low operating costs.

This is not the only reason why numerous vehicle manufacturers in the car transporter sector rely on close cooperation with EDER GmbH. The automotive industry and its sales organisations, car dealerships, workshops, specialist companies from the bodywork+paint sector, car rental companies, specialists for the transport of sports vehicles and classic cars as well as international breakdown services all rely on the quality made by EDER.

Vehicle transporters and recovery companies are particularly important. EDER GmbH is an industry member of the VBA (Association of Recovery and Towing Companies) and is always available to the organised towing trade with its entire know-how. EDER GmbH is certified for the highest quality by the official ISO certificate „Quality Management according to ISO 9001:2008“.



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