

---

<b>Contents</b>	<b>03-2008</b>
1. Introduction	2
2. Construction	3
3. Advice for registration in Germany	4
4. Compliance tests	5
5. Guarantee terms	6
6. The most important rules	9
7. Before the journey	10
8. During the journey	11
9. After the journey	14
11. Loading the trailer	16
12. Maintenance and care	18
13. Worth knowing about some materials	19
14. Brakes	21
15. Plug connections	24
16. Tyres: type and pressure	24
17. Fault finding and remedying	25
19. Accessory and spares ordering	28
20. Handover and inspection records	29
21. Inspection records	30

## **1. Introduction**

### **Congratulations**

Congratulations on buying your Thiel trailer. You have chosen a high quality product "Made in Germany" which you can rely on. Your Thiel trailer is product of careful research and continual testing. Its advantages are superior technology, high level of safety and economy.

### **Thiel**

By choosing Thiel you have chosen a manufacturer with many years experience in polyester manufacture and in vehicle production. Highly qualified staff develops and produces functional transport solutions for individual requirements in our modern factory in line with the latest technical state of technology. Our comprehensive programmes, the quality of our products as well as our service have made us one of the leading European manufacturers of horsebox trailers.

### **Service work**

Prior to delivery, your Thiel trailer was thoroughly tested. Contact your specialist dealer should there be a service requirement. He knows your vehicle technically and will ensure that you enjoy it for a long time.

### **Instruction Book**

**The instruction book is to help you to maintain and operate your Thiel trailer properly.**

**Please therefore observe the following:**

- **Read the whole brochure carefully, before you use the vehicle.**
- **Keep this instruction book in the glove pocket of your car so that it is always available.**



We wish you a good journey whenever and wherever.

Thiel Horsebox Trailers

**Please ensure after purchasing, as well as after the first 50 km whether wheel nuts are properly tightened and tighten if necessary.**

## **2. Construction**

### **General**

Thiel trailers are made of high quality materials which are treated with carefully. We manufacture only in Germany at our location in Pfullendorf.

### **Technical modifications**

**We reserve the right to make technical modifications.**

### **3. Advice for registration in Germany**

#### **Registration conditions**

##### **For sports purposes:**

- with ABE (general authorisation to operate) – green registration plate
- Only for transporting of horses
- No extra costs for tax and insurance, insured with the towing vehicle
- **As cattle transporter**
- With motor vehicle registration papers – black registration plate
- Everything can be transported
- Liable for tax and insurance

#### **100 kph - registration**

Confirmation from TÜV or DEKRA is necessary for trailers and appropriate motor vehicle.

Prerequisites for the trailer:

Wheel shock absorbers and tyres that are not more than six years old.

#### **Payload**

The axle loads may not exceed that stated in the vehicle registration documents as permissible according to the StVZO (Vehicle Registration Regulations). It can be distinguished from the nominal load.

#### **Official test**

In Germany registered trailers up to 3,500 kg must currently undergo an official test according to § 29 StVZO. For other countries the regulations there apply.

#### **Dimensions**

Generally vehicles and load together should not exceed 4 m and not be wider than 2.55 m (§ 22 Abs.2 StVO).

#### **Legal regulations**

As legal regulations are subject to modification, we recommend that you check with your Thiel specialist dealer what the current situation is. Police and road traffic offices will also provide this information. This advice applies to all legal regulations which are mentioned or quoted in this instruction book.

## **4. Compliance tests**

- There must be an annual compliance test for all trailers as well as after major changes.
- All main inspections, material and accident prevention tests are to be arranged by the operator. He is responsible if he orders the test.
- Please observe the following GB (employer's liability insurance association) regulations:
  - BGV D 29 (previously VBG 12 and VBG 5)
  - For winching, lifting and towing units BGVD 8
  - BG regulations motor vehicle commissioning BGR 157
  - For animal transport VSG 4.1 and animal protection regulations
  - For mounted cranes compliance test annually according to BGV D6 (hitherto VBG 9)
- If third party products such as cooling, heating, winches, cranes, drive on track rails and similar are installed in our vehicles then the operating instructions, safety regulations, accident prevention regulations and compliance test prescriptions of these manufacturers must be observed.
- The commissioning of the vehicle is prohibited until it is established that the user is versed in the use, and the safety and accident prevention regulations.
- The StVO and StVZO regulations must be observed in any case.

## **5. Guarantee terms**

### **Product liability**

- The product liability obligates the manufacturer and dealer to hand over an instruction book when selling machines. It is necessary to have a confirmation that the machine and instruction book have been properly handed over.
- In the eyes of product liability laws every self employed person and farmer is an entrepreneur. Damage to property in the sense of the product liability law is damage which is caused by a machine, not however to it. Entrepreneurial wilful damage in the sense of the product liability laws is excluded.
- Duty to inform

**Equally if the machine is passed on by the customer, an instruction book must be handed over with it. Whoever takes over the machine must be trained under reference of the named regulations.**

### **Guarantee**

**We provide guarantee within the legal regulations of the Federal Republic of Germany.**

- Thiel original parts and accessories are specially designed for our products. We draw express attention to the fact that parts and components which are not manufactured by us are neither tested nor approved by us. The installation and/or use of such parts may therefore possibly negatively alter or affect specified properties of your Thiel trailer. Any liability whatsoever on the part of the trailer manufacturer Thiel for damage which results from the use of non- original parts or accessories is excluded. Guarantee claims which might have existed prior to this therewith expire.
- Your Thiel trailer may only be used, serviced or maintained by persons who are conversant with the necessary procedural methods and are briefed on their dangers. All persons from whom it cannot be expected that they have a proper understanding are to be precluded from commissioning or starting to use the Thiel trailer.
- Arbitrary modifications as well as the use of assemblies or attachments exclude liability on the part of the manufacturer.

- The guarantee is valid for trailers and superstructures and covers defects in new vehicles, which are not a result of or related to normal wear, negligence or incorrect handling, accident, inadequate maintenance or incorrect operation
- There is no guarantee liability for natural wear or if the fault or damage results from it, if a fault is not reported or not reported in due time, or the customer despite being invited to do so does not take the immediate opportunity to rectify, the subject of the contract is improperly handled or over used or previously repaired, maintained or looked after in an unauthorised manner, if parts have been installed in the subject of the contract where their use has not been approved, the subject of the contract has been modified in an unauthorised way or the customer has not followed the instructions concerning handling, maintenance and/or care of the subject of the contract (e.g. instruction book).
- Your Thiel trailer is to be regularly checked and serviced by an authorised specialist dealer. Services and maintenance carried out is to be documented.

### **Conditions:**

- The maintenance periods, instructions and regulations which are contained in these conditions have to be complied with.
- Original components are required for repairs.

### **No defects are:**

*Superficial scratches:* Each trailer is a hand finished product. Despite the greatest care superficial scratches can occur when assembling which do not have any affect on the intended use.

Polyester components are not 100% colour fast. UV and weathering can lead to some fading. Individual components of polyester may differ in their gloss finish or colour. Hairline tension cracks in the surface caused by production cannot be avoided. These hairline cracks have no effect on stability or the intended use of the trailer. Water may encroach through openings such as doors, flaps and windows.

### The guarantee does not include:



- Expenses for ongoing maintenance.
- Costs which are not attributable to normal wear and tear. Stand damage caused by standing time e.g. with handbrake applied.

**Caution:** If left standing for longer periods, particularly if damp and cold and frosty, the trailer should only be secured by chocks – without the handbrake applied –, otherwise there is a danger that the brake shoes stick or freeze up.

- Faults which are due to improper use of the trailer.
- Defects, which are due to the use of non-original spare parts or attachments.
- Defects which result from a repair which is not the result of a repair by a workshop.
- Repairs within the guarantee performance which have not been carried out by Thiel Trailer or one of our service dealers.
- Carrying out repairs within the guarantee without prior agreement from Thiel Horse trailers.

*Travel and transport costs are excluded from the guarantee and are fully the responsibility of the holder.*

### Guarantee handling:

In order to be able to deal with your claim smoothly, this should be submitted in writing together with proof of maintenance with the following details:

- Copy of the purchase contract or invoice
- Copy of the vehicle registration certificate or documentation
- Exact description of the claim, if possible with pictures.

Please send these to:

**Thiel Pferdeanhänger Fax: 0049(0)7552/938822**  
**or per E-Mail:**  
**info@thiel-anhaenger.de**

## **6. The most important rules**



### **I. Coupling**

- Check the ball hitch for correct seating.
- Do not only rely on safety display (if available).
- Visual and pull test ("lift").

### **II. Plugs and lighting**

- Always pull the plug itself, never the cable - danger of breaking the cable).
- Lighting (before starting a journey) check for function.

### **III. Useful and tow bar load**

- Observe maximum permitted total load.
- Observe permitted maximum tow bar load
- Never load head or tail heavy (danger of skidding).

### **IV. Storm**

**All horsebox trailers are side wind prone! If there is a storm there is therefore a danger of tipping over.**

### **V. Departure check**

Before commencing a journey please check carefully around the trailer again and pay particular attention to the following:

- Is the coupling seated properly?
- Is the contact-breaking cable fastened?
- Lift and secure tow bar wheel and tow bar (if available).
- Check lights
- Close tailgate and secure.

### **VI. Accident prevention**

Comply with the valid legal regulations regarding accident prevention.

## 7. *Before the journey*

- Regularly check tyre pressures and state of tyres.
- When coupling up the tow ball coupling make sure it is properly seated, attach safety cable.
- Release handbrake.
- Insert the lighting plug and check the lighting. Check that all the reflectors, light covers etc are clean.
- Do not cover the lighting when loading or unloading in the dark or in poor light.
- Pull up all towing equipment until it arrests and fasten, turn up the tow bar wheel as far as the safety point and arrest ensuring that it is pointing to the rear and in no way touches the brake lever.
- Adjust the inside and outside mirrors of the towing vehicle. There must be a clear view of the road to the rear through two outside rear view mirrors.
- When loading do not exceed the permissible total weight of the trailer, stow the heavier items in the axle area.
- **The maximum permissible towing weight of the trailer tow bar on the towing vehicle trailer coupling should not be higher or lower than the minimum regulation 4% of the towed load (not more than 25 kg necessary).**



---

## **8. During the journey**

### **the most important regulations**



- The driver must have a valid driving licence for the trailer.
- Axles, brakes and chassis should never be overloaded. Therefore exceeding the permissible total weight should be avoided.
- No one is allowed to be in the trailer during the journey.
- The valid maximum speed limit for operation with a trailer must be observed. This should not be used during bad weather (e.g. rainy, gusty, snowy or icy).
- The relevant accident protection regulations as well as other generally recognised safety related, occupational medical and road traffic law regulations are to be observed.

### **Special features of driving with trailers**

- The driving behaviour when operating with a trailer is different than without a trailer. Therefore driving behaviour should be adjusted to the changed conditions. Neither the permitted maximum towed load nor the permitted maximum load of the trailer nor the towing equipment should be exceeded. You can find these details in the vehicle documents and on the type plates of the towing equipment and the trailer (see type plate). The permitted towed load should not be exceeded (see type plate). We recommend you to use this towed load as far as possible, at least however maintain a tow bar towed weight of 30 kg.
- Your team (Vehicle and trailer) is longer, possibly also higher and wider, than your towing vehicle. Take this into consideration when carrying out overtaking manoeuvres and when driving round bends.
- The climbing power of your team is limited.
- The braking distance of your team is longer than that of the towing vehicle.

## Speed

- The technically determined highest speed at which the Thiel trailer can travel is 100 kph. However, most countries have speed limits which do not allow this maximum to be used. In Germany for example there is a speed limit of 50 kph in built up areas for vehicles with trailers and 80 kph on country roads and motorways. If you have the prescribed authorisation you can however travel at 100 kph on German country roads and motorways.
- Always adjust your speed to the conditions. The speed has to particularly be in line with the road conditions and the trailer load. This applies above all on bends. If your vehicle with trailer starts to snake, the speed has to be reduced immediately. On no account try to straighten it out by accelerating.
- Reduce speed if the road surface is wet, to avoid aquaplaning. Avoid lane grooves, brake carefully.
- Change down ahead of gradients and inclines, so that the engine can act as a brake.

## Load

- Each load and its distribution as well as attaching accessories can alter the driving characteristics of the vehicle substantially. Driving style and speed have to be adjusted accordingly. Above all if the load is increased substantially the speed must be reduced.

## Reversing

- For inexperienced team drivers (vehicle and trailer) it is principally recommended to practice reversing with the trailer on an empty car park.
- If when reversing the rear view is blocked by the load, then there must be a second person behind the team to act as a guide.
- Before using the trailer the driver has to become conversant with all the operating equipment and its functions. When in use it is too late.
- Check the trailer for traffic safety and operating safety each time before using it.
- All protective equipment must be fitted to your trailer and be in proper working order.
- No over stressing by unreasonable or improper driving behaviour or by incorrect handling, avoid pothole and shock stresses on the axles.

- No over exertion from using wheels that are not properly balanced or aligned or is eccentric or the tyres have uneven treads or wear.
- Ensure that the tyre pressure is the pressure for full load.
- The replacement of worn and/or damaged covers, protection, attached parts or fittings in good time is necessary to ensure compliance with traffic and operating safety.
- Tiredness affects your reaction capabilities: therefore do not drive if you are tired. It is further to be recommended that you stop for a break after two hours driving.
- Driving and braking behaviour change when pulling a trailer. Avoid sudden steering action or sudden braking.
- In winter conditions:
  - Drive carefully. Avoid sudden acceleration or abrupt braking or steering action.
  - Keep sufficient distance between yourself and the vehicle in front of you.

## **9. *After the journey***

- When parking the team fully apply the handbrake on the trailer, if parked on a slope also put chocks under the wheels. Chocks are mandatory for overall weights over 750 kg.
- Attached locking attachments should as far as possible be released from a location outside the danger area.
- If parking for a longer period of time then the trailer should be unloaded and parked on a level surface with chocks under the wheels to stop it rolling away, apply override attachment and release handbrake, to avoid the brake pads sticking to the brake drums. After a week move the wheels a quarter of a turn to avoid parking flat spots on the tyres.

## 10. Hitching up and unhitching

### Basics

- Always put your feet beside the towing equipment, never under it. There is a risk of squashing.
- First put the tow support wheel on the ground; reverse the car to the trailer or if it is a small trailer (only on the level) pull the trailer to the hitching point.
- The towing ball coupling of your trailer is type tested. The maximum towed load at the coupling point must be observed.

### Hitching up

- Open coupling jaws. Pull the handgrip up in the direction of arrow and turn in the direction of the arrow towards the front. Position the opened coupling on the trailer ball on the towing vehicle. By pressing down at the same time (usually the coupling load is enough) the handgrip must slide back of its own accord to its original position. Locking and securing takes place automatically. Connect the contact breaking cable and lighting cable to the towing vehicle, turn the support wheel right up and secure. Check that it is seated properly.
- As we use towing equipment from various manufacturers, opening the coupling jaws may vary slightly from the method described here. Always read the operating instructions which are on a label on the towing equipment.

### Unhitching

- Pull the trailer handbrake on fully, on slopes put chocks under the wheels as well. Release the contact breaking cable and remove the lighting plug, pull the handgrip up in the direction of the arrow and turn towards the front in the direction of the arrow, if necessary lift off the coupling from the trailer ball of the vehicle by winding down the support wheel.
- **The trailer may move back up to about 25 cm before the brake becomes fully effective. Therefore leave sufficient space when parking.**

## **11. Loading the trailer**

### **General about loading animals into the trailer**

- Observe animal protection transport regulations and EU animal transport regulations. In particular it is important to comply with the minimum requirements for space needed.
- The animals must be spared excessive stress arising from inappropriate driving behaviour. The driver must therefore particularly avoid situations where substantial centrifugal forces occur, e.g. abrupt braking, extreme acceleration as well as driving fast around bends.
- Only load when the trailer is hitched to the towing vehicle.
- Make sure there is adequate ventilation.

### **Loading horses**

- Loading horses, particularly young, inexperienced ones, must be done in peace and without any hectic activity. Disruptive influences such as the presence of other horses, for example, which are not going to be loaded, are to be avoided.
- If a horse shies when being loaded, he should be given time to investigate the vehicle and smell around it.
- The loading can be made easier with the aid of two lunges.
- Attention should be paid to the cover on the open tailgate.
- When the horse enters the vehicle, the horse handler must step in front of the front safety bar as soon as possible. The front door (groom door) of the vehicle must be opened prior to commencing loading.
- The rear safety bar must be fastened immediately after the horse has entered the vehicle, only then should the horse be tethered. Two horses standing beside one another should only be tethered to the side walls of the vehicle.
- When transporting single horses with the dividing wall set at an angle to the side a safety bar (foal bar) which reaches across the whole width of the vehicle should be used.
- Opening and closing the trailer tailgate may only be carried out from the side, i.e. the person opening the tailgate should stand to the side of the vehicle when doing so.
- Even when travelling empty, all safety bars (breast and breeching bars) should always be hooked in.

### **Trailers with ramps and ventilator flaps**

- Only load when the trailer is hitched up to the towing vehicle. After loaded lift the supports and secure.
- Lock the ramps and doors and the ventilator flaps (if there are any) when travelling.

## 12. Maintenance and care

- In order that your trailer remains serviceable for a long time, it has to be maintained and looked after. This chapter explains what you can do yourself.
- Cleaning the trailer can be done with normal commercial care products. Painted surfaces should not be sprayed with a high pressure cleaner.
- Check regularly that the wheel nuts are properly tightened and if necessary tighten the wheel bolts with a torque spanner (tightening moment 95 Nm). This check is to be carried out:
  - immediately after having the trailer handed over
  - after the first 50 km
  - 50 km after every wheel change
  - periodically every 2,550 km
  - before long journeys
- Regularly check state of the tyres and tyre pressures.
- Regularly check the lights equipment and that the lights work properly.
- Grease the override attachment every three months, if used regularly then once or twice a week.
- Trailers all in polyester should be waxed each year with special polyester cleaner.
- Rubber components, particularly rubber seals on entrance doors, opening windows and ventilator flaps should be checked regularly (at least before the onset of winter) and treated with talcum, Vaseline or silicon spray.
- **Seals with PU adhesive and compounds (no silicon)**  
Seals with internal (rubber bottoms, display windows) and external (end strip hood/lower part and base frame fitting side wall/frame) have to be checked regularly for completeness and adhesion and if necessary be renewed.
- Loose laid rubber flooring should be taken out after every journey to let the vehicle floor dry out.
- **The floor must be strewn with straw or saw dust when transporting horses with horse shoes and/or calks.**
- **Where horses have Widia shoes, no guarantee is accepted for the durability of the floor area, including the rubber floor.**
- All other work must be carried out in a specialist workshop. This applies particularly to maintaining the axles, the towing equipment and the brakes. Please observe the service periods given in the last chapter for all Thiel trailers as well as the maintenance advice of third party equipment manufacturers (e.g. axles and override attachments).



## ***13. Worth knowing about some materials***

### **Steel**

- Before galvanising creates an effective protection against rust, it is necessary for the galvanised component to oxidise. This takes some months. As long as the metal looks "as bright as silver", the oxidisation process is not yet complete.
- Galvanised parts are not resistant to certain acids or chemicals. It is therefore recommended after each transport to thoroughly wash down all galvanised parts of the trailer to remove dung and other acidic materials using clean water. Formation of white rust is normal and is not a cause for guarantee claims.

### **Wood**

On the occasions when we use wooden floors in our trailers, we only use high quality laminated wood. Do however remember that wood is an organic material and protect the floor area from being permanently wet or wet for long periods of time. Your trailer is not an aquarium. Wood absorbs water and begins to swell. If you are not able to keep your trailer under cover then use a flat or shaped tarpaulin from an accessory supplier. Make sure at least that the water outlet holes in the front area of the trailer are not blocked. Park the vehicle such that the vehicle floor is not horizontal and that water can run away.

## **Aluplast floor (only in all polyester trailers)**

### **Properties**

By using a completely new material combination we have been able to retain the advantages of laminated plywood, but eliminate the disadvantages. The Aluplast floor consists of a plastic core between two aluminium layers. The outside the metal is protected from oxidation by a special coating.

This material combination unites the functionality of plastic with the load bearing capacity of metal structures. The creep behaviour in bending demonstrates the same mechanical resistance as a plywood floor, but dampness and temperature variations cannot harm the dimensional stability of the floor. The surface is abrasion and scratch resistant, there are therefore no waste disposal problems.

### **Guarantee**

Your Aluplast floor has a **15 year guarantee against rotting**. Invasive damp or moisture which lead to swelling and shrinkage in conventional floors causing gradual destruction and rotting of the floor, cannot damage this new material combination. You save yourself the time consuming and cost intensive repair of a floor being changed, which in the case of damage does exclude the risk of injury to the horse and the danger to traffic. The guarantee is for the original owner and commences on the date of purchase and only applies to the rotting damage to the floor.

## 14. Brakes

### Test braking with braked trailers

At the beginning of each journey carry out test braking and check whether the override brake on the trailer is working properly.

### Response threshold of the override attachment

- To check the response threshold, apply the handbrake, and then depress the coupling head. After insertion, the draw pipe should push itself back out again.
- If the draw pipe can be pushed in easily by hand and does not push out again, the damper is defective. This must then be changed.
- The brake must work evenly so that the team (trailer and vehicle) stops in its tracks.
- **The slightest defect in the brakes means that an authorised specialist workshop must be found immediately.**
- Pay particular attention to adjustable tow bars, it is imperative that the override attachment is parallel to the tow bar. Otherwise the brakes do not work properly.
- Check the safety of the adjustable tow bar before each journey. The toothed washers must fit together without any play (check the toggle screws are properly seated and if necessary tighten) so as that stable driving behaviour and safety is ensured.
- Height adjustment should only be carried out on a flat surface. In any case secure the trailer with chocks.

## Adjusting the brakes

- Brake adjustments should only be made by specialists.
- The vehicle wheels must be lifted so that they are clear of the ground on blocks. Ensure that the vehicle is secured by appropriate measures against slipping, falling off or over.
- To adjust the brakes, the wheels must be mounted on the vehicle. The M12x1.5 wheel bolts tightening torque when using steel disk wheels is generally approximately 90 – 100 Nm. Ask the wheel rim manufacturer for exact values.
- Check the free movement of the brake cables and the brake rods by pulling the hand brake lever several times and observing the relevant components.
- Undo both M10 nuts on the thread rod near the balancing scale and the two M8 nuts on the brake cables. The balancing scale should now be able to be moved freely.
- The wheel on the brake to be adjusted must now be turned forwards and at the same time the adjustment screw must be tightened in a clockwise direction. If the brake shoes rub against the drum and the rotation of the wheel is inhibited, then turn the adjustment screw back approximately a half of a turn. The wheel should now run freely again. Repeat this procedure for all other wheels.
- When finished, screw nuts M8 and M10 on the balancing scale back on so that there is no noticeable play present. Now lock the nuts. After locking the nuts the brake cable thread ends should project approximately 8 – 10 mm.
- Operate the handbrake lever a few times and then check on the balancing scale whether any play has developed again. Should this be the case, remedy the situation and remove the play by the method described above.
- A final test drive with several brake tests and reversing as well as a further check is to be recommended. If the brakes are adjusted too tightly then reversing requires extra power.
- As we use axles manufactured by various companies the adjustment possibilities must be taken into consideration in each case.
- **The brake pads should not be greased or oiled.**

## Hydraulic transfer unit on loading devices

### Operating

#### operating brake function

The overrun bar pushes itself on depending on the amount tow bar power there is and preeses over the deflexion lever on the main brake cylinder. Brake leads/lines transfer the pressure to the slave cylinder on the axle. The slave cylinder pulls on the Bowden control

via the compensation profile; the wheel brake is applied through the expanding joint lock, the trailer brakes.

### **Reversing function**

Function as described in Operating Instruction 580 458, but the transfer is hydraulic.

### **Handbrake function**

#### On V-overrun device:

Function as described in Operating Instruction 580 458.

#### On square overrun device:

**Caution:** The lever on the overrun device is only intended for use with the emergency brake. There is a separate lever for the handbrake, which is however not on the overrun device but is mounted on the vehicle chassis. Otherwise as described in the Operating Instruction 580 450.

**Regulation:** The hydraulic transfer cylinder is not intended for continual operation of the handbrake. If there is a pressure drop there is a loss of braking force.

Pull past the dead point in the case of the gas spring version of handbrake handle.

In the case of the gas cylinder version pull the handbrake handle as far as the last tooth.

The trailer is braked.

Take care that the vehicle can roll backwards about 25 cm with the handbrake fully applied to the full extent of the handbrake force.

### **Maintenance and cleaning**

**Caution:** All maintenance work which occurs should only be allowed to be carried out by trained personnel in specialist workshops or service stations. The brake fluid level in the fluid reservoir should be checked regularly and if necessary topped up with brake fluid. Too little fluid may indicate brake lining wear or a leak.

We recommend replacement of the brake fluid (DOT4 or J1703) annually.

When changing the brake fluid or replacing brake components it is necessary to thoroughly wash out the whole brake unit, because dirt or contamination in the braking system could lead to brake failure.

## 15. Plug connections

If your towing vehicle has a thirteen pin socket, you can plug a 7 pin plug into this with the aid of an adaptor.

### 7pin

<b>Plug connections 7pin (12 Volt) on trailer</b>			
<b>Pin number</b>	<b>Terminal designation</b>	<b>Cable wire colour</b>	<b>Meaning</b>
1	L	Yellow	Directional indicator (flasher) left
2	54g	Blue	Rear fog light
3	31	White	Earth (-)
4	R	Green	Directional indicator (flasher) right
5	58R	Brown	Tail light right
6	54	Red	Brake lights
7	58L	Black	Tail light left

### 13 pin

<b>Plug connections 13 pin (12 Volt) on trailer</b>			
<b>Pin number</b>	<b>Terminal designation</b>	<b>Cable wire colour</b>	<b>Meaning</b>
1	L	Yellow	Directional indicator (flasher) left
2	54g	Blue	Rear fog light
3	31	White	Earth (-)
4	R	Green	Directional indicator (flasher) right
5	58R	Brown	Tail light right
6	54	Red	Brake lights
7	58L	Black	Tail light left
8	ZR	Grey	Reversing light
9	30	Brown/Blue	Permanent positive
10	+	Brown/Red	Charge lead positive
11	not allocated	free	not allocated
12	not allocated	free	not allocated
13	31	Black/White	Earth (-) for pins 9-13

## 16. Tyres: type and pressure

15 inch = 2,8 bar or 14 inch = 4,5 bar (MEXX)

## 17. Fault finding and remedying

<b>Fault</b>	<b>Cause</b>	<b>Remedy</b>
Trailer snakes	Speed too high	Decrease speed
	Wrong load distribution	Load trailer according to instructions
	Coupling load insufficient	arrange sufficient coupling load
Braking pulls to one side	The brakes are unequally adjusted	Adjust brakes and check brake cable
Braking effect too weak	Tow bar pushing in completely	Adjust
	Pads not run in	Will settle after braking a few times
	Pads damaged	Renew brake shoes
	Too great a friction loss, corrosion on tow bar	Make transmission attachment including brake cable more free moving
Brakes overheating when travelling forwards	Faulty adjustment: brake are not completely released when travelling forwards	Adjust according to instructions, release handbrake, check transmission attachment and reversing lever for freedom of movement
	Wheel brake dirty	Clean
	Cable or Bowden cable kinked	Renew Bowden cable
	Return springs are weakened or broken	Replace springs
	Rust coating in the drum	Replace brake drum and if necessary shoes
Handbrake effect too weak	Pads not run in	Will resolve itself after a short running in time
	Too great a friction loss	Ensure free movement of transmission attachment and Bowden cable (by oiling)
	Wrong adjustment	Adjust according to instructions

<b>Fault</b>	<b>Cause</b>	<b>Remedy</b>
Trailer brakes on deceleration	Shock absorber faulty	Replace shock absorber
Fitful driving behaviour or jerky braking	Shock absorber faulty, too much play in the brakes	Replace shock absorber, set brakes
Reversing difficult or not possible	Brakes adjusted too tightly	Readjust brakes
Coupling does not engage after placing on ball	Ball diameter greater than 50 mm	Replace ball
	Inside of coupling dirty or movement not free	Clean and grease coupling and coupling mechanism or oil, if necessary replace
	Ball iced up	Free ball from ice
Trailer will not uncouple	Ball not round	Replace ball
	Trailer and car are not standing in the same direction	Move trailer and car so that they are standing in the same direction
Too much play between coupling and ball, danger of unhitching.	Coupling worn	Replace coupling
	Coupling worn (according to DIN 74058 the ball must be of a diameter of m\ max. 50 mm and min. 49.5 mm.)	Replace ball

## 18. Maintenance work

<b>Vehicle component</b>	<b>Test point</b>	<b>Work to be carried out</b>
<b>Braking system</b>	Brake linings	Check, change if necessary
	Brake mechanism	Check, repair if necessary
	Sliding parts of braking mechanism	Lubricate
	Overrun device	Grease
	Braking effect	Check, reset if necessary
<b>Wheel bearing</b>	Play	Check, reset if necessary
<b>Axles</b>	Damage	Visual check, if necessary repair
	Fixing	Check, if necessary reset
<b>Rims</b>	Damage	Check, renew if necessary
<b>Tyres</b>	Damage / old age	Check, renew if necessary
	Profile	Check, if necessary renew tyres
	Concentricity	Check, if necessary balance
	Air pressure	Check, if necessary correct
<b>Tow bar/ overrun device</b>	Screw connection	Check, if necessary tighten
	Overrun track reverse automatic	Check, if necessary adjust
<b>Tow and ball coupling</b>	Function and play	Check, replace if necessary
	Antisnake coupling	See separate instruction
<b>Structure</b>	Screw connection	Check, if necessary tighten
	Corrosion protection	Check, if necessary touch up
	Damage inside/outside	Check, if necessary repair
	Plugs, cable, lighting	Check function repair if necessary
	Rear lights, rear beam	Check for damage, renew if necessary
	Rubber seals	Check, replace if necessary
	Rubber seals (doors/flaps)	Apply care product, renew if necessary
	Gad spring	Check, renew if necessary
	Seals with PU adhesive and sealant (no silicon) on rubber bases, seal strip (hoods./lower parts, base frame surround structure/frame	Check for integrity and adhesion, replace if necessary

## **19. Accessory and spares ordering**

In order that the ordering of spares and accessories is prompt and smooth please always give type description and vehicle identification number (VIN) of the trailer, the axles, the brakes and the coupling. The best thing to do is to fill out the following form from the respective identification plates so that you have all the necessary information to hand when placing an order.

### **Vehicle**

Identification number \_\_\_\_\_  
Type \_\_\_\_\_  
Permitted total weight \_\_\_\_\_

### **Axle**

Manufacturer \_\_\_\_\_  
Type \_\_\_\_\_

### **Override attachment**

Manufacturer \_\_\_\_\_  
Type \_\_\_\_\_  
Test certification \_\_\_\_\_

### **Wheel brake**

Manufacturer \_\_\_\_\_  
Type \_\_\_\_\_  
Model \_\_\_\_\_  
Test number \_\_\_\_\_

### **Ball coupling**

Manufacturer \_\_\_\_\_  
Type \_\_\_\_\_  
Test certification \_\_\_\_\_

### **Tyres**

Manufacturer \_\_\_\_\_  
Size \_\_\_\_\_  
Identification \_\_\_\_\_  
Wheel description  
(wheel offset) \_\_\_\_\_

---

## ***20. Handover and inspection records***

Handover check and confirmation

Trailer type: .....

Vehicle Identification Number (VIN): .....

It is confirmed that the handover checks have been carried out and that the vehicle has been handed over in a defect free state.

**All guarantee claims on the manufacturer become void upon not maintaining the prescribed inspection intervals.**

**The dealer retains a copy of this and the following pages.**

Place, Date

.....

Dealer Signature and stamp

Signature Customer

.....

.....

**Apparent non-compliance with this operation instructions may reduce or exclude manufacturer liability and/or claims under guarantee.**



## ***21. Inspection records***

Six month inspection:  
Date:

Stamp and signature

Inspection after further six months:  
Date:

Stamp and signature

Inspection after further six months:  
Date:

Stamp and signature

Inspection after further six months:  
Date:

Stamp and signature

Inspection after further six months:  
Date:

Stamp and signature

Inspection after further six months:  
Date:

Stamp and signature

Inspection after further six months:  
Date:

Stamp and signature

Inspection after further six months:  
Date:

Stamp and signature

Inspection after further six months:  
Date:

Stamp and signature

Inspection after further six months:  
Date:

Stamp and signature

Inspection after further six months:  
Date:

Stamp and signature

Inspection after further six months:  
Date:

Stamp and signature

I Inspection after further six months:  
Date:

Stamp and signature

Inspection after further six months:  
Date:

Stamp and signature

Inspection after further six months:  
Date:

Stamp and signature

Inspection after further six months:  
Date:

Stamp and signature