



# **Kellfri<sup>®</sup>**

## **23-TV25 TIPPING TRAILER**



**CAREFULLY READ THE OPERATING INSTRUCTIONS BEFORE USING THE PRODUCT!**

**OPERATING INSTRUCTIONS TRANSLATED FROM ORIGINAL**

**INTRODUCTION**

Thank you for choosing a product from Kellfri AB. Compliance with the general safety instructions, instruction manual and sound common sense will guarantee many years of enjoyment using the product. Kellfri’s equipment and products are aimed at self-employed farmers who have stringent performance demands.

**PRODUCT DETAILS**

Kellfri’s Tipping Trailer has opening flaps and is perfect for lighter transport work. This tipping trailer is equipped with a tipper ram and can withstand a max. load of up to 2,500 kg. The perfect trailer for gardens, parks, smaller farms and forestry work.

Equipped with opening flaps, lighting, parking jack and tarpaulin attachment hooks as standard.

PRODUCT NO.	23-TV25 TIPPING TRAILER
Load capacity	2.5 tonnes
Load volume	1.25 m <sup>3</sup>
Total length	3,700 mm
Floor dimensions, L x W	2,400 x 1,270 mm
Floor depth	400 mm
Height	1,100 mm
Max. lifting angle	45°
Tyres (Wheel size)	20 x 10 - 8 / Max. tyre pressure 1.5 bar
Max. load	2,500 kg
Operating weight	335 kg
Rear lights	Standard
Opening flaps	Standard
Axle type	Bogie



The original design of the trailer must not, under any circumstances, be modified without the approval of the manufacturer. Unauthorised modifications and/or accessories may cause life-threatening injuries or death to users and others.

**Warning!**

*Kellfri is not liable for any modifications, changes or rebuilds carried out by customers.*

## SAFETY INSTRUCTIONS

Before using the equipment or product, and for the safety of yourself and others, you must read the safety instructions and instruction manual and understand their contents. Always make the safety instructions and the instruction manual easily accessible to users of the equipment or product. It is a good idea to read the safety instructions from time to time, both for your own safety and that of others. If the safety instructions or instruction manual gets damaged or in any other way cannot be used, new copies may be ordered from:

Kellfri AB, Munkatorpsgatan 6, SE-532 37 SKARA, Sweden. Tel.: +46 (0)511 242 50

The safety instructions can also be downloaded from the Kellfri website: [www.kellfri.se](http://www.kellfri.se)

Do not use the equipment or product if you feel ill, tired or are under the influence of alcohol. Do not use the equipment or product if you are taking prescribed medication or drugs. Always comply with general rules of the road and applicable rules stipulated by the Animal Welfare Act. People under the age of 15 are not allowed to use the equipment.

*When the machine is used professionally, employers are responsible for ensuring that users of the machine have theoretical and practical knowledge of the machine and that work is performed in a safe manner. Stay informed by complying with work environment legislation, contact your local work environment authority.*

## PRODUCT SAFETY INFORMATION

Compliance with the safety instructions requires that the tipping trailer is only used as described in these instructions. It is the user's responsibility to read through the instructions and comply with them.

- The trailer must only be used with tractors that provide the correct towing capability.
- Never overload the tipping trailer. Always comply with applicable regulations to ensure the permitted total weight for the vehicle is not exceeded. Never exceed the permitted weight and braking load!
- Never leave the driver's seat until the brakes on the towing vehicle have been engaged.
- The risk area is 15 metres. Only the operator is allowed to be within the risk area while the tipping trailer is in use.
- Do not leave a loaded tipping trailer parked unsupervised. To stop the equipment moving, in an emergency, engage the vehicle's brake system.
- When unhitching the tipping trailer, it must be empty and on a level surface with the trailer wheels secured using suitable brake blocks.
- Do not leave a loaded trailer parked unsupervised.
- The parking jack must always be used when carrying out maintenance and service.
- When tipping, the trailer must always be connected to the tractor.
- Always comply with applicable regulations when driving on public roads. An SMV sign must be visible and mounted when travelling on public roads.
- Operators or others should not stand under suspended loads.
- Never permit children or inexperienced persons to drive the trailer.
- Never allow anyone to travel on the trailer whilst it is in motion. Never allow anyone to climb up on the trailer whilst it is in motion.
- Always inspect the trailer before use. A damaged or worn tow bar eye and/or hitch must not be used and should be replaced before the trailer can be used. Using a damaged or worn tow bar eye and/or hitch may cause serious injuries or death to users and others, as well as damaging the trailer and equipment.
- Exercise caution when working with equipment with hydraulic hoses as the oil under pressure can penetrate skin. Immediately seek medical attention if this should occur.
- **WARNING!** When hitching, the trailer's brake system must not be connected to the towing vehicle's hydraulic system. The trailer's brake system must be connected to the tractor's brake outlet!
- Risk of crushing! Be careful when opening and closing the flaps.
- Be extra careful if the trailer has to be moved with floor tipped (risk of tipping)! Use the right speed; drive as slowly as possible to prevent accidents.


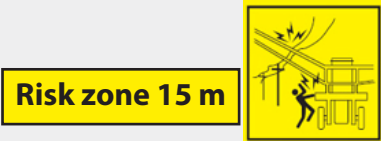


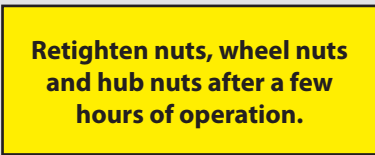

## INSTRUCTIONS FOR EMERGENCY SITUATIONS

In case of emergency, call 112.

Always have a mobile phone or emergency phone available when working alone. A first aid kit and fire extinguisher must be kept in an easily accessible location when carrying out any work, maintenance and service.

## WARNING DECALS

Make sure warning decals are always visible and clean them when necessary. Do not use a high-pressure washer directly on the warning decal. If any of part with a decal is replaced or the decal becomes worn or in any other way unusable, order a new set of decals.

SYMBOL	EXPLANATION
	Read the operating manual! Before carrying out work.
	Risk zone 15 m Respect the equipment's risk zone! WARNING! Be careful with low-hanging power lines.
	Warning! Risk of crushing! - fingers/hands Do not permit anyone to stand under suspended loads. Warning! Do not stand under the trailer when it is lifted! Always prop up the trailer using supports when carrying out repairs, maintenance and service.
	Warning! Oil under pressure can penetrate the skin! Immediately seek medical attention if this should occur!
	Retighten nuts, wheel nuts and hub nuts after a few hours of operation.
	The product is CE marked

## PERSONAL PROTECTION

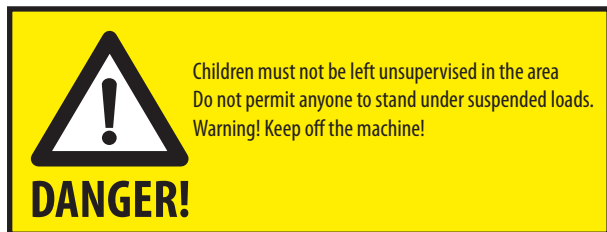
Always use suitable clothing and shoes. Do not wear loose clothing or jewellery while working with the equipment or the product. Long hair should be tied up when working with equipment that has moving parts.



## SURROUNDINGS

Check that the work area is free from bystanders, children and objects before hitching or using the equipment. There is a risk of serious bodily harm. Be extra careful if there are children in the vicinity of the area where the equipment or product is used or stored. Check that there are no low-hanging electrical cables within the work area. Exercise caution when working on slopes and close to ditches.

Always work alone with equipment or products that are made for working alone. Remove all rubbish from your work area. Keep work areas clean. Always respect the equipment risk zone.



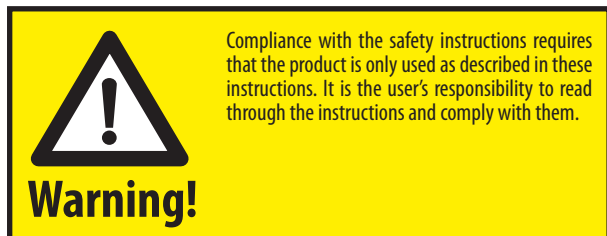
## STEPS TO TAKE BEFORE USE

Carefully read the safety instructions and the instruction manual. Make sure that you understand the safety instructions, the instruction manual and warning decals. Use common sense when using the product and suitable personal protective equipment.

Always check the performance of the machine combination to be used. It is important that these are in harmony and work satisfactorily together. This is done to ensure the equipment or product work as expected, and to guarantee the safety of yourself and others.

Carry out a visual inspection of the equipment or product before use. Repair or replace damaged or worn parts to reduce the risk of injury. Grease moving parts and check that all nuts and bolts are tightened. Correct if necessary.

Learn and remember the correct working method. Beginners must work slowly until they have learned how the machine or product works. Users/customers are responsible for ensuring users can handle the situation. If users feel that the machine is dangerous to use, it should not be used.



## USE

Only those who understand the safety instructions and the instruction manual may use the equipment or product. Exercise caution and care when working with the equipment or product and only use them in the way described in the instruction manual. There is a risk of crushing when working with equipment that has moving parts. Exercise caution when working with equipment with hydraulic hoses as oil under pressure can penetrate the skin. Immediately seek medical attention if this should occur. Always work alone with equipment that is made for working alone. Respect the equipment's risk zone.

- Check that the trailer is not damaged before hitching it to the vehicle; the floor must always be completely flat when hitching the trailer.
- Loads must be spread evenly across the trailer. Never exceed the permitted load weight.
- Loads sticking out must be well anchored. Ensure the load is spread evenly across the trailer. Uneven loads can have an impact on how the towing vehicle is driven and can cause accidents!
- All operations are performed from the driver's seat.
- An SMV sign must be attached when travelling on public roads.
- The trailer is equipped for use on public roads. EU regulations stipulate how fast a rig with a non-braked/braked trailer is allowed to go. Comply with these regulations. (Maximum of 40 km/h in Sweden and 30 km/h in Norway).
- NOTE: do not disconnect the hydraulic hoses from the tractor, the tipper ram or connections when the floor is tipped.
- Check that the hitch between the trailer and towing vehicle is locked. When tipping, the trailer must always be connected to the towing vehicle.
- Tipping must take place on a level, hard surface.
- Safety distance when tipping: 15 m radius.
- Never drive with the trailer in the tipped position. Keep an eye on the trailer, floor, flaps and load when tipping. Stop tipping if anything unexpected should happen or if there is a risk of damage or overturning due to, for instance, strong side winds.
- Risk of crushing! Be careful when opening and closing the trailer flaps!
- Be careful when lowering the floor, especially when it is loaded.
- When carrying out work under the floor, the tipper ram must be disconnected and the floor locked in place.

## CONNECTING THE TRAILER:

- Check the ball coupling on the trailer; then connect the tipping trailer to the towing vehicle. Beware! When hitching and unhitching the trailer, there is a crushing risk due to the force exerted on the hitch due to the upward and downward motion.
- Connect the hydraulic hose to the towing vehicle's hydraulic system. The trailer's brake system must be connected to the tractor's brake outlet!
- Operate and carefully check the movements of the trailer. Hoses must not be stretched or rub against sharp edges, etc. Correct if necessary. Tighten leaking connections if there are any leaks. Do not overtighten the connections. They may break if they are overtightened. Check the air pressure in the tyres. Max. 1.5 bar
- When using a tractor with an automatic hitch system, make sure the tow bar eye is correctly fitted. Always check that the trailer is correctly connected to the tractor.



**Warning!**

**NOTE: loading and tipping the trailer must be done on an even surface.**

**Respect the trailer's risk zone! Persons are not allowed in the vicinity of the trailer when tipping and loading.**

Most accidents occur when tipping the trailer. It is therefore important to inspect the trailer and the hitch on the towing vehicle before use. Damaged and worn parts should be replaced. Incorrect use can lead to serious personal injury or damage the trailer and equipment. When tipping, the operator must sit in the driver's seat in the towing vehicle and follow the trailer's movements carefully.

**IMPORTANT!** This can cause major damage to the trailer or lead to a serious accident if tipping is not performed correctly. Make sure the hitch is correctly attached and will stay in place during tipping.

**IMPORTANT!** The towing vehicle's motor must idle when tipping. (This may vary from vehicle to vehicle.) Always start at a low speed and tip the floor with care. Make sure the trailer is used as required.

Remember that the driver is liable for any damage or injury.



**Warning!**

Never use equipment or products that have defective safety components.

## AFTER USE

- Stabilisers must always be used when unhitching the trailer.
- Ensure that the trailer is on a level surface when unhitching it.
- On slopes, place brake blocks in front of the wheels before unhitching.
- Before disconnecting the hydraulic hoses, make sure there is no pressure left in the system.
- To extend the service life of your trailer, do not park it out in the open, but under a roof.
- Wash down the trailer when required.

## TRANSPORTATION AND SET-UP

Check that the work area is free from bystanders, children and objects before driving off. Always observe additional caution during transport and moving. Ensure that the equipment or product is well anchored and existing transport lashings are fitted. Always position the load as low as possible. Respect the risk zones even during transport and moving. Do not permit anyone to walk under suspended loads when carrying out lifts. Trailers used for transport should have brakes that work.

Always store the equipment or product on a dry surface, preferably under a roof when not in use. Ensure that the equipment or product is stable and cannot fall over. Never permit children to play at the storage site. Be aware of the tipping risk!

### RECYCLING

When scrapping, the equipment should be dismantled and transported to a designated recycling station. Contact your municipality for further information.

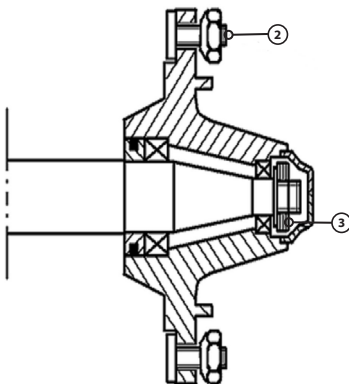
### MAINTENANCE AND SERVICE

Make sure that the equipment is stable and cannot tip over when carrying out maintenance and service work. Disconnect the trailer from the vehicle while faults are being repaired.

Replace damaged or worn parts to reduce the risk of injuries. Only use spare parts with equal performance to reduce the risk of injuries and breakdowns. Carry out maintenance, service and checks in line with recommendations.

- Regularly check the condition of the rig. Retighten the wheel bolts and nuts when required. If cracks, twists, bends, gaps or fatigue are discovered, stop using the trailer and rectify the fault. Avoid using the trailer at temperatures lower than -20°C and higher than +30°C.
- After wheel replacement, check that the wheel nuts are tightened and retighten after a number of miles in use. The tightening torque must not exceed 90Nm.
- Grease the wheel bearings regularly.
- Never perform welding on the tow bar eye as this may affect its durability!
- Check that all nuts and bolts are tightened after maintenance and service work.

Service	Interval	
Tyres	Before each use	Check the air pressure in the tyres. It must always at least be the recommended air pressure (1.2-1.5 bar)
Cables and hoses	Before each use	Check that all cables and hoses are intact.
Wheel nuts	Perform an initial check after 2-3 hours of operation, and subsequently 2-3 times a year.	Retighten all the wheel nuts, 90 Nm
Trailer parts	Regularly, at least 3 times a year,	Visually inspect any brakes fitted, lights, SMV sign, tow bar eye, bogie eye, hinges. Replace worn and damaged parts.
Lights	Before each use,	check that all lights are working.
Trailer	After each use	Wash down with water if required.



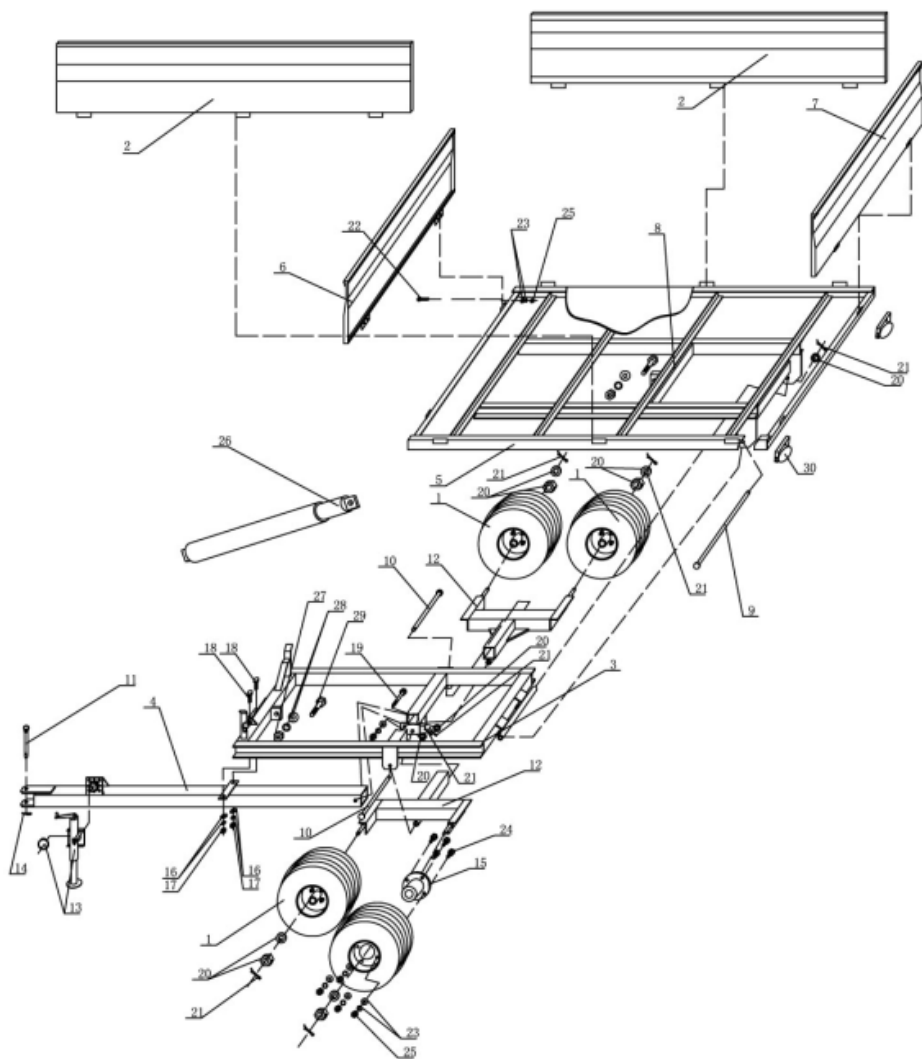
### CARE INSTRUCTIONS

1. Do not overload the tractor and trailer!
2. After wheel replacement, check that the wheel nuts are tightened and repeat after a stable period of operation. The tightening torque must not exceed 90 Nm. Use a torque wrench if possible.
3. Check that the bearing setting is correct to prevent bearing play and abnormal bearing wear. The bearing setting should preferably be too loose than too tight.

Regularly grease all wheel bearings.







NO.	DESIGNATION	NO.	DESIGNATION	NO.	DESIGNATION
1	Wheels	10	Short axle	21	R-clip
2	Side	11	Pin	22	M10 x 25 bolt
3	Bottom beam	12	Bogie	23	10 Washer
4	Tow bar beam	13	Parking jack (stabiliser)	24	M10 x 30 screw
5	Side beam	14	R-clip	25	M10 nut
6	Front side	15	Axle hub	26	Tipper ram
7	Tailgate	16	12 Washer	27	M20 nut
8	Support beam	17	M12 nut	28	20 Washer
9	End-to-end axle	18	M12 x 30 bolt	29	M20 x 90 bolt
		19	M12 x 120	30	Rear light

## ASSEMBLY INSTRUCTIONS TV25

Consider the following when assembling the trailer:

Due to the weight of the trailer, it is recommended that two people work together to assemble it.

### 1. Check that all parts are included in the delivery.

- Chassis
- Front side
- Tailgate
- Sides (2)
- Tow bar with stabilisers
- Bogie (2)
- Wheels (4)
- Grease nipples (90°) for wheels (4)
- Stabiliser bars (2)
- Pins, bolts, nuts and washers are fitted to the trailer
  - Pins for fitting sides to the floor (6)
  - 4 pins with 2 lynch pins for front side and 2 for tailgate
  - 4 bolts with washers and M10 x 60 nuts for fitting the front side
  - 2 L-pins for fitting tailgate
  - 2 axles for fitting bogie
  - 3 bolts for fitting tow bar
  - 4 wheel nuts and washers
- White reflectors (2)
- Stickers
- Hitch for towing vehicle

### 2. Collect all the tools required to assemble the trailer.

- Angle grinder for cutting the transport frame
- Combo wrenches 9, 10, 16, 17, 18, 19
- Jack required to lift the chassis
- Ratchet tool
- Size 36 socket or jack wrench
- Pliers
- Jack stands
- Screwdrivers
- Hammer
- Grease gun



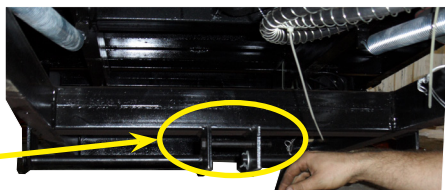
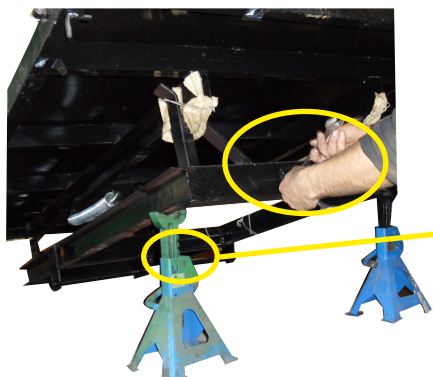


1. The trailer is delivered packed on a steel frame. Cut around the frame using an angle grinder to remove the trailer. Line up all the parts required for assembly, remove packing such as plastic, steel bands etc. **NOTE:** the steel band marked in the illustration must not be cut until the tow bar is fitted. The steel band holds the frame and the chassis together.

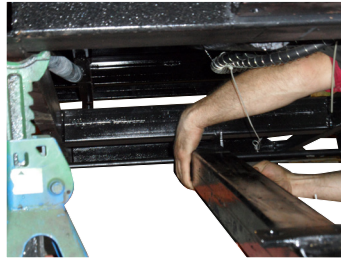


2. Lift the trailer using a jack and support using jack stands.

**WARNING for crushing risk!** Make sure the trailer cannot tip or overturn when carrying out the assembly.



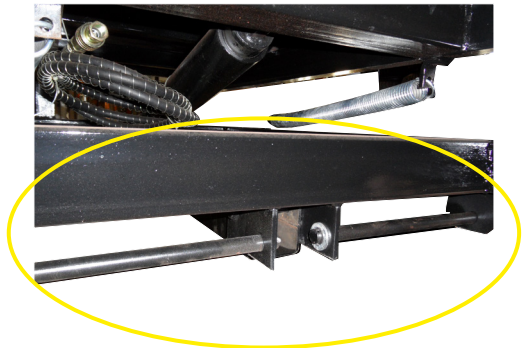
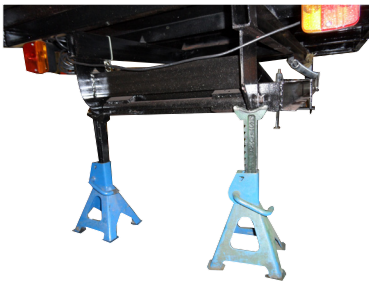
3. Remove the bolts (marked in the picture) to fit the tow bar.



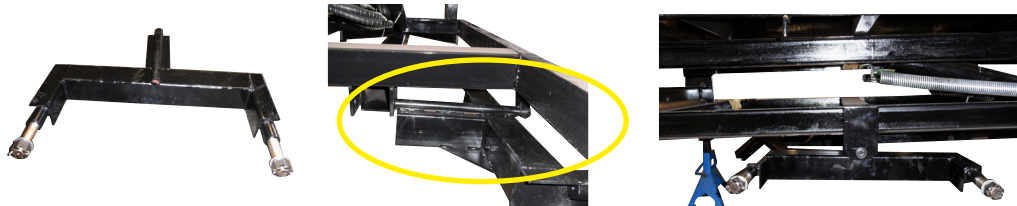
**4.** Fit the tow bar, wind up the stabiliser completely to get the tow bar at the correct height. Use a jack if required to get the correct height.



**5.** Fit the stabiliser bars to the trailer and the tow bar. Tighten all the bolts.



**6.** Lift the back of the trailer and support using jack stands. Remove the axles under the trailer to fit the bogie.



**7.** Fit the bogie to the trailer Insert the axle and lock with a washer and an R-clip. Do the same on the other side of the trailer.



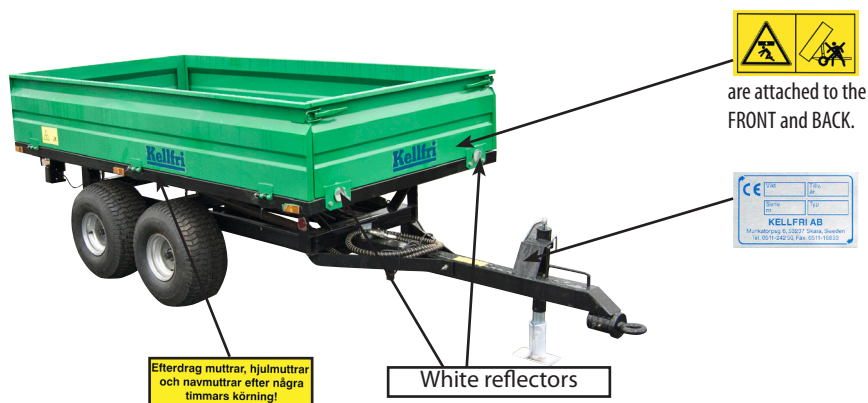
**8.** Before fitting the wheels, pull the hydraulic hose through the hole and attach the electrical cables to the chassis. Make sure the hose and the cables are not crushed or exposed to abrasion.



**9.** Fit the wheels to the bogie. The wheels should have angled 90 ° grease nipples to make it easier to attach the grease gun nozzle. Replace the wheel nipples if required. Hand tighten the wheel nuts. NOTE: the wheel nut must not be tightened too much. Grease all wheel bearings, wipe off any excess grease and then fit the hub cap.

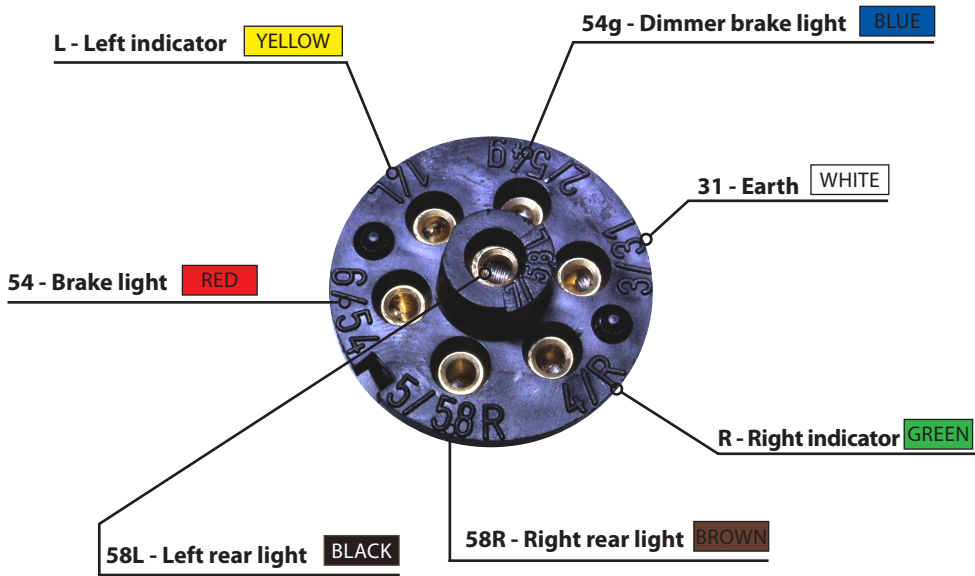


**10.** Remove the bolts (4) on the front of the floor frame, fit the front side and screw the bolts back in place. Fit the sides (with the KELLFRI sticker on the front) and the tailgate, and lock in place with pins.



**11.** Check that all bolts are tightened. The stickers and white reflectors must be stuck on to the trailer. (See illustration above for positioning.)

**ELECTRICAL DIAGRAM FOR CONNECTING ELECTRICAL CONTACTS TO TRAILERS.**

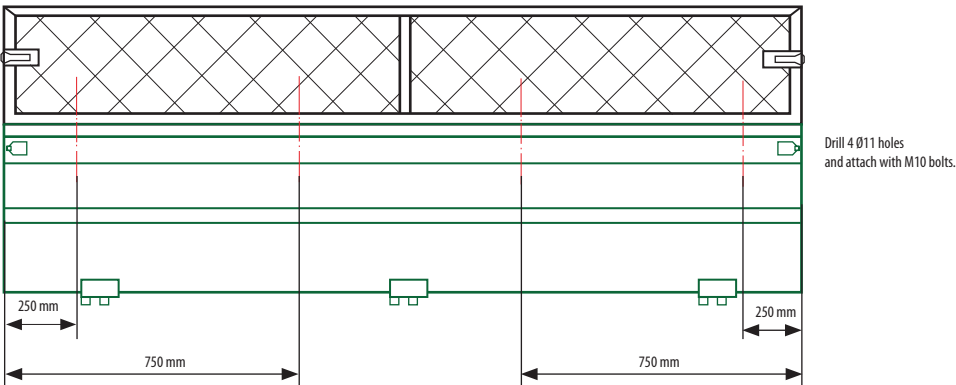


**IMPORTANT! CHECK THAT ALL THE LIGHTS ARE WORKING BEFORE USING THE TRAILER.**

**OPTIONS:** Increase the load volume with 23-TV25FH steel mesh extension sides. Fitted to the trailer's existing sides by drilling a hole in the flaps and screwing them in place. The extension sides can also be welded onto the trailer.

**Weight:** 100 kg

**Height:** 400 mm





## WARRANTY TERMS AND CONDITIONS

- |                             |  |
|-----------------------------|--|
| The warranty's validity     | - Kellfri's warranty is valid for 12 months from the date of purchase  |
| The warranty covers         | - Reimbursement for parts replaced after verified material or manufacturing defect.  |
| The warranty does not cover | <ul style="list-style-type: none"><li>- Labour costs</li><li>- Travel costs</li><li>- Machines on which the purchaser has made/commissioned modifications.</li><li>- Any additional costs arising as a result of damage to the machine.</li><li>- Damage due to normal wear and tear of the machine, substandard servicing, the user's inexperience or use of spare parts that are not original.</li><li>- Wear parts such as hoses, seals, oil and belts.</li></ul> |

## EC DECLARATION OF CONFORMITY FOR MACHINERY, ORIGINAL

In accordance with 2006/42/EG, Appendix 2A

Kellfri AB

*Munkatorpsgratan 6*

SE-532 37 Skara, Sweden

Hereby declares that the machine

Name: 23-TV25

Type: Tipping trailer

Conforms with all applicable requirements in the Machinery Directive 2006/42/EC.  
Other equipment must comply with the Machinery Directive's requirements.



Tina Baudtler, CEO 18 December 2013

*Kellfri AB has a policy of continuous product development and therefore reserves the right to make modifications, e.g. to the design and appearance of the product, without prior notice.*

---

## CUSTOMER SERVICE

You are always welcome to give feedback or ask us about our equipment and products.

Kellfri AB

**Phone: +46 (0)511 - 242 50**

**Fax: +46 (0)511 - 168 33**

**E-mail: [info@kellfri.se](mailto:info@kellfri.se)**



Latest version: 20 April 2015