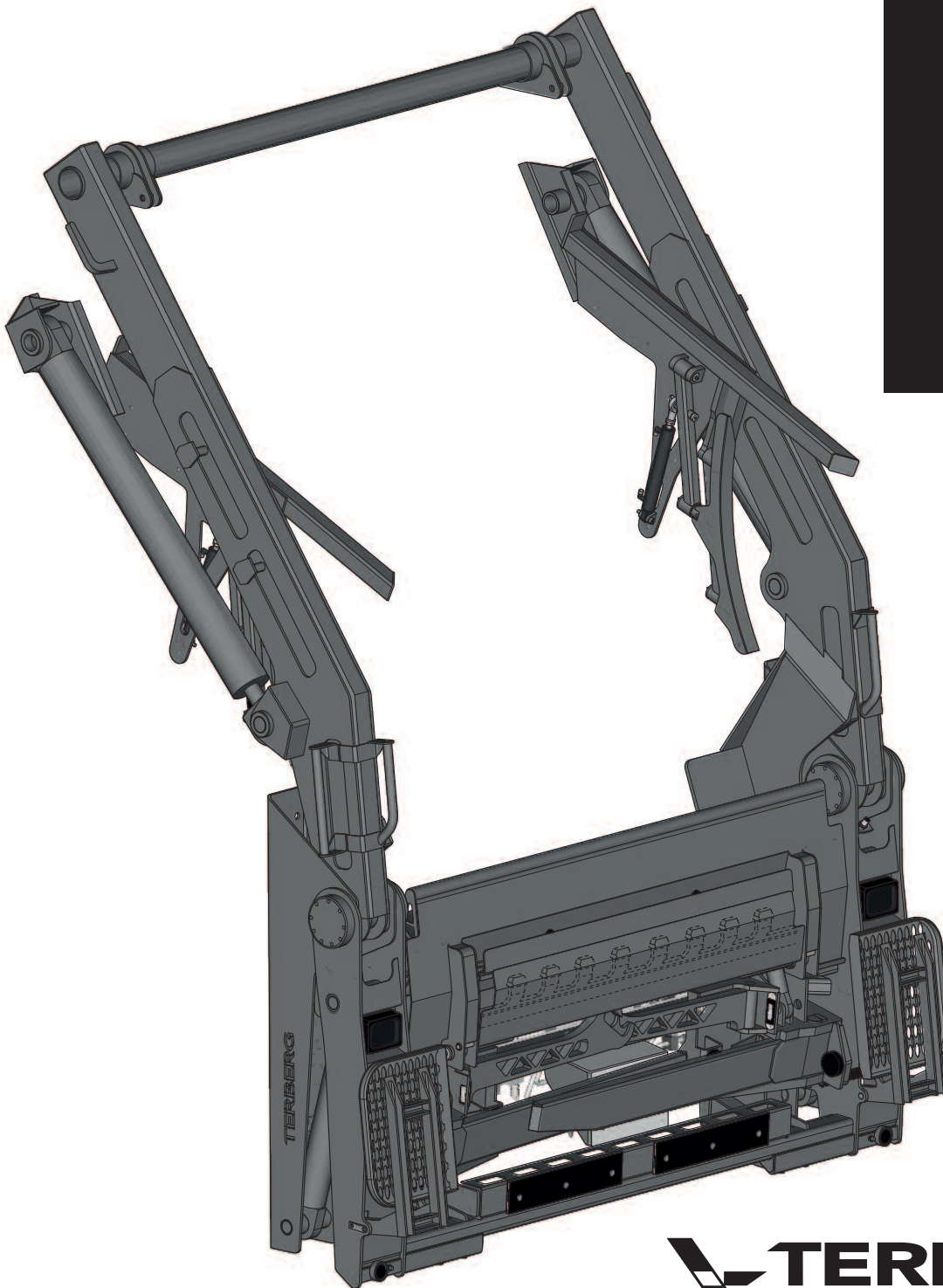


OmniGV

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## Foreword

This user manual provides information about the operation and maintenance of the **OmniGV** bin lift system.

In order to work safely and efficiently with this manual bin lift system, it is essential that you read this manual carefully before putting the bin lift into use.

Make the user manual available to everyone concerned with the operation and/or the maintenance of the bin lift.

Consult the user manual as needed for the truck chassis and the packer.

When all the operating and maintenance instructions have been met the bin lift can be safely used.

Should you nonetheless have any further questions, please get in touch with your distributor.

## Guarantee

For more information about the conditions of guarantee, please contact your distributor.

## Operator requirements

- The bin lift system may only be operated by persons who are familiar with the operation of the bin lift.
- Repairs may only be carried out by qualified personnel.

## The user manual has the following sections:

### Introduction

A description of the function, conditions of use and the operating principle of the machine.

### Safety

Description of the safety provisions and the measures that need to be taken into account in order to work safely with the machine. As well as an explanation of the symbols on the machine.

### Operation

A clear description of the most important components and instructions for emptying different types of bin.

### Maintenance and cleaning

Covers all the periodic procedures needed for the proper functioning of the machine.

### Technical data

Electrical connections, hydraulic connections and components, troubleshooting and parts.

## Symbols used



### Note:

Additional information.



### Warning:

If these instructions are not followed, there is a risk of damage to the equipment and/or personal injury.



### Stop:

If these instructions are not followed correctly, there is a risk of personal injury and/or risk of serious damage to the equipment.

## 1.1 Description of the bin lift system

The **OmniGV** is a manually operated bin lift system that is very versatile thanks to its modular design. This makes it particularly suitable for collecting industrial waste.

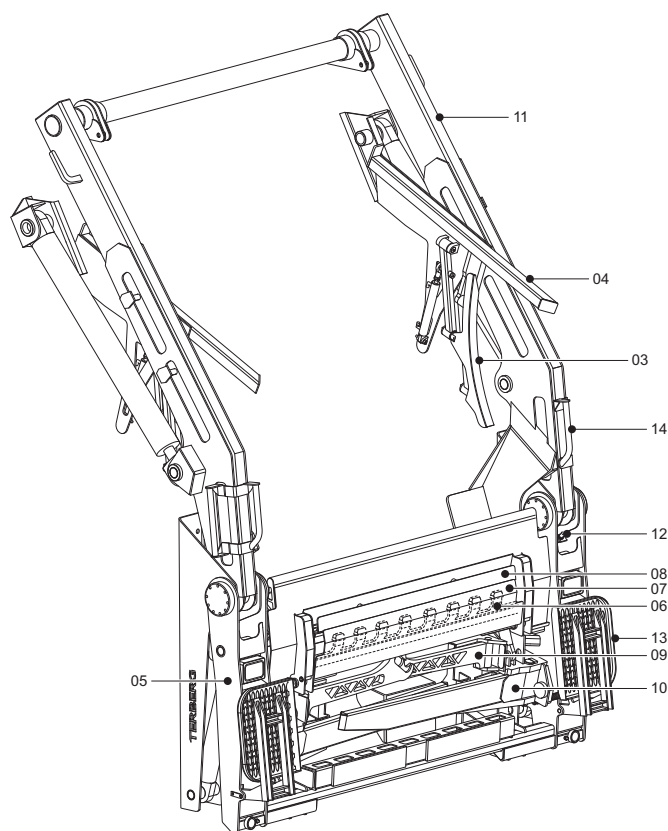
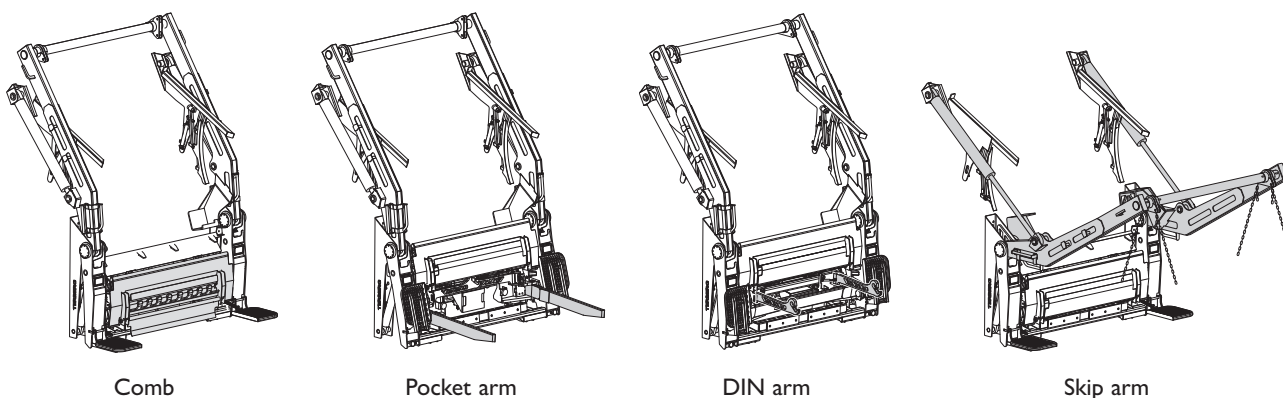
### The OmniGV's extensive range of uses:

- 2-wheel bins via the comb.
- 4-wheel containers (only with **FLAT** lid) via the comb.
- 4-wheel containers via the DIN pick-up arms.
- 4-wheel large waste containers with container capacities of 2.5m<sup>3</sup> and 4.5m<sup>3</sup> via the Pocket pick-up arms.
- Skip containers with capacities of 5m<sup>3</sup> to 10m<sup>3</sup> via the Skip arms.
- And thanks to the low throw-in height (about 1400 mm), it is also well suited to the collection of "loose" waste.

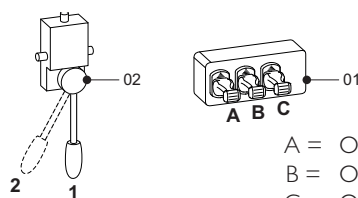
The maximum lifting force of the bin lift system is **70,000 N (7,000 kg)**.

### Characteristics of the OmniGV:

- A robust and multifunctional bin lift system.
- Fitted with a proportional controller for a smooth operation to protect the containers.
- Safe operation.
- Quiet operation.
- Prepared for mechanical weighing.
- Simple joystick operation of the lift/lower and tilt movements.
- Lid openers with hydraulic lever control.
- Integrated handlebars and footboards (option).
- Integrated LED rear lights (option).



The manual controls should be fitted on the right hand side of the hopper.








- A = Operation of tilt frame
- B = Operation of pick-up comb
- C = Operation of Skip arm

- 01 = Controls for lifting / lowering / tilting (joysticks)
- 02 = Lid opener operation (lid opener lever)
- 03 = Lid openers, 2 positions  
(opens lid of the 2,500-4,500 litre containers)
- 04 = Guide tracks
- 05 = Tilt frame
- 06 = Pick-up comb
- 07 = Screening plate
- 08 = Container locking
- 09 = DIN pick-up arms
- 10 = Pocket pick-up arms
- 11 = Skip arms
- 12 = Skip arm sensor  
(monitors distance between Skip arm and tilt frame)
- 13 = Footboards (option)
- 14 = Handle bars (option)

## 1.2 Technical specifications

Directives and Standards	2006/42/EG, EN 1501-1 & EN 1501-5: 2011
Weight	1,536 kg (footboards included)
Sound pressure	≤ 65 dB(A)
Vibration	≤ 2,5 m/s <sup>2</sup>
Operating voltage	24 Volts DC
Current	5 Ampère / 24V DC
Oil flow	40-60 litre/minute
Operating pressure PTO	Min. 180 bar / Max. 200 bar

### Bin / container and bin lift information

	Container type	Capacity (litres)	According to standard	Lifting capacity*	Cycle time (seconds)	Tilt angle
	2-wheel bins	80 - 390	EN 840-1	1,600 N (160 kg)	3 + 6.5 / 6.5 + 3	45 degrees
	4-wheel flat-topped containers	500 - 770 1,000 - 1,280	EN 840-2	<b>Comb:</b> 8,000 N (800 kg) <b>DIN arms:</b> 8,000 N (800 kg)	3 + 6.5 / 6.5 + 3  6.5 / 6.5	<b>Comb:</b> 45 degrees <b>DIN arms:</b> 40 degrees
	4-wheel roll-topped containers	770 - 1,100	EN 840-3	<b>DIN arms:</b> 8,000 N (800 kg)	6.5 / 6.5	40 degrees
	4-wheel container with Pocket arm pick-up	2,500 - 4,500	EN 12574-1	20,000 N (2,000 kg)	6.5 / 6.5	36 degrees
	Skip	5,000 - 10,000	DIN 30 720	70,000 N (7,000 kg)	21 / 23	90 degrees (Skip floor)

\* Before emptying, check the maximum permitted filling weight of the container.



The **DIN pick-up arms** must be closed if containers are being loaded over the Pocket pick-up arms.



The **Pocket pick-up arms** must be closed if containers are being loaded over the DIN pick-up arms.



The **DIN and Pocket pick-up arms** must be closed if containers are being loaded over the Skip arms.



The emptying of bin types other than those indicated above, is not permitted with this bin lift system. If in doubt, please contact your distributor.

## 2.1 General safety instructions

### General

- The bin lift system may never be operated when the refuse collection vehicle is travelling along and also not with reverse gear engaged.
- The bin lift system may only be operated by persons who have received operator training and are fully familiar with its operation.
- First read the operating instructions before you start using the bin lift.
- Read through the operating instructions for the compaction body carefully.
- In your daily work as bin lift operative you are working in traffic, do not put it or yourself in danger.
- Before starting the collection round, discuss with your colleagues how to act in certain situations such as stopping, driving off, etc.
- When you are working with the bin lift, you should not wear any loose clothing and jewellery.
- While working always wear work clothing, safety footwear and work gloves that comply with the standards indicated in the table below.

Personal protection equipment:	According to standard:
Work clothing	NEN-EN-ISO 20471:2013
Safety footwear	NEN-EN-ISO 20345:2011
Work gloves	NEN-EN 420:2003+A1:2009

- Make sure that an unattended bin lift can never be put into operation by unauthorised persons (remove the ignition key).
- Do not use the bin lift system in spaces or installations where the presence of gasses and/or flammable materials creates a danger of fire or explosion.
- The bin lift system may under no circumstances be used if the oil feed rate is higher than 60 litres per minute.
- Technical faults should be reported immediately to the person responsible for supervising the loading. The bin lift must be taken out of operation until the fault (if this could present a danger) is remedied.
- Never use the pick-up arms or any other part of the bin lift system as a seat.  
This is **life-threateningly dangerous!**
- The controls may under no circumstances be altered.
- None of the installed safety features may be removed or altered.

- If the safety features are damaged, they must be immediately repaired or replaced by original parts.
- The movement speeds and lifting forces set by the manufacturer may on no condition be altered.
- Operating and safety stickers should be present and clearly legible.
- Actions that override the safety provisions are expressly forbidden!
- It is forbidden to stand on the footboards while the refuse collection vehicle is reversing.
- Take care that during reversing you are visible to the driver of the refuse collection vehicle.
- The bin lift may never be used as a hoisting instrument.
- No vehicle may be towed with the towing cable attached to the bin lift system.
- The pick-up arms should be folded in while the vehicle is in motion.
- When riding on the vehicle you must absolutely not sit or stand on parts of the machine other than the special footboards for this purpose, **this really is extremely dangerous!**
- In extremely bad weather (storms, thunderstorms, etc.) it is not advisable to use the bin lift system.

## 2.2 Safety instructions applicable during operation, maintenance and repair

### During the operation of the bin lift system

- Ensure that no-one is in the immediate vicinity of the bin lift system during the loading cycle.
- If the bin lift system is in operation, you may under no circumstances reach into the lifting system (**danger of injury**).
- Check that there are no foreign objects in or between the bin lift system that can hinder its operation.
- Loose refuse may not be loaded above the edge of the hopper.
- The compactor may not be used while objects are protruding from the throw-in hole.
- Never use the bin lift system when the view of the load is obstructed.
- Never use the bin lift system on a very uneven surface.
- The bin lift system may not be driven up against a bin or a pile of refuse.
- Take account of the heating of the hydraulic oil. This can become 40°C warmer than the environment. As a result, the pipes and hoses can cause light burns at high ambient temperatures.
- It is not permitted to use bin types not listed in the manual.
- Nothing should protrude from the bin and only bins whose lids are fully closed should be emptied.
- Do not empty any damaged bins. These can cause problems.
- Overweight bins should be removed from the bin lift system.
  - max. lifting force with the pick-up comb:  
8,000 N (800 kg)
  - max. lifting force DIN pick-up arms:  
8,000 N (800 kg)
  - max. lifting force Pocket pick-up arms:  
20,000 N (2,000 kg)
  - max. lifting force Skip arms:  
70,000 N (7,000 kg)
- Check that the container is located correctly on the DIN / Pocket pick-up arms before you empty it.
- Let go of the bin as soon as it is picked up by the bin lift system.
- It is expressly forbidden to manually 'help' the lifting system.
- Only remove the bin when the bin lift system has come to rest and the bin is back on the ground.
- Place empty bins where they do not pose a danger to other road users.

- It is forbidden to empty bins that contain dangerous and/or radioactive substances.
- It is not permitted to empty bins that contain burning or smouldering materials.
- Do not walk backwards towards the bin lift system.
- A bin may only be offered to the bin lift system when held by the handle bars.



*Keep a minimum distance of 5 meter between the bin lift and objects which are located behind the bin lift system. This is to avoid a dangerous situation in case that a container comes loose.*

### During maintenance and repair

- Maintenance and repairs may only be carried out by authorised technical personnel.
- Any faults detected should be corrected before the bin lift system is used.
- For maintenance and repairs switch the bin lift system off (switch off the engine of the refuse collection vehicle and turn off the main power switch).
- While working, accidental activation should be prevented by removing the key from the ignition switch (keep on your person).
- You may not go under the tilt frame for repair or cleaning unless the tilt frame is supported.
- Before cleaning can begin, you should switch off the drive gear of the refuse collection vehicle.
- The grease between the pivots may get washed away if you use a high pressure hose. Think about the safety of your eyes and use safety glasses.
- When working on the hydraulic system, you should bear in mind that this is filled with hydraulic fluid under pressure. Always use personal protective equipment to avoid contact with skin and eyes. Use absorbents to avoid environmental pollution.
- You must comply with the maintenance interval specified by the manufacturer.
- On disassembly, disconnect the plugs and couplings from the vehicle.
- Following a collision involving the bin lift system Terberg will need to assess whether it is still safe to use or first needs to be repaired.

## 2.2 Safety instructions (continued)

- Original or specified parts should always be used for repair or maintenance.
- Do not stand under the bin lift or the bin!



*Repairs may only be carried out by qualified personnel, never rectify faults yourself, this may cause danger for you and damage to the bin lift system!*

## 2.3 Warning signs

### Warning signs

All safety and instruction stickers affixed must be replaced if damaged.

The pictogram stickers have the following meanings:



Do not stand under the tilt frame!



Do not stand behind a working bin lift!



Do not reach into the bin lift, danger of injury!

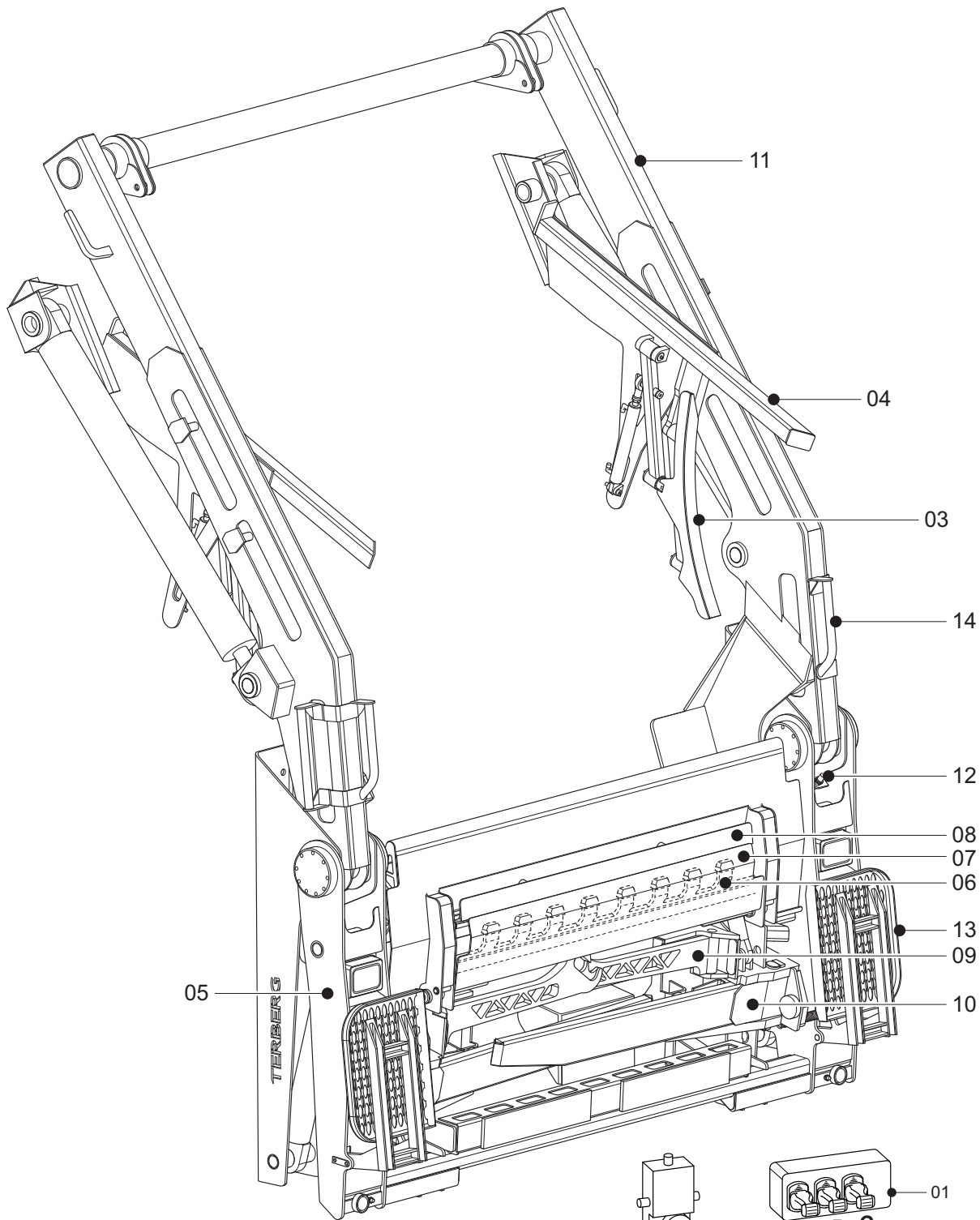


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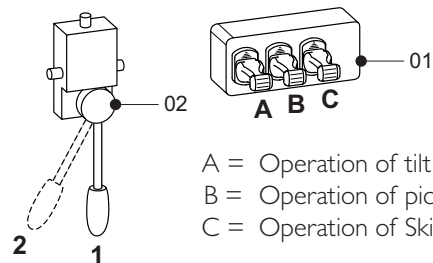
### 3.1 Important components

EN

3. Bin lift operation



- 01 = Controls for lifting / lowering / tilting (joysticks)
- 02 = Lid opener operation (lid opener lever)
- 03 = Lid openers, 2 positions
- 04 = Guide tracks  
(opens lid of the 2,500-4,500 litre containers)
- 05 = Tilt frame
- 06 = Pick-up comb
- 07 = Screening plate
- 08 = Container locking
- 09 = DIN pick-up arms
- 10 = Pocket pick-up arms



- 11 = Skip arms
- 12 = Skip arm sensor  
(monitors distance between Skip arm and tilt frame)
- 13 = Footboards (option)
- 14 = Handle bars (option)

## 3.2 Warnings and tips



Before starting to use the bin lift system, first read the operating instructions.

- It is expressly prohibited to help the bin lift system 'manually' with lifting.
- Lifting capacity of the DIN pick-up arms: max. 800 kg.
- Lifting capacity of the Pocket pick-up arms: max. 2,000 kg.
- Lifting capacity of the Skip arms: max. 7,000 kg.
- Excessively heavy bins must not be lifted.
- Do not remove the bin before the bin lift has come to a standstill.
- **Always** approach the bin lift forwards with outstretched arms, even when removing the bins.
- When you are working you are in traffic; do not put it and yourself in danger. Place empty bins where they do not cause any danger to other road users.
- When you are working with the bin lift system, do not wear loose clothing and jewellery.
- Loading is teamwork. Before starting the collection round, discuss with your colleagues how to act in certain situations such as stopping, driving off, etc.
- Never use the bin lift system as a seat. ***This is life-threateningly dangerous.***
- When the bin lift system is in operation, you may not reach into the lifting system, **this may cause a danger of injury.**
- It is forbidden to stand on the footboards while the refuse collection vehicle is reversing.
- Take care that during reversing you are visible to the driver of the refuse collection vehicle.

## 3.3 Daily checks

Before you start work, you must check the bin lift system for the following points:

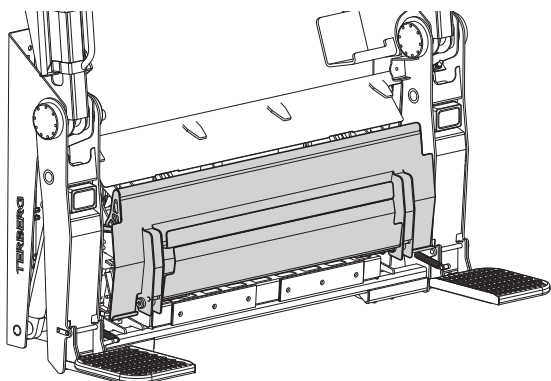
- Check that no oil loss has occurred.
- Look to see if there are any foreign objects (branches, twigs, plastic bags, etc) in the bin lift system that could hinder its operation.
- **Operation of the controls**  
Check the operation of all the controls by performing all the possible actions with empty bins (for information on lid opener position / bin type see next pages of this Section):
  - Lid opener movement; fold the lid openers out and in.
  - Joysticks for lifting / lowering / tilting.
- **Working footboards (option)**  
Check the operation and mounting of the footboards.



To make it easier to throw in bags and/or bulky waste, you can lower the throw-in height of the lifting device.

- 1) Engage the PTO of the refuse collection vehicle.
- 2) Fold down both footboards (13).
- 3) Check that the lid opener handle (02) is in Position I.  
In this position the lid openers (03) are automatically folded IN (stowed position).
- 4) Check that the pick-up comb (06) is in the LOWER position and that the screening plate (07) is closed shut.

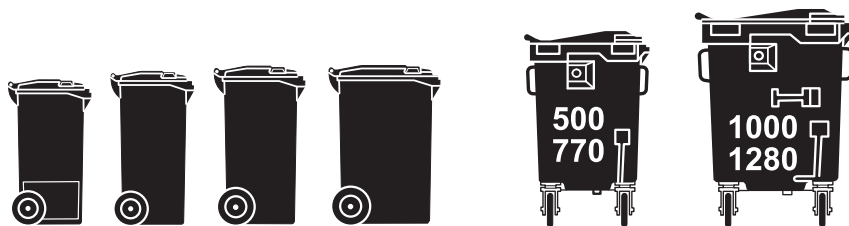
If the pick-up comb (06) is still not in the LOWER position, lower it using **joystick B** (01).  
Fold the screening plate (07) shut and lock it.



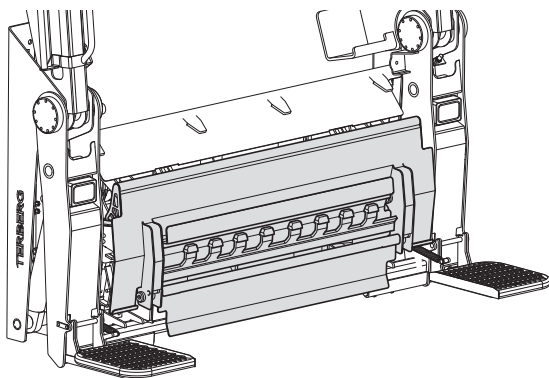
## 3.5 Loading with the pick-up comb

2-wheel bins;  
contents 80 to 390 litres

4-wheel containers  
with a FLAT lid;  
contents 500 to 1,280 litres



- 1) Engage the PTO of the refuse collection vehicle.
- 2) Fold down both footboards (13).
- 3) Check that the lid opener handle (02) is in Position I.  
In this position the lid openers (03) are automatically folded IN (stowed position).
- 4) Fold the screening plate (07) OPEN.



- 5) Bring the pick-up comb (06) to the correct height:  
Lower the pick-up comb (06) to the right height for the container to be emptied by moving joystick B (01) downwards.



4-wheel containers with a ROUND lid may only be loaded over the DIN pick-up arms!  
The lid openers are not suitable in combination with the pick-up comb.

- 6) Roll the container against / above pick-up comb (06).



Make sure that the bin/container is located correctly on the pick-up comb.

- 7) Container emptying:
  - Use joystick B (01) to put the container in the highest position. The container edge is now clamped in position.
  - Now use joystick A (01) to lift the container further to the tilt position. The container is emptied.

- 8) Container removal:

- Use joystick A (01) to tilt the container upright again.
- Then use joystick B (01) to return the container to the ground.
- Remove the container from the bin lift as soon as the wheels touch the ground.

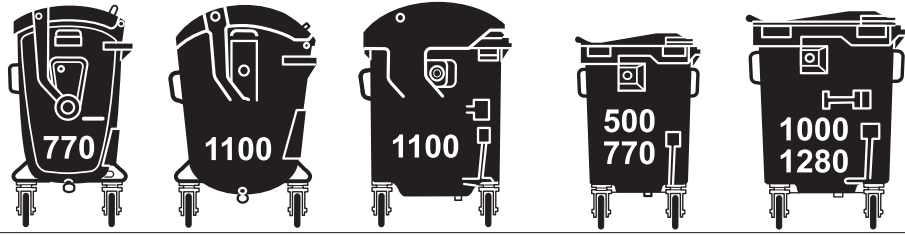


Never pull hard on the operating levers. This can cause damage and has no effect on the operation of the bin lift system.

### 3.6 Loading with DIN pick-up arms

4-wheel containers  
with a **ROUND** lid;  
contents 770-1, 100 litres

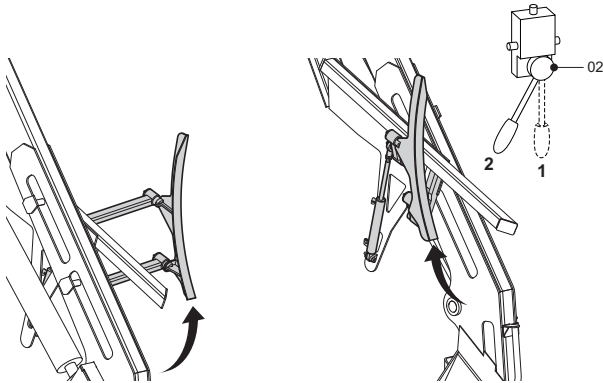
with a **FLAT** lid;  
contents 500 to 1,280 litres



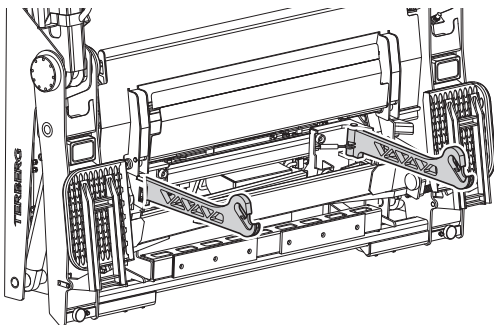
- 1) Engage the PTO of the refuse collection vehicle.
- 2) Fold up both footboards (13).
- 3) Check that the pick-up comb (06) is in the **TOP** position and that the screening plate (07) is folded shut.  
If the pick-up comb (06) is still not in the TOP position, raise it using **joystick B** (01).  
Fold the screening plate (07) shut and lock it.
- 4) Ensure that the Pocket arms (10) are closed.
- 5) Lid openers:

For containers with a **ROUND** lid, both lid openers (03) must be folded **OUT**

If the lid openers (03) are not yet folded **OUT** (which is the working position), put the lid opener handle (02) in Position **2** (see the drawing below).  
If a joystick (01) is now used, and pressure is thus built up, the lid openers will fold **OUT**.



- 6) Fold out both DIN pick-up arms (09).



- 7) Roll the container straight between the pick-up arms.

- 8) Bring the pick-up heads to the correct height:  
Use **joystick A** (01) to raise both pick-up arms until the pick-up heads are level with the lifting lugs of the container.



*Take great care that the container's lifting lugs insert firmly into both pick-up heads of the DIN arms.*

- 9) Container emptying:  
Use **joystick A** (01) to raise the container further to the tilt position. The container is emptied.

- 10) Container removal:

Then use **joystick A** (01) to return the container to the ground. Make sure the lifting lugs of the container come out of the pick-up heads of the DIN arms (09).  
Roll the container out of the bin lift.



*On an uneven road surface the lifting lugs of the container may get stuck in the top position of the pick-up heads.*

**In this case, proceed as follows:**

- Using **joystick A** (01) raise the container slightly until the wheels are free of the ground.
- Pull the container backwards so that the lifting lugs of the container are in the lower position of the pick-up heads.
- Then let the container descend.



*Ensure that your fingers do not become trapped when folding in the pick-up arms.*

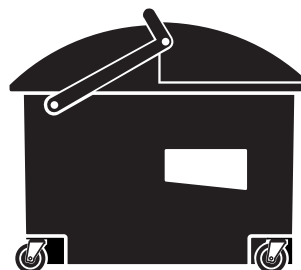


*Never pull hard on the operating levers. This can cause damage and has no effect on the operation of the bin lift system.*

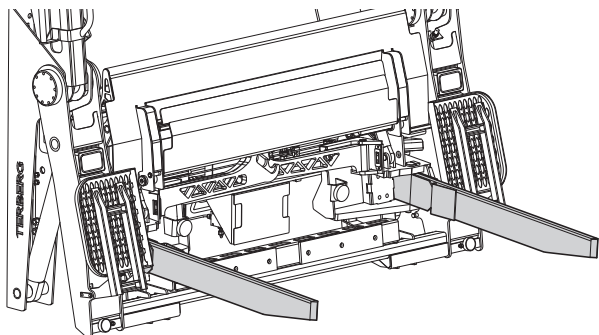
## 3.7 Loading with Pocket pick-up arms

4-wheel containers with Pocket-arm pick-up;

contents 2,500 - 4,500 litres



- 1) Engage the PTO of the refuse collection vehicle.
- 2) Fold up both footboards (13).
- 3) Check that the pick-up comb (06) is in the TOP position and that the screening plate (07) is folded shut.  
If the pick-up comb (06) is still not in the TOP position, raise it using joystick B (01).  
Fold the screening plate (07) shut and lock it.
- 4) Ensure that the DIN pick-up arms (09) are closed.
- 5) Check that the lid opener handle (02) is in Position I.  
In this position the lid openers (03) are automatically folded IN (stowed position).
- 6) Fold both Pocket pick-up arms (10) outwards.



- 7) Roll the container in front of the pick-up arms.
- 8) Bring the pick-up arms to the correct height:  
Use joystick A (01) to raise both pick-up arms until they can be inserted into the lifting flanges (pockets).
- 9) Roll the container over the pick-up arms.
- 10) Container emptying:  
Use joystick A (01) to raise the container further to the tilt position. The two guide tracks (04) at the top, on both sides of the bin lift, have by then opened the lid. The container is emptied.

### 11) Container removal:

Then use joystick A (01) to return the container to the ground.

Roll the container off the pick-up arms and out of the bin lift.



Keep a minimum distance of 5 meter between the bin lift and objects which are located behind the bin lift system. This is to avoid a dangerous situation in case that a container comes loose.



Ensure that your fingers do not become trapped when folding in the pick-up arms.

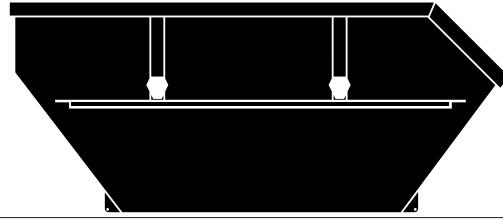


Never pull hard on the operating levers. This can cause damage and has no effect on the operation of the bin lift system.

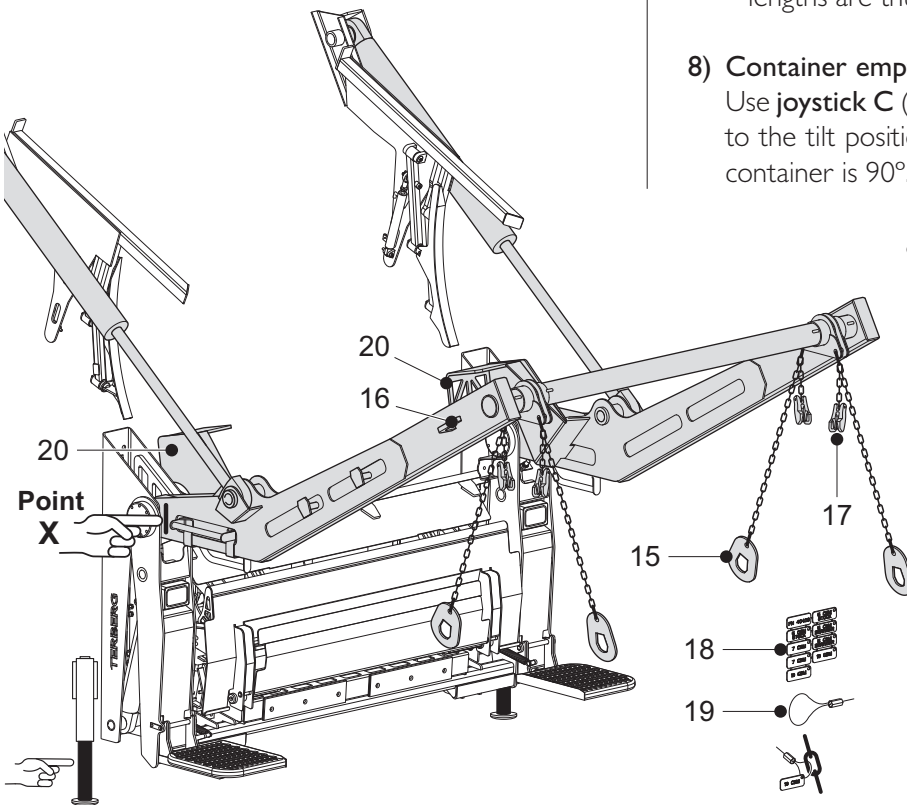
## 3.8 Loading with Skip arms

Skip containers;

contents 5,000 - 10,000 litres



- 1) Engage the PTO of the refuse collection vehicle.
- 2) Fold down both footboards (13).
- 3) Check that the pick-up comb (06) is in the LOWER position and that the screening plate (07) is folded shut.  
If the pick-up comb (06) is still not in the LOWER position, lower it using joystick B (01).  
Fold the screening plate (07) shut and lock it.
- 4) Ensure that the DIN pick-up arms (09) and the Pocket pick-up arms (10) are closed.
- 5) Check that the lid opener handle (02) is in Position I.  
In this position the lid openers (03) are automatically folded IN (stowed position).
- 6) Stabilize the refuse collection vehicle by allowing the two stabilizer legs at the rear to descend.



### 7) Hooking up the Skip container:

- Use joystick C (01) to let the Skip arms (11) descend to just above the container.
- Unhook the 4 Skip lifting plates (15) from the hooks (16) and put them around the lifting lugs of the container.



*The correct chain lengths depend on the type of container. The right chain lengths will have to be found by trial and error.*

- Shorten every chain to the correct length by hooking a link to a shortening claw (17). If the correct length is known, the relevant chain link can be marked with the marking plates (18) and marking straps (19) included in the delivery.
- The container stop / receiving brackets (20) have a fixed position on the bin lift system. If the front edge of the container passes **Point X** during lifting, it will correctly enter the stop / receiving brackets (20) and the correct chain lengths are thus determined!

### 8) Container emptying:

Use joystick C (01) to raise the container further to the tilt position. The tilt angle for this type of container is 90°. The container is emptied.

### 9) Container removal:

- Then use joystick C (01) to return the container to the ground.
- Unhook the Skip lifting plates (15) and hang them back on the hooks of the Skip arms.
- Use joystick C (01) to bring the Skip arms (11) back in.

### 10) Pull the two stabilizer legs of the refuse collection vehicle back in.



### 3.9 Travel height and footboards

#### Footboards and handle bars

The bin lift system is fitted with footboards and handle bars. The handle bars - two brackets on either side - are fixed.

These are used in three situations. In each of these situations, the footboards must be in the correct position.

#### 1) Transport

Footboards folded up.

#### 2) Loading

Footboards folded down.

#### 3) Riding

Footboards folded down.

#### If someone is standing on the footboard:

- Reversing is not permitted.
- The refuse collection vehicle may not be driven at more than 30 kilometres per hour (19 mph).
- The compactor should not run in full automatic mode.

#### Throwing waste in manually

Throw large heavy objects across the width of the compacter space to prevent damage to the bin lift system.

#### Obstacles or uneven surfaces

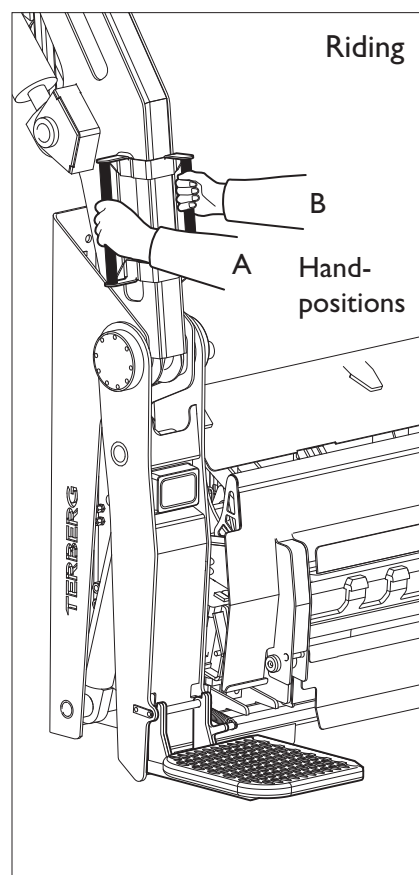
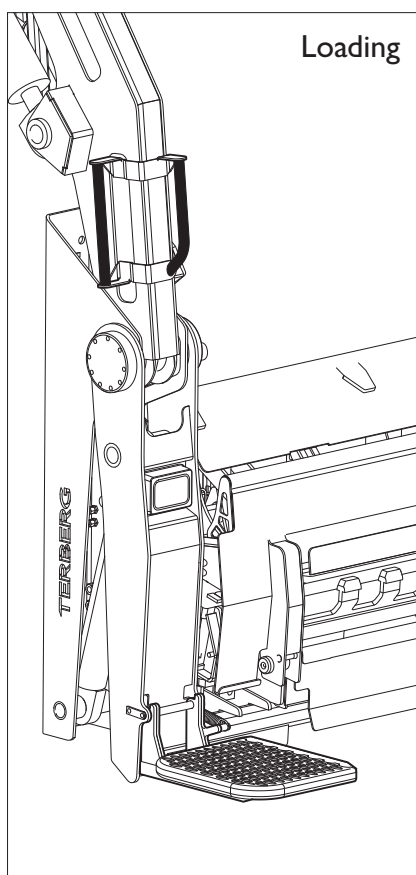
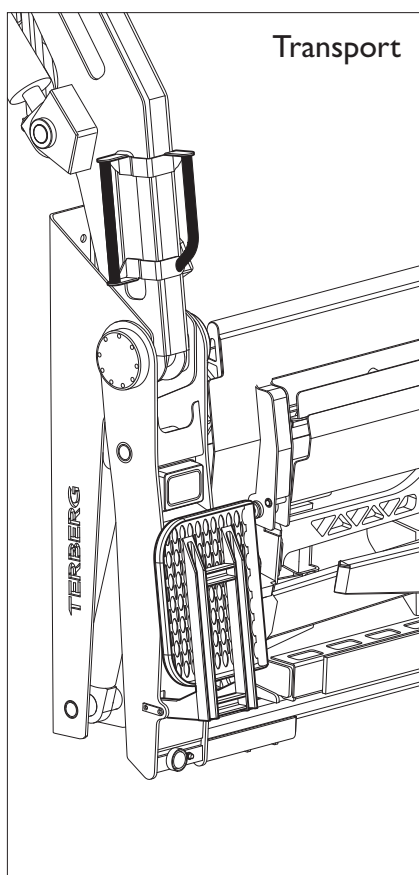
When driving over large obstacles or uneven terrain, it is important to place the footboards in the transport position and tilt the bin lift up for adequate ground clearance.



The bin lift may *never* be operated when the refuse collection vehicle is travelling along and also not when reverse gear is engaged.



Never stand on other parts of the bin lift and also never use them as a seat, **this is extremely dangerous!**



## 4.1 Maintenance: general and daily

### General

Before starting with maintenance, cleaning or repair work, the following should be taken into account:

- Put the refuse collection vehicle on the handbrake.
- Before working on the tilt frame you should first secure it against sagging (hoist, struts, etc.).
- None of the installed safety features may be altered or removed under any circumstances.
- You should adhere to the maintenance interval specified by Terberg Machines B.V.

### Daily maintenance

It is recommended to clean the bin lift system after every working day.



*Before you start cleaning you must switch off the drive of the refuse collection vehicle!*



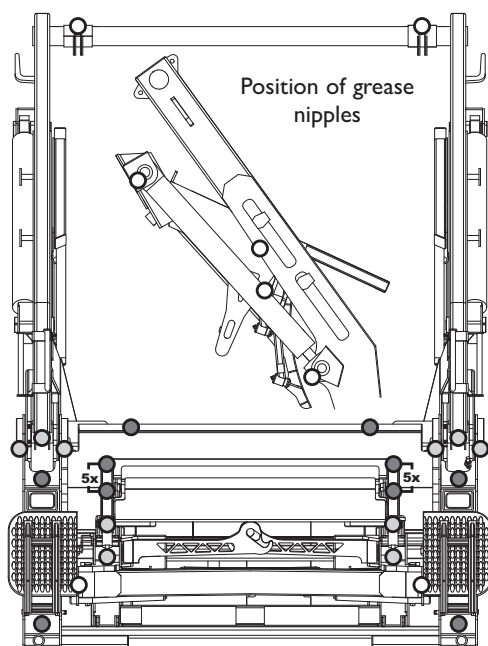
*In the interests of your safety, do not stand under the tilt frame while cleaning the bin lift system.*

- Clean the bin lift system with a high-pressure cleaner. Do not direct the spray directly at electrical components or stickers!



*Always wear safety goggles when you clean the bin lift with a high pressure cleaner.*

- Check or the footboards and the handle bars of the bin lift system are undamaged, functioning correctly and firmly mounted.



## 4.2 Maintenance: weekly

### Weekly maintenance

- **Operation of the controls (01 & 02)**
  - Check the operation of all the controls by performing all the possible actions with empty bins (for information on lid opener position / bin type see Section 3):
    - Lid opener movement; fold the lid openers out and in.
    - Joysticks for lifting / lowering / tilting.
- **Clamping action of the container locking (08)**
  - Raise the pick-up comb (06) to the highest position and see if the clamping plate moves forward when the pick-up comb is nearly at the top. Approximately the last 40 mm.  
*For adjusting the clamp distance, see the 6-weekly maintenance.*
- **Functioning of the screening plate (07).**
  - Check that the screening plate turns smoothly and that its locking works properly.
- **DIN pick-up arms (09)**
  - Check that the closure lips close in the tilted position.
- **Stickers**
  - Damaged safety and instruction stickers must be replaced immediately.
- **Lubricating the bin lift system**
  - The bin lift system has 38 grease nipples (see illustration below left).
    - Most of the grease nipples (●) can be reached with the tilt frame in the tilted position. The light colored (○) with the tilt frame actually in the resting position. Secure the tilt frame against sagging (hoist, struts, etc.).
    - Remove the red protective caps and clean the grease nipples. Keep adding grease until you see fresh grease between the pivots.
    - Only use approved acid-free types of grease that do not harm the bearings, such as Multifak EP2 Texaco (or equivalent).
- **Visual inspection**
  - Check the mounting and condition of the bump stops.
  - Check the bin lift for defective (curved / bent or broken) parts.
  - Check that there are no oil leaks.
  - Check the wiring for damages.



*Any faults identified must be rectified before the bin lift is taken into service.*

## 4.3 Maintenance: 6-weekly

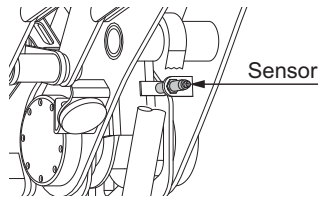
### 6-Weekly maintenance

First carry out the weekly maintenance.

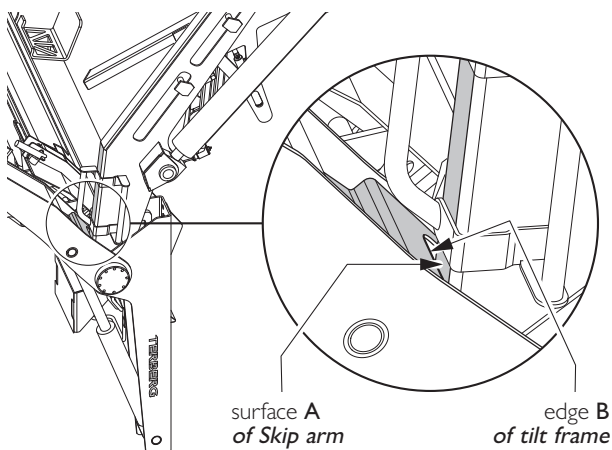
- **DIN pick-up arms (09)**
  - Check the operation of the gas springs (dampers).
  - Check the distance between the pick-up arms, at the pick-up heads, when they are folded out. This size must be  $1265 \pm 5$  mm and should also be centred to the centreline of the machine (see drawing in Section 5.2). The distance can be corrected by screwing the stop bolts in or out.
- **Pocket pick-up arms (10)**
  - Check the operation of the gas springs (dampers).  
For adjusting the pick-up arms, see annual maintenance.
- **Lid openers (03)**
  - Check the operation of the lid openers.  
For adjusting the lid openers, see annual maintenance.

- **Sensor Skip arm (12)**

This sensor is located on the tilt frame next to the hinge point of the right Skip arm and serves to prevent the Skip arm and the tilt frame from colliding regardless of their positions.



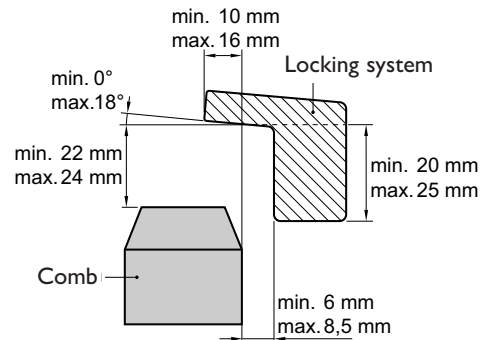
- Ensure that the Skip arms are folded up against the rubber bumper stops. Tilt the tilt frame as far up as possible. The sensor will now intervene.
- Check the distance between A and B (see drawing), which must be  $10 \pm 1$  mm.
- This distance can be corrected by moving the sensor. Turn the fixing nuts slightly in or out. The sensor switches / reacts to about 5 mm distance from the lip mounted on the Skip arm. Keep an eye on the monitoring LED in the sensor.



- **Container locking (08)**

Check the opening between the pick-up comb (06) and the clamping plate (see drawing below). This must be done with the pick-up comb in the upper position.

- This opening can be adjusted using the M12 bolts to the right and left of the rear of the pick-up comb.



With the pick-up comb in the upper position the clamping plate is compressed by the two springpots. These are mounted to the left and right behind the clamping plate.

For adjusting the springpots, see annual maintenance.

- **Chains and fastening aids**

- Check the shackles, shortening claws, Skip lifting plates and marking straps.
- Check that the chain mountings, around the Skip arm axis, still work (turnable).

- **Bolts and nuts**

- Make sure that all bolt connections are still tightened.

- **Footboards [option] (13)**

- Check the springs.
- As an option, the footboards can be fitted with sensors by the body manufacturer. In this case, check the functioning in accordance with the instructions and requirements provided by the body manufacturer.



Any faults identified must be rectified before the bin lift is taken into service.

## 4.4 Maintenance: annual

### Annual maintenance

First carry out the weekly and 6-weekly maintenance.

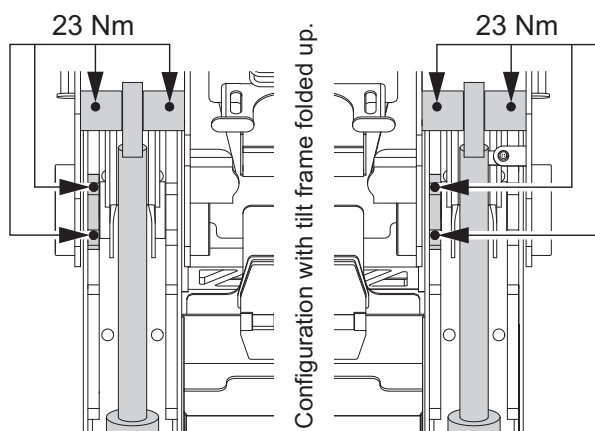
- **Bearing play – bin lift**

Check all shafts for excessive bearing play.

- Main shaft bearings for tilt frame and Skip arms.
- Cylinder shaft bearings for tilt frame and Skip arms.
- Pick-up comb bearings, complete with parallel arm bearings.
- Lid opener bearings.

- **Mounting bolts for main shaft and cylinder shaft**

Re-tighten the 4 mounting bolts of the main shaft and of the top cylinder shaft (tilt frame) to 23 Nm (on both sides of the bin lift, see drawing). Loctite has been applied to these bolts.



- **Mounting of bin lift**

Re-tighten all the mounting points of the bin lift, including:

- The mounting of the bin lift system onto the refuse collection vehicle.
- The bin lift footboards.

- **DIN and Pocket pick-up arms (09 & 10)**

Check the DIN and Pocket pick-up arms for deformation. The arms must be straight.

- **Pocket pick-up arms (10)**

Check the distance between the pick-up arms, at the ends, when they are folded out. This size must be  $1680 \pm 10\text{mm}$  and should also be centred to the centreline of the machine (see drawing in Section 5.2). The distance can be adjusted by adding or removing washers under the bumper stops.

- **Lid openers (03)**

Check the distance between the lid opener tracks when these are folded OUT. This size must be  $1290 \pm 10\text{mm}$  and should also be centred to the centreline of the machine (see drawing in Section 5.2). The distance can be adjusted by turning the rod ends of the cylinders in or out.

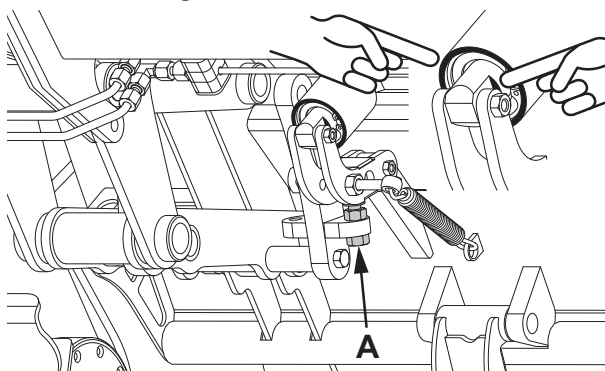
- **Springpot of the container locking / clamping plate**

This springpot provides the clamping action of the clamping plate against the pick-up comb and is fitted to the left and right behind the clamping plate (08).

- Check both for correct operation, clean inside if necessary and grease all the parts.

**Adjusting the springpots:**

- Set the pick-up comb to the highest position.
- First adjust the clamp distance of the clamping plate (see 6-weekly maintenance).
- If necessary, use Bolt A to move the flat part of the ingoing shaft up to the edge of the housing (the black surfaces in the drawing). The spring in the housing now has the correct bias.



- **Electrical wiring**

Check the electrical wiring and connections for the entry of moisture.

- **Hydraulic hoses**

- The hydraulic hoses must be replaced after four years' use.
- This must be done at the latest 6 years after the production date (indicated on the coupling housing)

- **Speeds of the tilt frame and pick-up comb**

**Tilt frame:**

- Up 6.5 seconds, down 6.5 seconds.

**Pick-up comb:**

- Up 3 seconds, down 3 seconds.

- **Working pressure of the hydraulic system**

Check the working pressure of the hydraulic system. The working pressure is set to 185 Bar. The bin lift system is rated for a lifting capacity of max. 7,000 kg.