

37878



AUTOMATIC BIN LIFT SYSTEM

OMNIDEKA
OMNIDEKA 

 **TERBERG**
MACHINES

A TERBERG ROSROCA COMPANY

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The original Dutch version (article code 37877) can be obtained from Terberg. Please send a mail to: info@terbergmachines.nl

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FOREWORD

• General	3
• Warranty	3
• Operator requirements	3
• Symbols used	3
• Description of sections	3
• Type indication	3

1. INTRODUCTION

1.1 Description of the bin lift system	4
1.2 Technical specifications	5
Bin/container and bin lift information	5

2. SAFETY

2.1 General safety instructions	6
2.2 Safety instructions	
2.2.1 During operation of the bin lift system	7
2.2.2 During maintenance and repair	7
2.3 Warning signs	8
2.4 Safety provisions: Emergency stop button	9
Entrapment	9
2.5 Underwalk protection (Rear Protection Device)	10

3. BIN LIFT OPERATION

3.1 Important components	12
3.2 Warnings and tips	13
3.3 Daily checks	13
3.4 Manual loading with the pick-up comb	
3.4.1 2-Wheel bins	14
3.4.2 4-Wheel containers	15
3.5 Automatic loading with the pick-up comb	
2-Wheel bins	16
3.6 Semi-automatic loading with the pick-up comb	
4-Wheel containers	17
3.7 Loading using SMT: Single Man Trade	18
3.8 Loading with DIN pick-up arms (optional)	19
3.9 Shake function 2-wheel bins (Green waste)	20
3.10 Transport and travel positions	20
3.11 Diagnostic System	22
3.11.1 Level 1: Home screen / messages	23
3.11.2 Level 2: Monitor	24
3.11.3 Level 3: Bin counter (optional)	25
3.11.4 Level 4: Configuration menu	25
3.11.5 Level 5: Settings	27

4. MAINTENANCE AND CLEANING

4.1 General and daily maintenance	32
4.2 Weekly maintenance	33
4.3 Six-weekly maintenance	34
4.4 Annual maintenance	35
4.5 Maintenance schedule	37
4.6 Trouble shooting	39
Alarm messages	40

5. TRANSPORT AND STORAGE 53**6. INSTALLATION AND COMMISSIONING**

6.1 Dimensions of the bin lift	54
6.2 Minimum free space required in compactor body	55
6.3 Mounting the bin lift on the RCV	56
6.3.1 Height of side guards / safety arms	57
6.3.2 Entering the mounting height (Diagn. Syst.)	59
6.3.3 Calibrating position sensors (Diagn. Syst.)	60
6.4 Hydraulic connection to compactor body	61
6.5 Electrical connection to compactor body	62

7. DECOMMISSIONING (disposal) 65**8. APPENDICES**

8.1 Hydraulic connections and components	66
8.1.1 Hydraulic block, overview components	68
8.1.2 Valves for lifting and tipping cylinders & catcherbar	69
8.2 Electrical connections and components	71
8.2.1 Overview Inputs	80
8.2.2 Overview Outputs	81
8.3 Special tools	82

Additional information for the ELECTRIC VERSION 83**SPARE PARTS BOOK** 101

Foreword

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

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

The operation and appearance of components and button control stations may differ, this depends on the version ordered.

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

Where necessary, refer to the user manual of the refuse collection vehicle and the refuse handling body.

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.

Warranty

For more information about the conditions of warranty, 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.

Symbols used



NOTE:

Additional information.



CAUTION:

If these instructions are not followed, this may result in slight to average injury and/or damage to the product or the environment.



WARNING:

If these instructions are not followed, this may result in serious or fatal injury and/or serious damage to the product or the environment.

The user manual has the following sections:

1. Introduction

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

2. 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.

3. Operating

A clear description of the most important components, instructions for emptying various types of bins and information about the Diagnostic System.

4. Maintenance and cleaning

Covers all the periodic operations needed for the correct functioning of the machine, trouble shooting and fault diagnosis.

5. Transport and storage

Information about the weight, the centre of gravity and how to store the machine.

6. Installation and commissioning

A description of the installation dimensions for the machine when being built onto the RCV (Refuse Collection Vehicle), including a list of means and tooling required to conduct the installation.

7. Decommissioning

Description of the actions necessary to dismantle the machine safely and to dispose of this in an environmentally-friendly manner.

Type indication

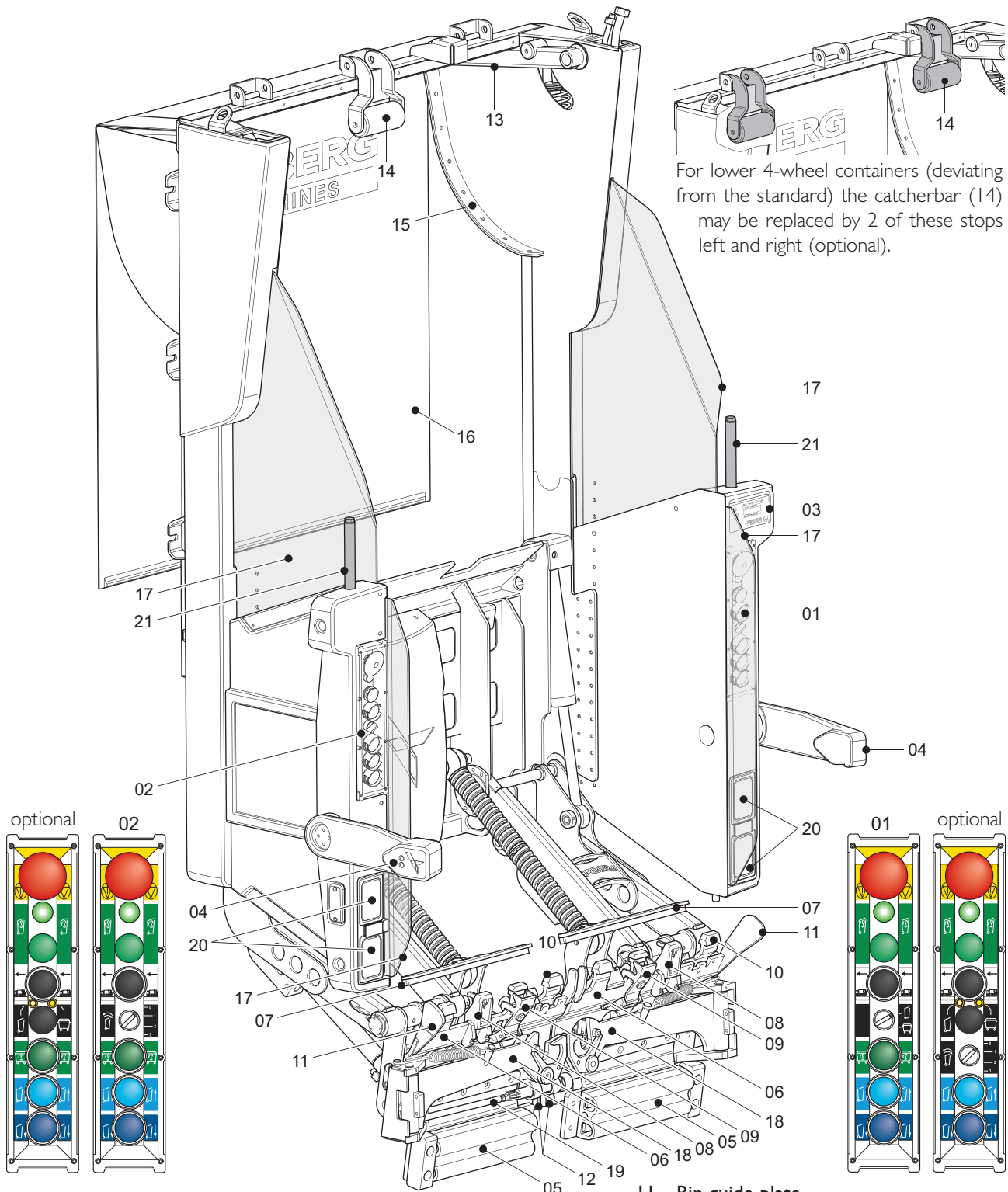
Each bin lift is provided with a type plate with the type indication, machine number and year of construction. The type plate can be found on the right-hand side of the frame.

		Baronieweg 23 3403 NL IJsselstein Nederland Tel. +31 (0)30 210 06 00 www.terbergmachines.nl	Bin lift system Beladingsysteem Lève-conteneurs Schüttungssystem
TYPE	OMNIDEKA		
FABR. NR.	160622000656		BOUWJAAR YEAR OF MANUF. ANNÉE DE CONSTR. BAUJAHR
MANUF. NR.			2016
HERSTELL. NR.			

1.1 Description of the bin lift system

EN

I. Introduction



For lower 4-wheel containers (deviating from the standard) the catcherbar (14) may be replaced by 2 of these stops left and right (optional).

- 01. Button control station R/H* with integrated emergency stop
- 02. Button control station L/H* with integrated emergency stop
- 03. Diagnostic System*
- 04. Safety arm
- 05. Lifting chair
- 06. Pick-up comb
- 07. Locking plate
- 08. Bin security switch
- 09. Pedal arm (cycle start switch)
- 10. Position for RFID antenna

- 11. Bin guide plate
- 12. 4-Wheel container detection
- 13. Catcherbar
- 14. Catcherbar 1100 litre containers
- 15. Guide track - lid opener
- 16. Dust curtain (tarpaulin)
- 17. Protective screen/window
- 18. DIN pick-up arms (optional)
- 19. Chair lock, mechanical (optional)
- 20. Taillights (optional)
- 21. Handle bar (optional)

* Country dependent: - The position of the control stations have been switched.
 - The Diagnostic System is mounted on the left or right hand side of the bin lift.

1.1 Description of the bin lift system

The **OmniDEKA** is a versatile automatic bin lift system. This bin lift system is suitable for emptying the normal 2-wheel bins as well as for emptying most 4-wheel containers (see table 1.2b). With the (optional) pick-up arms, 4-wheel containers that are not fitted with a comb pick-up edge can be emptied.

A safe advantage of this bin lift is that the bin moves away from the operator during the lifting motion.

Operation is done using the two button control stations on each side of the bin lift.

If the bin lift is fitted with an automatic function, then this function can be activated on the button control station. The bins then only need to be wheeled up against the pick-up comb. The bins/containers are picked up automatically, clamped, tipped over and put down again.

The bin lift can optionally be provided with a semi-automatic function for 4-wheel containers. This function has a slightly different mode of operation, you will find more about this in the chapter 'Operation'.

The automatic and semi-automatic functions only work with the safety arms in the horizontal position.

The bin lift is fitted with a passive catcherbar, no adjustment per bin/container type is needed.

1.2 Technical specifications


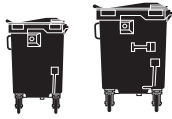
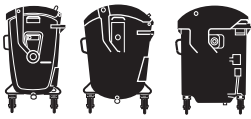

The bin lift is an 'interchangeable lifting device' in compliance with EN 1501-5:2011.

For information: This bin lift system has been designed for mounting onto refuse collection vehicles that are fitted with a standard interface (mechanical, hydraulic, electrical, for technical dimensions and functionality).

Table 1.2a **Technical data OmniDEKA**

Guidelines and standards	2006/42/EG, EN 1501-1 & EN 1501-5:2011
Weight	650 kg standard (685 kg with DIN pick-up arms)
Noise level without bin/container	≤ 61 dB(A)
Noise level (according EN 1501-4 6.4.3)	≤ 70 dB(A)
Vibrations	≤ 2.5 m/s ²
Operating voltage	24 Volt DC
Maximum current consumed by controls	7.5 Ampère / 24V DC
Required oil flow	40 litres/minute
Required working pressure	Min. 200 bar
Return pressure	Max. 2.0 bar at 70 litres/minute
Quick release couplings	DIN 25, ISO 72141-1

Table 1.2b **Bins/containers to be emptied**

	2-wheel bins 	4-wheel containers with flat lid 	4-wheel containers with roll top 	Paladin containers 
Capacity	80 - 360 litres	500 - 1280 litres	770 and 1100 litres	900 litres
According to standard	EN 840-1	EN 840-2	EN 840-3	--
Lifting capacity (maximum)	1700N (170 kg)	5000N (500 kg)		
Cycle time* (excl. dwell time)	5-7 seconds	10-12 seconds		
Time in tipping position	Adjustable			

* Depending on mounting height, bin/container weight and oil temperature.



The emptying of bin/container 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

Terms of conformity

This bin lift conforms to the current standards at the time of production. It has been tested and checked, on a rig, in normal conditions with an increase of 25% weight in static and 10% weight in dynamic operation.

It is the end user's responsibility to maintain the equipment in accordance with the manufacturer's recommendations, also if there is a risk of damages or injury the bin lift must be taken out of service immediately.

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 may only be operated by persons who have received operator training and are fully familiar with the working of the bin lift.
- Read the operating instructions carefully before taking the bin lift into service.
- Also read the instructions for the compactor carefully.
- You will be working where traffic is present during your daily work as operator of the bin lift. Do not endanger yourself or other road users during your daily operations with the bin lift.
- Before commencing the run discuss and agree with your colleagues how to act in particular situations such as stopping, driving away, etc.
- When you are working with the bin lift system you may not wear any loose hanging clothing or jewellery.
- Always wear work clothing, safety shoes and work gloves that comply with the standards shown in the table below while working with the bin lift.

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

- Make sure that an unattended bin lift can never be started by a person who is not authorised to do so (remove ignition key whenever the vehicle is left unattended).
- Don't use the bin lift in areas or near installations where there is a risk of fire and/or explosion due to the presence of gases and/or combustible substances.

- The bin lift may not be operated under any circumstances if the oil flow is greater than 60 litres/minute.
- Technical faults must be reported immediately to the person who is responsible for the supervision of the bin lift. The bin lift must be put out of action until the fault (that could cause danger) has been repaired.
- Never use the lifting chair, pick-up arms or other parts of the bin lift system as a seat, **this is life threatening!**
- Under no circumstances may the controls be changed.
- Under no circumstances may any of the safety provisions fitted be removed or changed.
- Don't blind off or cover the ultrasonic sensors, fitted in the safety arms, under any circumstances.
- If the safety provisions are damaged they must be repaired or replaced immediately by original parts.
- Under no circumstances may the cycle speeds and lifting forces set by the manufacturer be changed.
- Operating and safety decals must be present and properly legible.
- Actions that override the safety provisions are expressly forbidden!
- The lifting chairs should be positioned in their travel position before reversing.
- It is not permitted to stand on the footboards while the refuse collection vehicle is reversing.
- Make sure that you are visible to the driver of the refuse collection vehicle when it is reversing.
- 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 refuse collection vehicle may never be lifted by the lifting points of the bin lift.
- 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

2.2.1 During operation of the bin lift system

- This bin lift has not been designed for throwing in loose refuse. Should you decide to load loose refuse, bags or boxes, then ALWAYS SWITCH the AUTOMATIC function OFF. Always also do this when removing refuse from the lifting chairs.
- Don't go between the safety arms if the automatic function is activated.
- Always switch the automatic function off if for any reason you need to enter between the safety arms.
- Make sure that there are no persons in the immediate vicinity of the bin lift during the loading cycle.
- When the bin lift system is operating, under no circumstances is it permitted to put your hand in the bin lift system (**Risk of injury**).
- In the event of danger immediately press the nearest emergency stop switch (see chapter Safety provisions 2.4).
- Check that there are no foreign objects in or between the bin lift system that could obstruct its working.
- Compacting may not be carried out when there are objects sticking out of the throw-in opening.
- Don't use the bin lift system in situations where there is poor visibility of the bin lift.
- Never use the bin lift system on a very uneven surface.
- The bin lift system may not be driven up against a bin/container 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 work with bin/container types other than those stated in the manual.
- Nothing should protrude from the bin and only bins whose lids are fully closed should be emptied.
- Don't empty damaged bins/containers. These can cause problems.
- Overweight bins/containers should be removed from the bin lift system:
max. lifting capacity 2-wheel bins: 1700N (170kg)
max. lifting capacity 4-wheel cont.: 5000N (500kg)
- Check that the bin/container is positioned correctly on the pick-up comb before emptying it.
- Let go of the bin/container as soon as it is lifted.
- It is expressly forbidden to 'manually' assist the lifting cycle by hand.

- Only apply extra shaking if there is a need for this.
- Only take the bin/container away when the bin lift has come to a standstill and the bin/container is back on the ground.
- Place empty bins/containers where they will not cause a danger to other road users.
- It is forbidden to empty bins/containers containing hazardous and/or radioactive substances.
- It is forbidden to empty bins/containers containing smouldering or burning substances.
- Never walk backwards in the direction of the bin lift system.
- Two bin presenting and/or taking at a time by one person should be kept to a minimum.
- A bin may only be offered to the bin lift system when held by the handle bars.
- Always push a 2-wheel bin to the bin lift with two outstretched arms.
- Never bend your body over the bin when offering it to the bin lift.
- Under wintry conditions, if the bin lift is blocked with large amounts of ice or snow deposits, the sensors may become concealed or the bin clamping mechanism may become clogged up.
Apply emergency stop switch prior to cleaning. Clean these parts and keep as dry as possible, for example with a broom. Never clean the bin lift using defrosting liquids!



Keep a minimum distance of 2.5 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 bin/container falls from the pick-up comb.

2.2.2 During maintenance and repair

- Maintenance and carrying out of repairs is only permitted for qualified technical personnel.
- Any faults detected should be corrected before the bin lift system is used.
- During maintenance and repair work switch off the bin lift system (switch off the engine of the refuse collection vehicle and the main power switch).
- During repair work it must be made impossible for unintentional switching on to occur, therefore remove the ignition key from the ignition switch (keep on your person).

2.2 Safety instructions (continued)

- You may not go under the lifting chairs for repair or cleaning unless the lifting chairs are adequately supported.
- Switch off the drive of the refuse collection vehicle before beginning cleaning.
- It is possible that grease can squirt out from the hinge points when a high pressure cleaner is used, protect your eyes by always wearing safety glasses.
- Use the lifting points provided to raise the bin lift.
- When working on the hydraulic system, you should bear in mind that this is filled with hydraulic fluid under pressure. Always use personal protection equipment to avoid contact with skin and eyes. Use collecting trays / absorbents to avoid environmental pollution.
- You must comply with the maintenance interval prescribed by the manufacturer.
- Electrical fuses should never be bridged or replaced by a fuse with a higher capacity.
- When dismantling, 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.
- Original or specified parts should always be used for repair or maintenance.
- Do not stand under the bin lift or the bin/container!



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

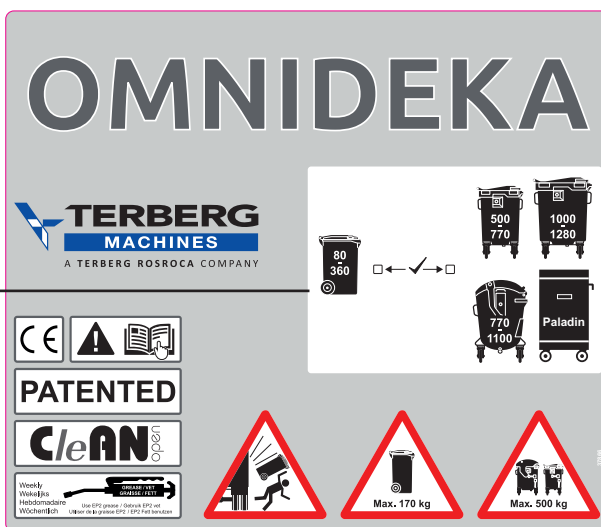
All safety and instruction decals must be replaced when damaged.

The pictogram decals have the following meaning:



The above decal has been affixed to the inside left and right of the bin lift.

This decal has been affixed to the outside left and right of the bin lift.



Necessary setting / Choice between 2-wheel bins and 4-wheel containers.

Information and safety:

- CE certification mark.
- Read the user manual!
- Various constructions have been patented.
- Communications network refuse collection vehicles.
- Lubrication interval + grease recommendation!
- Do not stand under the lifting chair!
- Maximum capacity 2-wheel bins!
- Maximum capacity 4-wheel containers!

2.4 Safety provisions: Emergency stop button

General

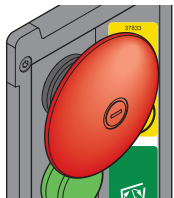
- If it is noticed that the bin lift system does not work or has a fault while collecting refuse, the workshop or service station must be informed immediately with a clear description of the defect.



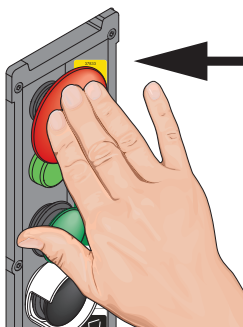
Repairs may only be carried out by qualified personnel, never rectify faults yourself, this may cause danger for you and damage to the bin lift system!

Emergency stop button

In case of emergency, you can use the emergency stop buttons (positioned in the button control stations on both sides of the bin lift) to immediately stop the compactor and the loading cycle of the bin lift.

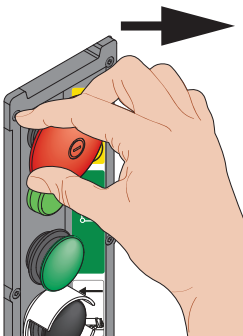


Emergency stop button identifier.

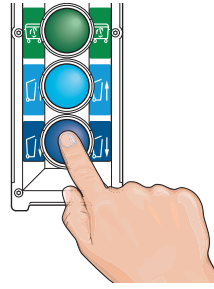


- After the red emergency stop button is pressed, the supply of hydraulic oil stops and the electrical circuit is interrupted.
- The check lights for automatic working go out. The driver of the refuse collection vehicle is warned by a buzzer in the cabin that the emergency stop button has been pressed.

Reset emergency stop button



- Reset the emergency stop button by pulling it out. The buzzer in the cabin stops.
- Resetting of the compactor body may be required, consult the body manual for the correct procedure.



- Press the dark blue DOWN button. The lifting chair lowers to the lowest position.
- Solve the reason for pressing the emergency stop button.
- Remove the bin/container from the bin lift system if applicable.

- *The bin lift system is ready for use again.*

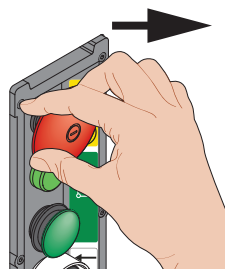
Entrapment

In the event of a dangerous occurrence or if a person has become trapped in the lifting mechanism and consequently the emergency stop button has been pressed.

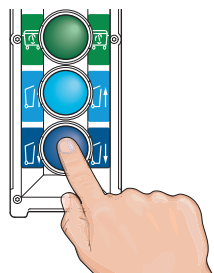
The system will need to be reset to allow the lifting chair to be raised or lowered which ever is appropriate to release the person.

An understanding of the resetting procedure of the compactor body will be required of the operators.

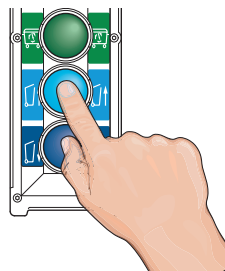
In such cases, proceed as follows:



- **Reset the emergency stop button** by pulling it out. The buzzer in the cabin stops.



- Press the dark blue DOWN button to allow the lifting chair to lower or the light blue UP button to allow the lifting chair to raise.



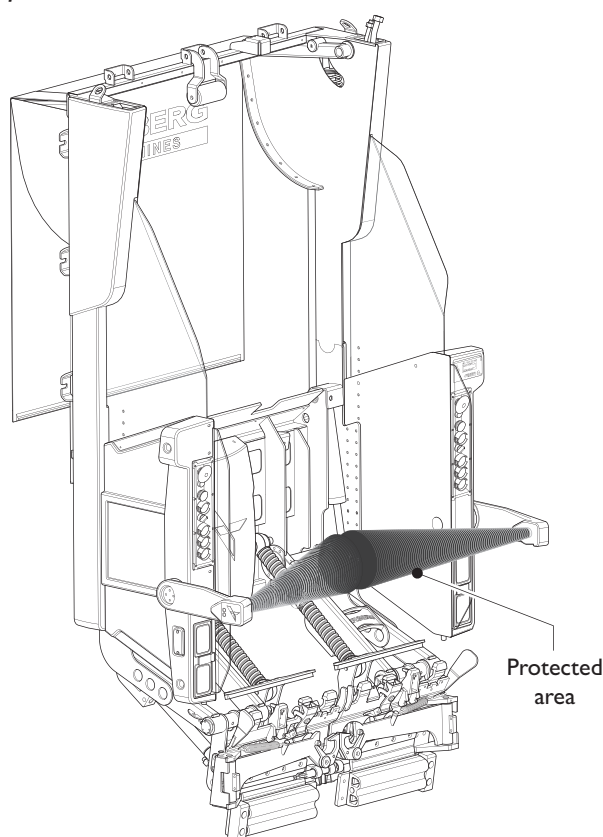
2.5 Underwalk protection (Rear Protection Device)

To comply with European Standard EN 1501-5, all automatic and semi-automatic bin lift systems are equipped with an underwalk protection (RPD).

This safety provision protects persons approaching the bin lift when it is emptying automatically (or semi-automatically).

This safety provision consists of two ultrasonic sensors fitted in both safety arms. The sensors detect persons or objects coming within the protected area of the bin lift. **This occurs separately for each lifting chair.**

The underwalk protection (RPD) is therefore only active when lifting automatically (or semi-automatically) and with the safety arms in horizontal position.



In case of damage to the safety equipment, this must be repaired or replaced by original parts immediately.



Repairs to the RPD may only be carried out by qualified personnel.



Do not use defrosting fluids for accumulated snow or ice removal, this leaves a sticky layer and snow accumulates even faster. Follow the safety procedure and sweep accumulated snow **BY HAND!**

- As soon as the area under a lifted bin is entered, during automatic or semi-automatic lifting, the downward movement is stopped.
 - The **green 'automatic' light** in the button control station **flashes rapidly** when the RPD on that side of the bin lift is activated.
 - However, the automatic (or semi-automatic) loading setting will remain activated.
- Lower the chair manually using the manual push-buttons, the warning light goes out and the RPD is reset.
 - The bin lift is again ready to lift bins automatically (or semi-automatically), the green light shows a steady light again.

The sensors are checked during each automatic lifting operation. When a sensor fault is identified the automatic lifting is switched off.

- The RPD system is designed such that it is not activated by rain or snow. When refuse, snow or another object block the 'unobstructed view' of a sensor, the lifting chair will rise and then stop.
 - The green 'automatic' light will go out.
 - The Diagnostic System display will show the message **'AREA PROTECTION SENSOR FAULT'**. This indicates that the 'unobstructed view' of the sensor is being blocked, or that there is a defect in the RPD system.
 - The bin lift will still work in manual mode, even with an RPD error.

Because the RPD sensors monitor both sides of the bin lift separately, in case of a defect on one side the other will still lift automatically.

Semi-automatic function 4-wheel containers (optional)

When the bin lift is equipped with the semi-automatic function 4-wheel containers, the activation of the RPD on one of the two sides will result in the bin lift stopping in the tipping position.



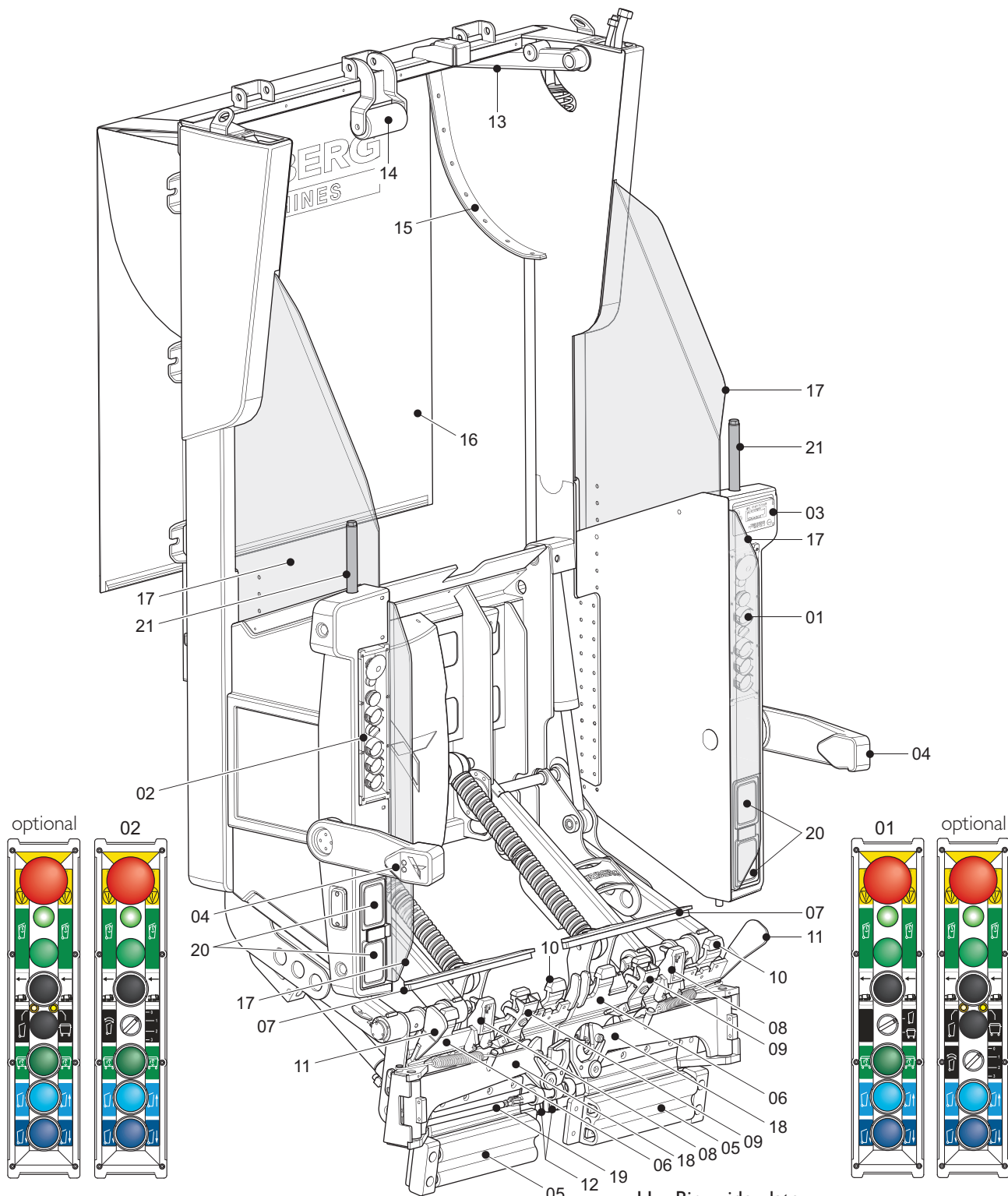
Keep a minimum distance of 2.5 meter between the bin lift and objects which are located behind the bin lift system. This is to avoid a dangerous situation in case that a bin/container falls from the pick-up comb.

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3.1 Important components

EN

3. Bin lift operation



- 01. Button control station R/H* with integrated emergency stop
- 02. Button control station L/H* with integrated emergency stop
- 03. Diagnostic System*
- 04. Safety arm
- 05. Lifting chair
- 06. Pick-up comb
- 07. Locking plate
- 08. Bin security switch
- 09. Pedal arm (cycle start switch)
- 10. Position for RFID antenna

- 11. Bin guide plate
- 12. 4-Wheel container detection
- 13. Catcherbar
- 14. Catcherbar 1100 litre containers
- 15. Guide track - lid opener
- 16. Dust curtain (tarpaulin)
- 17. Protective screen/window
- 18. DIN pick-up arms (optional)
- 19. Chair lock, mechanical (optional)
- 20. Taillights (optional)
- 21. Handle bar (optional)

* Country dependent: - The position of the control stations have been switched.
 - The Diagnostic System is mounted on the left or right hand side of the bin lift.

3.2 Warnings and tips



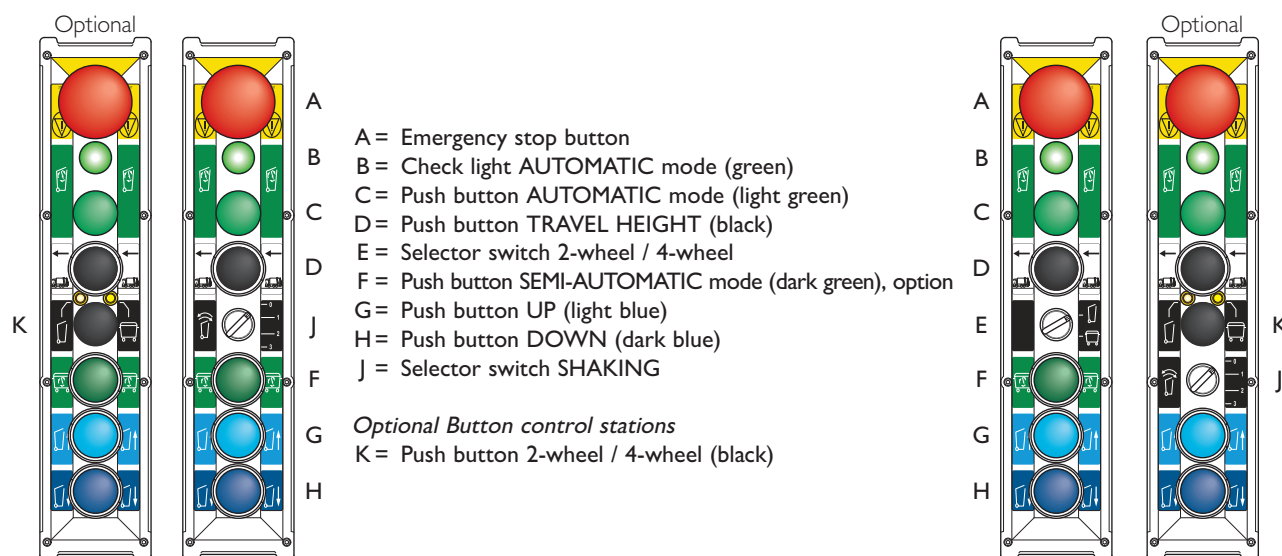
Before starting to use the bin lift system, first read the operating instructions.

- It is expressly forbidden to 'manually' assist the lifting cycle by hand.
- Lifting capacity 2-wheel bins: max. 170 kg.
Lifting capacity 4-wheel containers: max. 500 kg.
- Overweight bins/containers should be removed from the bin lift system.
- Do not remove the bin/container before the bin lift has come to a standstill.
- **Always** approach the bin lift forwards with outstretched arms, even when removing the bin/container.
- You will be working where traffic is present, do not endanger yourself or other road users. Place empty bins/containers where they do not cause any danger to other road users.
- When you are working with the bin lift system you may not wear any loose hanging clothing or jewellery.
- Loading is teamwork. Before commencing the run discuss and agree with your colleagues how to act in particular situations such as stopping, driving away, 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.
- Make sure that you are visible to the driver of the refuse collection vehicle when it is reversing.

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/containers:
 - Emergency stop buttons
 - Catcherbar
 - Shaking
 - Manual operation
 - Automatic function
 - Start sensors and 4-wheel recognition.
- **Working footboards (optional)**
Check the operation and mounting of the footboards.




3.4 Manual loading with the pick-up comb

3.4.1 2-wheel bins;

capacity 80 to 360 litres
according to EN 840-1

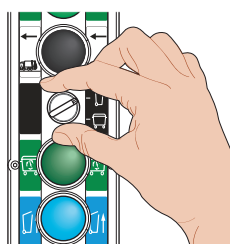


 For manual loading, the safety arms (04) do not need to be folded down.

 The optional DIN pick-up arms (18) must be folded in.

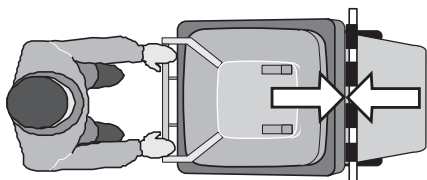
1) Switch on the refuse collection vehicle's compactor body.

2) Select 2-wheel bins:



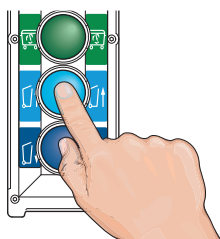
Set the rotary switch (E) to 2-wheel bins.
[Or press the black button (K), this can be done on both button control stations.
The left-hand LED next to the 2-wheel bin should light up.] *

3) Roll the bin against and over the pick-up comb (06).



Because in manual operation the bin security switch is deactivated, great care must be taken that the bin is located correctly on the pick-up comb.

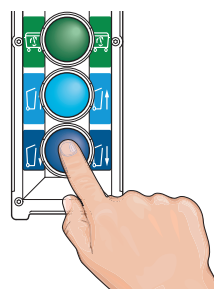
4) Empty the bin:



Press the light blue UP button (G), on the side of the lifting chair selected.
The bin will be lifted to the tipping position and emptied.

If any refuse remains stuck in the bin, you can give it an extra shake by keeping the UP button pressed.

5) Remove the bin:



- Press the dark blue DOWN button (H).
The bin lowers to the ground.
- Pull the bin out of the bin lift as soon as the wheels touch the ground.

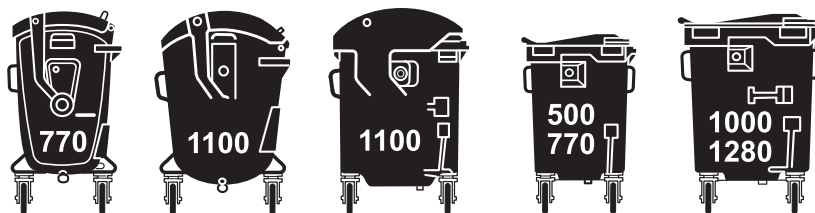


Only give an extra shake if there is a need for this. Shaking takes time and causes extra noise for the surrounding area.

[] * This text applies to the optional button control stations. See 'Important components' at the start of this chapter.

3.4 Manual loading with the pick-up comb (continued)

- 3.4.2 4-wheel containers;
with ROLL top;
capacity 770-1100 litres
- with FLAT lid;
capacity 500 to 1280 litres




The bin lift may be optionally fitted with automatic 4-wheel container recognition, so that when a 4-wheel container is driven up against the lifting chairs, the bin lift will automatically switch to 4-wheel containers. This is an ideal option if a combination of many 2-wheel bins and 4-wheel containers needs to be collected.

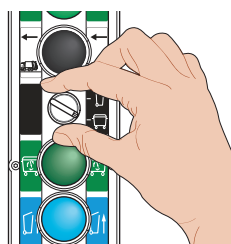
 For manual loading, the safety arms (04) do not need to be folded down.

 The optional DIN pick-up arms (18) must be folded in.

1) Switch on the refuse collection vehicle's compactor body.


2) Select 4-wheel containers:

 When the 4-wheel mode is selected, the bin lift will start to move!

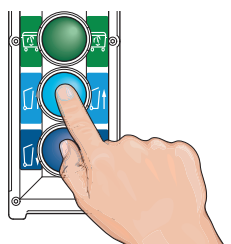


Set the rotary switch (E) to 4-wheel containers.
[Or press the black button (K), this can be done on both button control stations.
The right-hand LED next to the 4-wheel container should light up.]*
Both the lifting chairs will go to the correct height for loading 4-wheel containers.

3) Roll the container against and over the pick-up combs (06).


 Because in manual operation the container security switch is deactivated, great care must be taken that the container is located correctly on the pick-up combs.

4) Empty the bin:

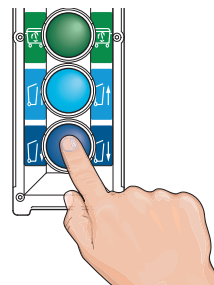


Press the light blue UP button (G), on one of the two button control stations.
The container will be lifted to the tipping position and emptied.

If any refuse remains stuck in the container, you can give it an extra shake by keeping the UP button pressed.

 Only give an extra shake if there is a need for this. Shaking takes time and causes extra noise for the surrounding area.

5) Remove the bin:



- Press the dark blue DOWN button (H).
The container lowers to the ground.
- Pull the container out of the bin lift as soon as the wheels touch the ground.

[] * This text applies to the optional button control stations. See 'Important components' at the start of this chapter.

3.5 Automatic loading with the pick-up comb

2-wheel bins;

capacity 80 to 360 litres
according to EN 840-1



This bin lift has not been designed for throwing in loose refuse. Should you decide to load loose refuse, bags or boxes, then ALWAYS SWITCH the AUTOMATIC function OFF. Always also do this when removing refuse from the lifting chairs.

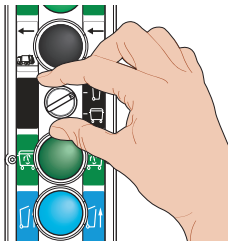


The optional DIN pick-up arms (18) must be folded in.

1) Switch on the refuse collection vehicle's compactor body.

2) Fold both safety arms (04) down (horizontal).

3) Select 2-wheel bins:

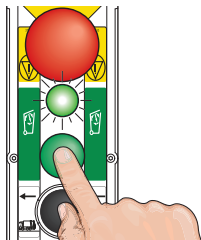


Set the rotary switch (E) to 2-wheel containers.

[Or press the black button (K), this can be done on both button control stations.

The left-hand LED next to the 2-wheel bin should light up.] *

4) Switch on the automatic function:



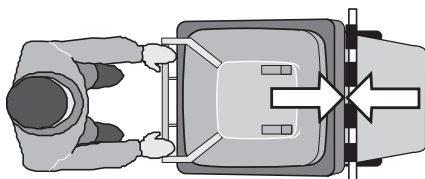
Press the light green automatic button (C).

The green check light should light up.

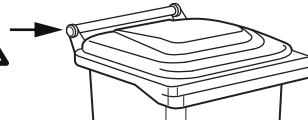


The automatic function must be switched on for each side.

5) Roll the bin against and over the pick-up comb (06).



Prevent clothes from getting caught behind the handle.
Roll the bin up against the bin lift with outstretched arms!



- Let the bin go as soon as it is lifted.
The container is lifted to the tipping position, is emptied and returns to the original position.
- Pull the bin out of the bin lift as soon as the wheels touch the ground.

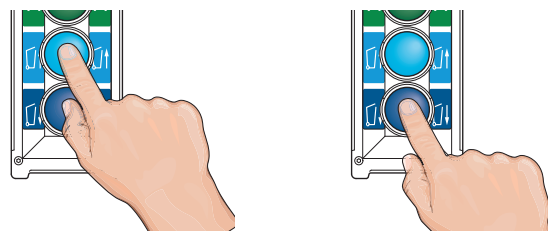


When the bin is not located correctly on the pick-up comb and as a result the bin security switch is not pressed, the upward movement is interrupted and the bin descends to the bottom position. When the lifting movement is interrupted, in spite of the fact that the bin is located correctly on the pick-up comb, you must check the bin for damage.



After emptying a 240 litre bin the pick-up comb will be in too high a position with respect to an 80 / 120 litre bin. By moving the 80 / 120 litre bin briefly before the start sensor the lifting chair will automatically descend to the right height.

- You can interrupt the automatic loading cycle by pressing the UP or DOWN buttons.
The green check light will flash to indicate that the automatic loading cycle has been interrupted.



In certain circumstances it may happen that a bin that has just been emptied is automatically picked up again. Press the DOWN button if this is not wanted to cancel the cycle!

When the lifting chair is in the start position again, the green check light will continue to light up and automatic bin emptying can be resumed.

Shake function (Green waste)

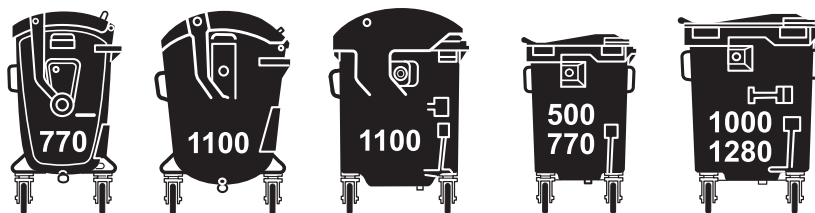
If refuse remains stuck in the bin, you can use the shake function. See page 20.

[] * This text applies to the optional button control stations. See 'Important components' at the start of this chapter.

3.6 Semi-automatic loading with the pick-up comb

4-wheel containers;
with **ROLL** top;
capacity 770-1100 litres

with **FLAT** lid;
capacity 500 to 1280 litres



The bin lift can optionally be fitted with a semi-automatic function for 4-wheel containers.



The semi-automatic function is only possible when 4-wheel containers are lifted with the pick-up comb.



The optional DIN pick-up arms (18) must be folded in.



This bin lift has not been designed for throwing in loose refuse. Should you decide to load loose refuse, bags or boxes, then ALWAYS SWITCH the AUTOMATIC function OFF. Always also do this when removing refuse from the lifting chairs.

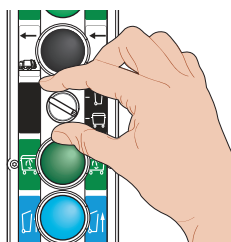
1) Switch on the refuse collection vehicle's compactor body.

2) Fold both safety arms (04) down (horizontal).

3) Select 4-wheel containers:



When the 4-wheel mode is selected, the bin lift will start to move!



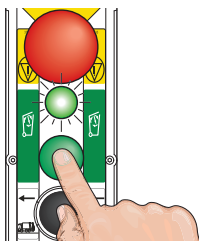
Set the rotary switch (E) to 4-wheel containers.

[Or press the black button (K), this can be done on both button control stations.

The right-hand LED next to the 4-wheel container should light up.]*

* Both the lifting chairs will go to the correct height for loading 4-wheel containers.

4) Switch on the automatic function:



Press the light green automatic button (C).

The green check light should light up.

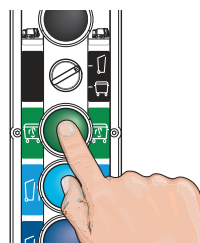
5) Roll the container against and over the pick-up combs (06).

- The container is automatically lifted about 10 cm.



Make sure that the container is located correctly on the pick-up combs.

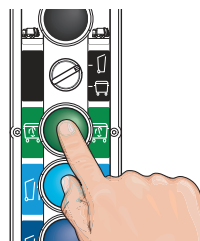
6) Press the dark green semi-automatic button (F).



- The container will be lifted to the tipping position and emptied.

- The container will lower to the start position, approx. 10 cm above the ground.

7) Allow the container to lower further:



- Press the dark green semi-automatic button (F) again.


The container lowers to the ground.


- Pull the container out of the bin lift as soon as the wheels touch the ground.


[] * This text applies to the optional button control stations. See 'Important components' at the start of this chapter.


3.7 Loading with the pick-up comb using SMT: Single Man Trade

Single man trade is a (semi) automatic function that enables one person to empty 4-wheel containers. If the function is activated, a 4-wheel container will be automatically lifted about 10 cm as soon as it is wheeled against and over the lifting chairs.

 For this function, the safety arms (04) do not need to be folded down.


 The optional DIN pick-up arms (18) must be folded in.

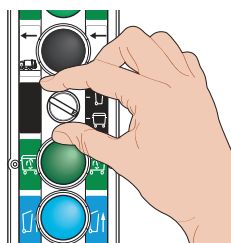
 Single man trade is only possible when 4-wheel containers are lifted with the pick-up comb.

 Emptying 4-wheel containers via DIN-arms is not possible with the single man trade function, because the container security switches do not operate then.

1) Switch on the refuse collection vehicle's compactor body.

2) Select 4-wheel containers:

 When the 4-wheel mode is selected, the bin lift will start to move!



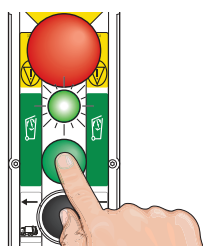
Set the rotary switch (E) to 4-wheel containers.

[Or press the black button (K), this can be done on both button control stations.]

The right-hand LED next to the 4-wheel container should light up.* [Or wheel a 4-wheel container over the pick-up combs the bin lift will automatically switch to 4-wheel.]*

Both the lifting chairs will go to the correct height for loading 4-wheel containers.

3) Switch on the automatic function:



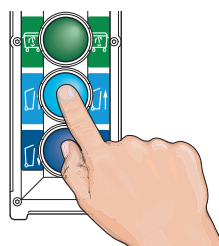
Press the light green automatic button (C).

The green check light should light up.

4) Roll the container against and over the pick-up combs (06).

- The container is automatically lifted about 10 cm.
- The bin lift will now wait until an UP/DOWN button is activated in the left or right button control station.

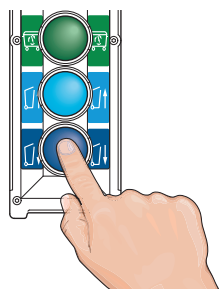
5) Empty the container:



Press the light blue UP button (G), on one of the two button control stations.

The container will be lifted to the tipping position and emptied.

6) Remove the container:



- Press the dark blue DOWN button (H).

The container lowers to the ground.

- Pull the container out of the bin lift as soon as the wheels touch the ground.



When after lifting with single man trade, you lift 2-wheel bins, the single man trade function is remembered.

As soon as you offer a 4-wheel container again single man trade is immediately reactivated!

[] * This text applies to the optional button control stations. See 'Important components' at the start of this chapter.

3.8 Loading with the DIN pick-up arms (optional)

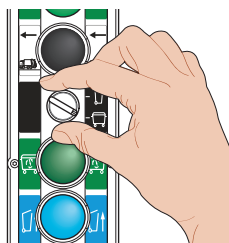
Optionally the OmniDEKA can be fitted with DIN pick-up arms.



When loading with the DIN pick-up arms, the safety arms (04) do not need to be folded down (horizontally).

1) Switch on the refuse collection vehicle's compactor body.

2) Select 4-wheel containers:



Set the rotary switch (E) to 4-wheel containers.

[Or press the black button (K), this can be done on both button control stations.

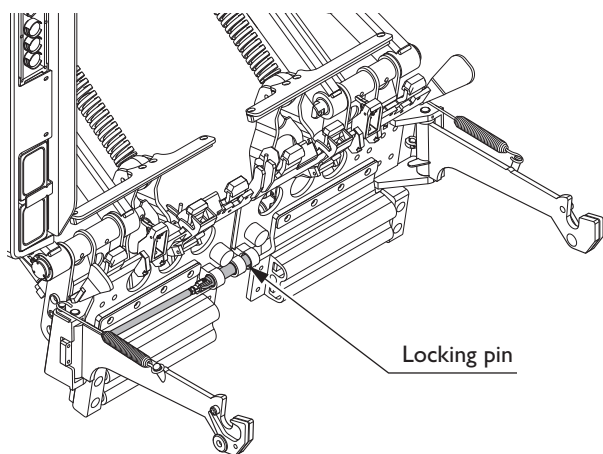
The right-hand LED next to the 4-wheel container should light up.* Both the lifting chairs will go to the correct height for loading 4-wheel containers.



When opening the DIN pick-up arms, the chairs must be at the same height, otherwise the locking pin will not engage.

3) Fold out both DIN pick-up arms (18).

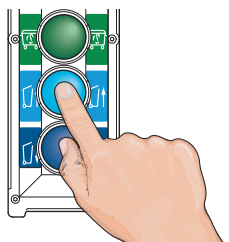
When opening the left-hand pick-up arm, the two chairs are coupled to each other via a mechanical locking pin.



Locking pin

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

5) Bring the pick-up heads to height:

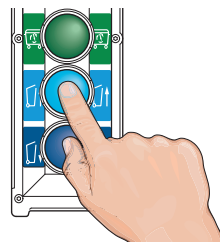


Using the light blue UP button (G), lift both pick-up arms until the pick-up heads are at the same height as the container's trunnions.



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

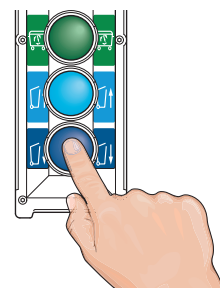
6) Empty the container:



Press the light blue UP button (G), on one of the two button control stations.

The container will be lifted to the tipping position and emptied.

7) Remove the container:



- Press the dark blue DOWN button (H). The container lowers to the ground.

- Check that the container's trunnions are released from the pick-up heads of the arms.

- Roll the container out of the bin lift.

The trunnions jam in the pick-up heads.



The pick-up head's lock of the DIN arms may remain closed when placing a container back on the ground, for instance if the refuse collection vehicle is pointing downwards on a slope.

In this case act as follows:

- Using the light blue UP button (G), lift the container a little until the wheels are free from the ground.
- Pull the container backwards so that the container's trunnions are brought into the lowest position of the pick-up heads.
- Then lower the container.



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

[] * This text applies to the optional button control stations. See 'Important components' at the start of this chapter.

3.9 Shake function 2W bins (Green waste)

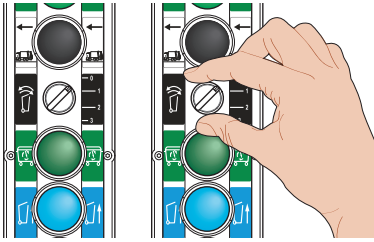
If refuse (Green waste) remains stuck in the bin, you can use the shake function. This function is only available with automatic loading.

The standard setting is 0x, 1x, 2x or 3x shaking. The number of shakes can be adjusted to client's requirements.

See chapter 3 - Diagnostic System, par. 3.11.5 - Settings: Shaking.

- Set selector switch (J) to the required number of shakes.

The standard setting is 0x, 1x, 2x or 3x shaking.



Only give an extra shake if there is a need for this. Shaking takes time and causes extra noise for the surrounding area.



This shake function is only available with **automatic loading**. With manual loading, you can apply extra shake by keeping the UP button pressed.

3.10 Transport and travel positions

TRANSPORT position

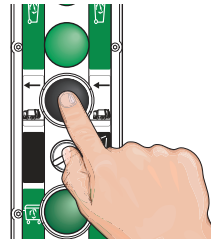
For sufficient bottom clearance, the lifting chairs must be set to the highest position with the optional pick-up arms folded in and the optional footboards folded up when:

- Driving to and from a collection area.
- Driving over large obstacles or over uneven terrain.
- Parking.

TRAVEL HEIGHT position

To avoid damage to the bin lift, the OmniDEKA is fitted standard with the travel height function.

When this function is activated, both lifting chairs go to the travel height.



Press the black button (D), on one of the two button control stations.

Both lifting chairs go to the travel height.

Reversing

When reversing of the refuse collection vehicle is activated, the bin lift will automatically lift both lifting chairs to a manoeuvring height. If automatic lifting is not done, for instance with a deactivated PTO, a warning signal will sound in the cabin after a few seconds to warn the driver that the bin lift is not at the travel height.

When somebody is standing on the footboard:

- Reversing is not allowed.
- The refuse collection vehicle may run no faster than 30 km/h.
- The compactor may not be running automatically.

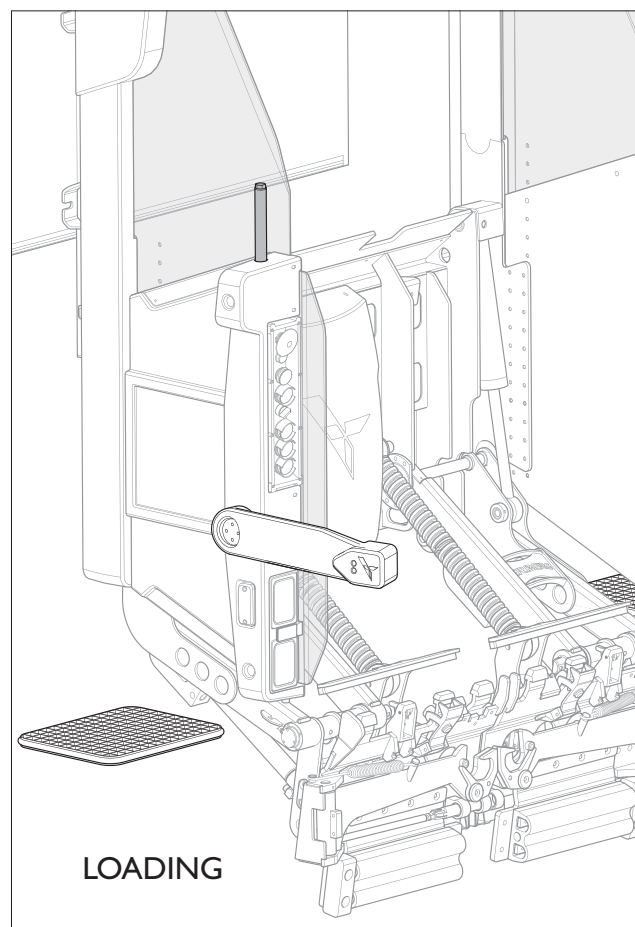
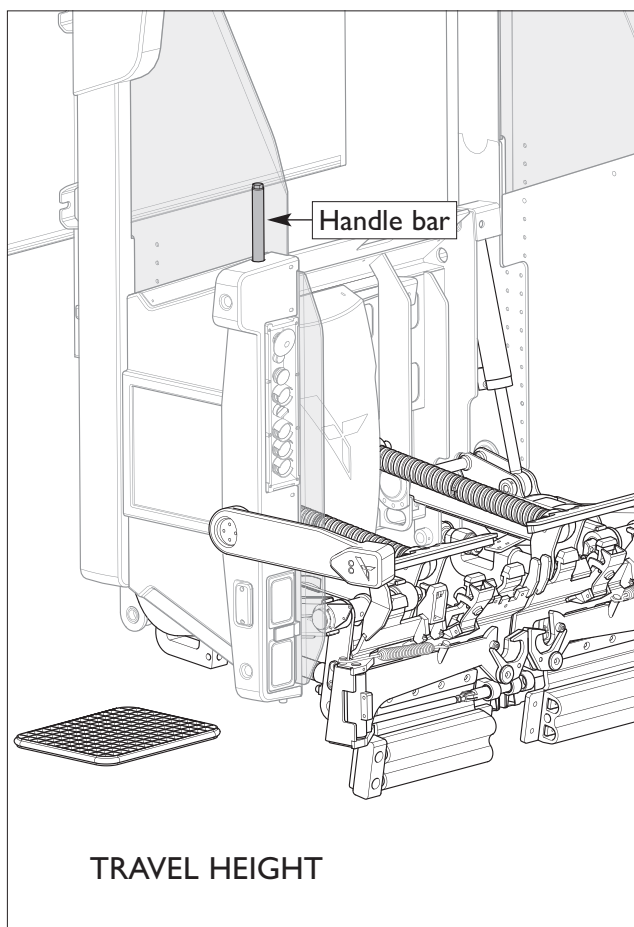
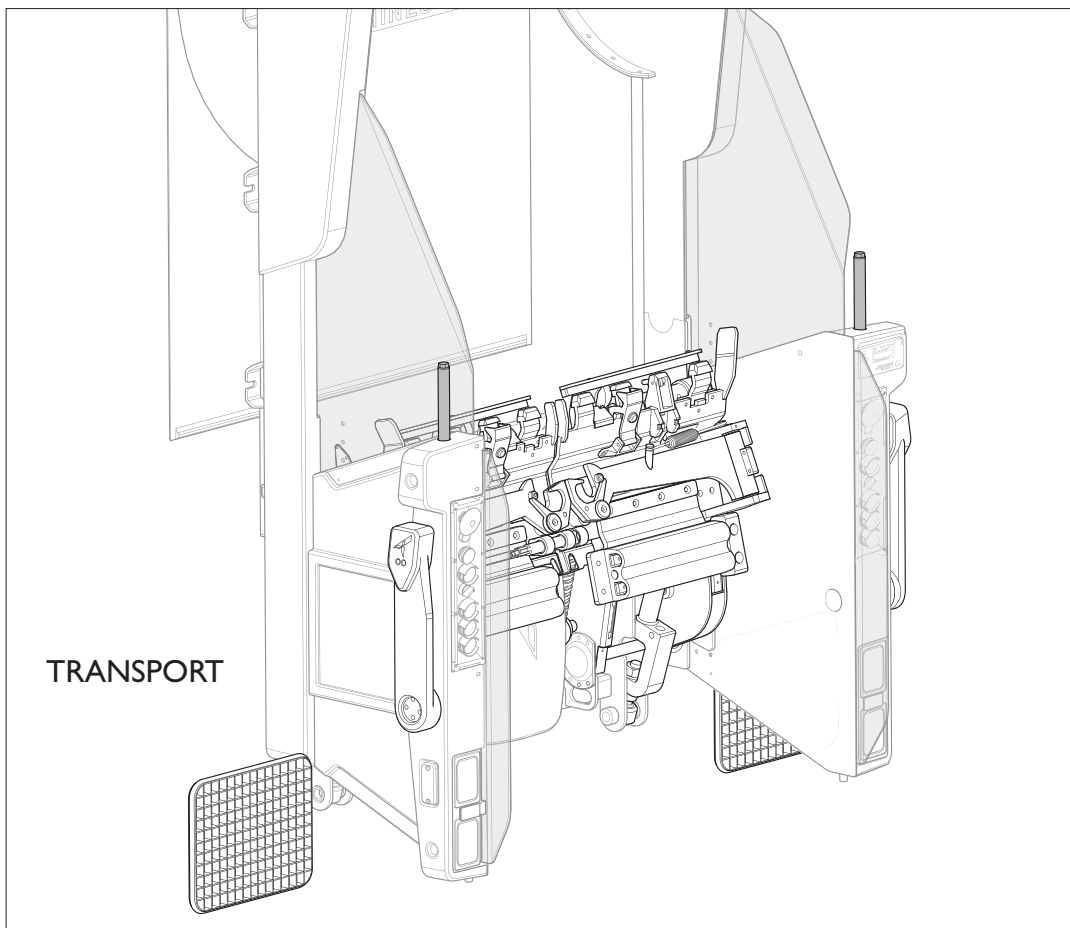


The bin lift may never be operated when the refuse collection vehicle is travelling along and also not when reverse gear is engaged.



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

3.10 Transport and travel positions (continued)



3.11 Diagnostic System

The Diagnostic System is mounted on the left or right hand side of the bin lift, depending on the country. All actions made by the bin lift are monitored by the SBC-I0 processor. A number of actions as well as faults are stored in the 'historical alarm list' that can store up to 200 messages. The alarm list can be consulted during maintenance and when rectifying faults, see also chapter 4.6 'Trouble shooting' - section 'Alarm messages'.

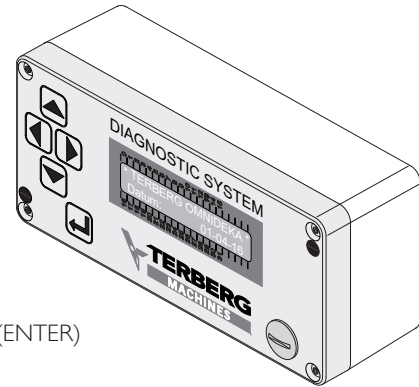
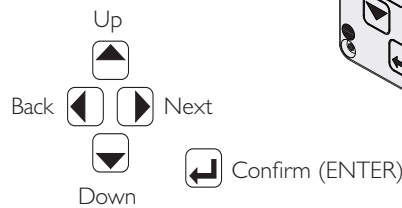
As an option the program can be extended with a 'bin counter program', with which it is possible to count the number of 2-wheel bins and 4-wheel containers emptied.

The program comprises 5 levels:

3.11.1 Home screen / messages

3.11.2 Monitor

- Position of L/H and R/H chairs
- Digital inputs
- Analogue inputs
- Digital outputs
- Analogue outputs
- Voltage of electrical system
- Pressure of hydraulic system



3.11.3 Bin counter (optional)

3.11.4 Configuration*

- *Machine number* (code **I001**); This is a unique number, for ordering parts and/or for questions about the bin lift you must always give this number as reference.
- *Fitting date* (code **I002**); This is the date on which the bin lift was fitted on the refuse collection vehicle.
- *End of warranty date* (code **I003**); This is the end date of the warranty period.
- *Historical alarms* (code **I004**); A number of actions as well as faults are stored in the 'historical alarm list', this can store up to 200 messages. This list can be consulted during maintenance and when rectifying faults, see also chapter 4.6 'Trouble shooting' - section 'Alarm messages'.
- *Time and date* (code **I005**); Here you will find the system date and GMT time (no summer- or wintertime is specified).

3.11.5 Settings

- *Compaction start options*; 2-wheel bins / 4-wheel containers / number of bins/containers before packer start.
- *Bin dump timer / Wait after dump*.
- *Single Man Trade (SMT)*; Standby position / lift height.
- *Raise lifting chairs during reverse* (Travel height).
- *Automatically change over* from 2- to 4-wheel and/or from 4- to 2-wheel bins/containers.
- *Shaking*; Maximum number of shakes via manual operation.
Shake frequency.
Activate or deactivate the variable shake mode.
Setting the 5 shake timers.
Restoring the Terberg default shake timer settings.
Shake switch positions and number of shakes.
- *N6 comb sensor*; setting time delay.
- *2-Wheel bins*; Up- and down speed.

* When you key in an unknown code in the configuration program, the following text will be shown:

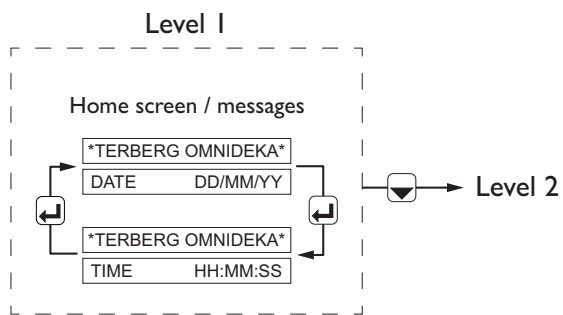
Access to the program has now been blocked for 2 minutes.

After these 2 minutes the program returns to the data entry screen and you can continue.

NO ACCESS !

3.11.1 Diagnostic System - level 1

After switching ON the bin lift system you go automatically to Level 1: Home screen / messages.

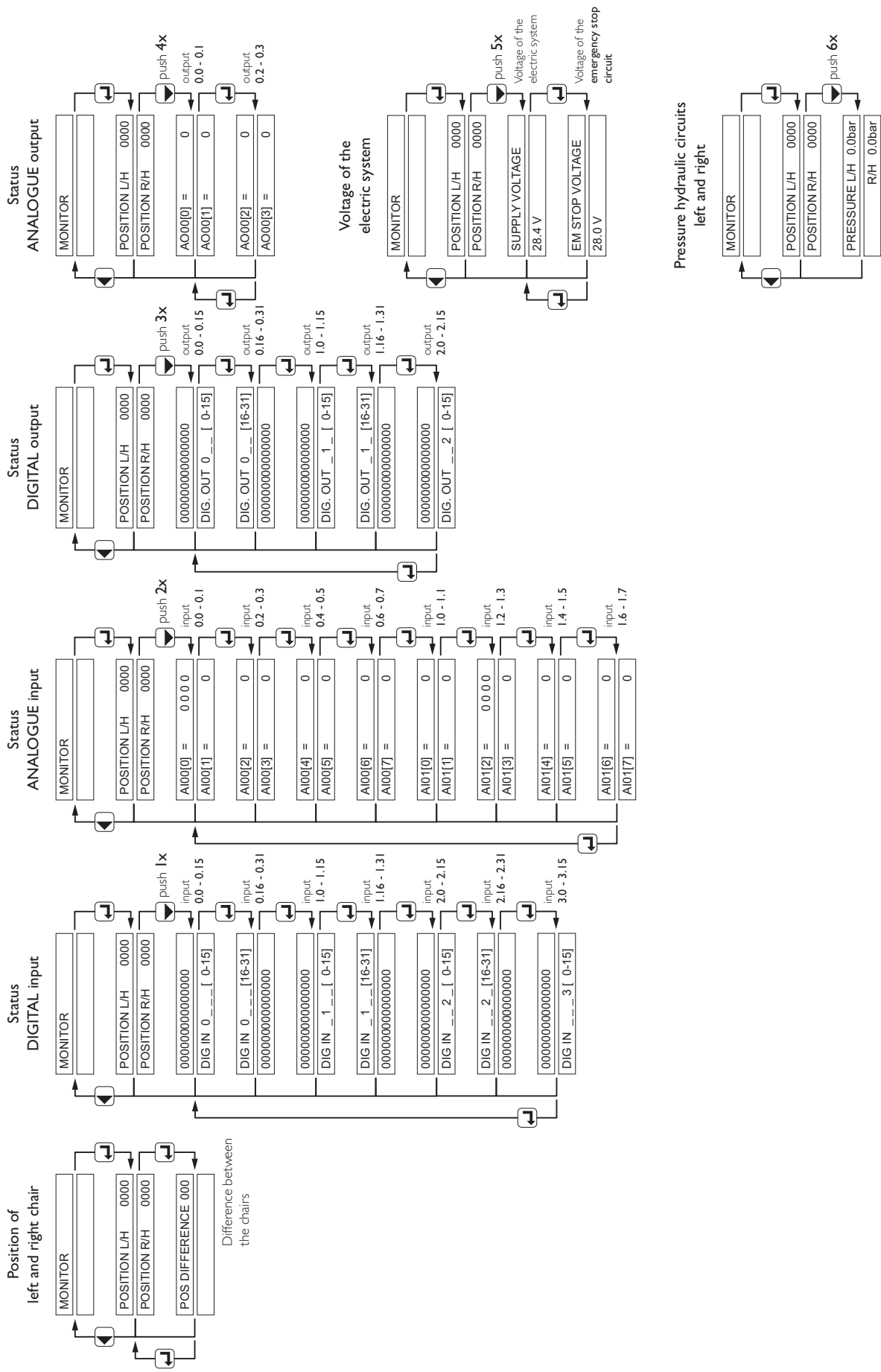


See next pages for the levels 2, 3, 4 and 5.

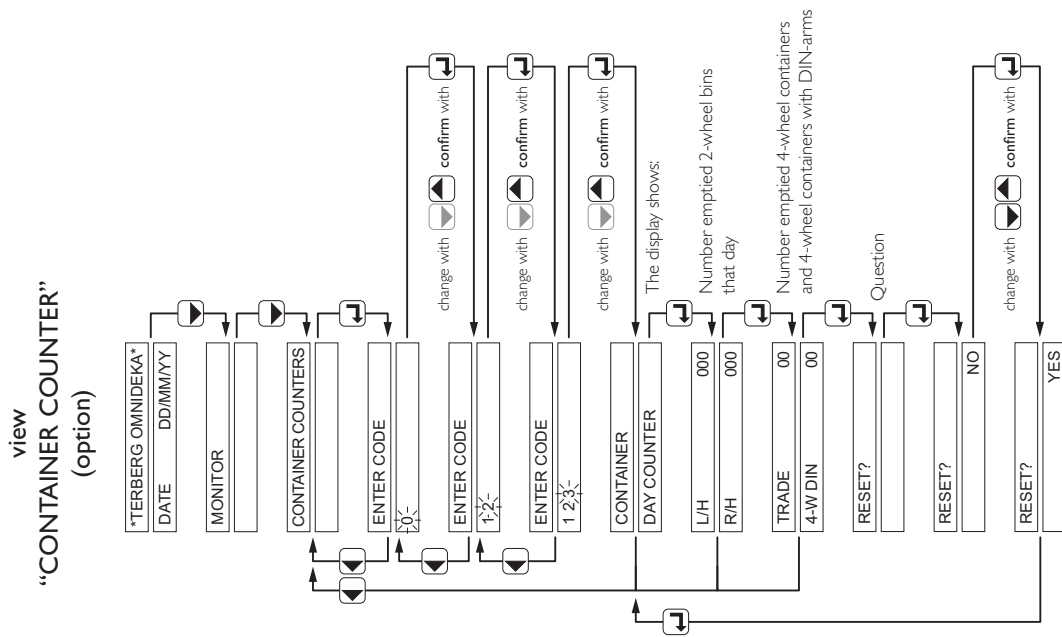
3.11.2 Diagnostic System - level 2

Position of chairs, Inputs and Outputs, Voltage electrical system, Pressure hydraulic system

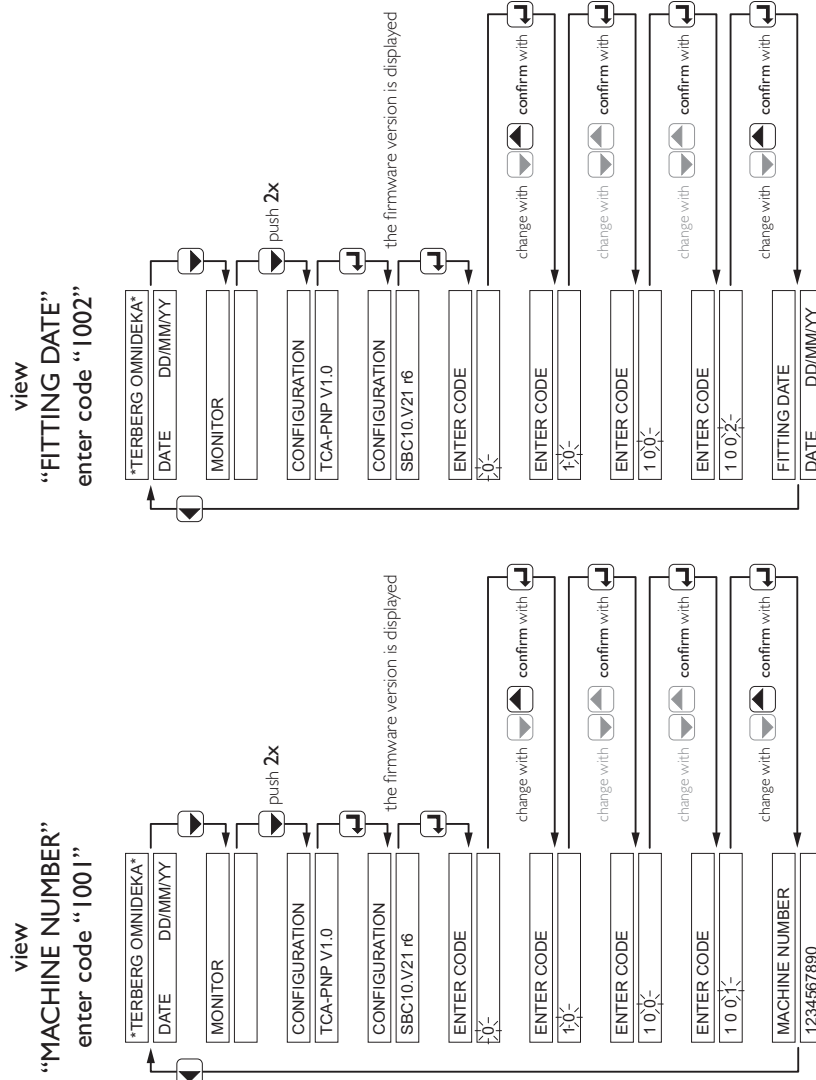
Level 2



Level 3 - Container counter



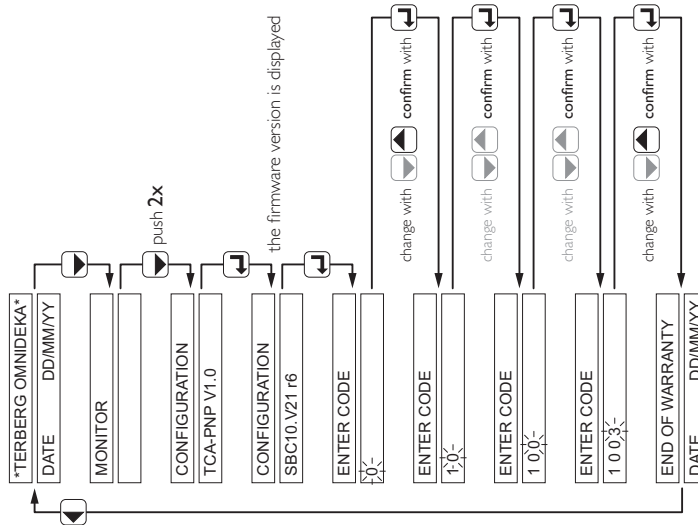
Level 4 - Configuration



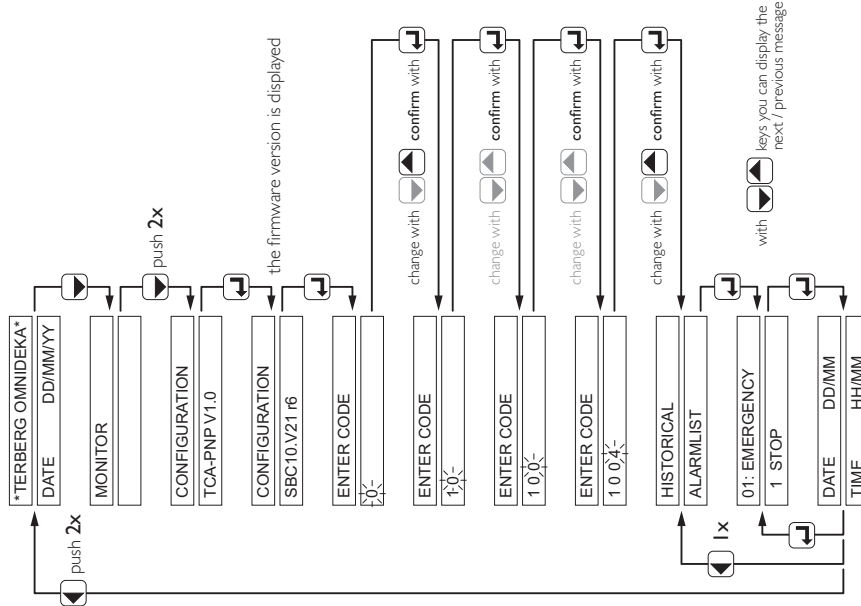
3.11.4 Diagnostic System - level 4 (continued)
End of warranty date, Historical alarms, Time and date

Level 4 - Configuration (continued)

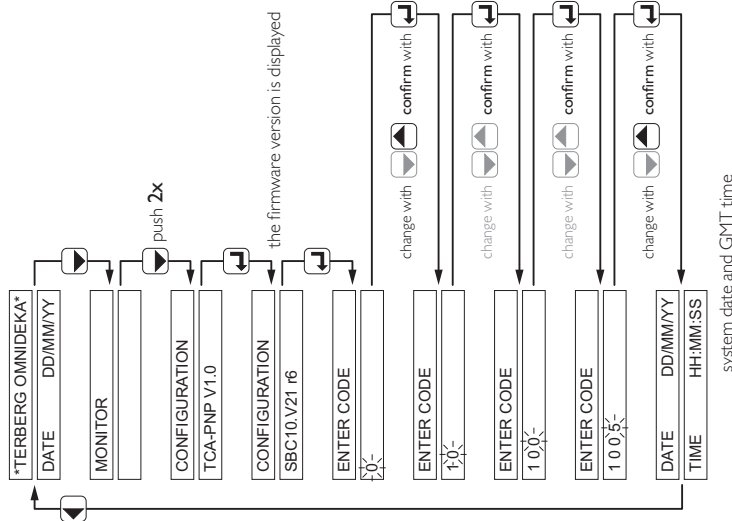
view
“END OF WARRANTY DATE”
enter code “1003”



view
“HISTORICAL ALARM LIST”
enter code “1004”



view
“TIME and DATE”
enter code “1005”

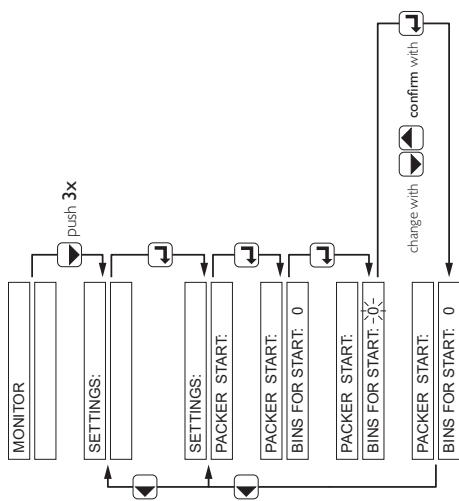


3.11.5 Diagnostic System - Settings

Compaction start options, Bin dump timer / Wait after dump, Single Man Trade (SMT) / Lift height

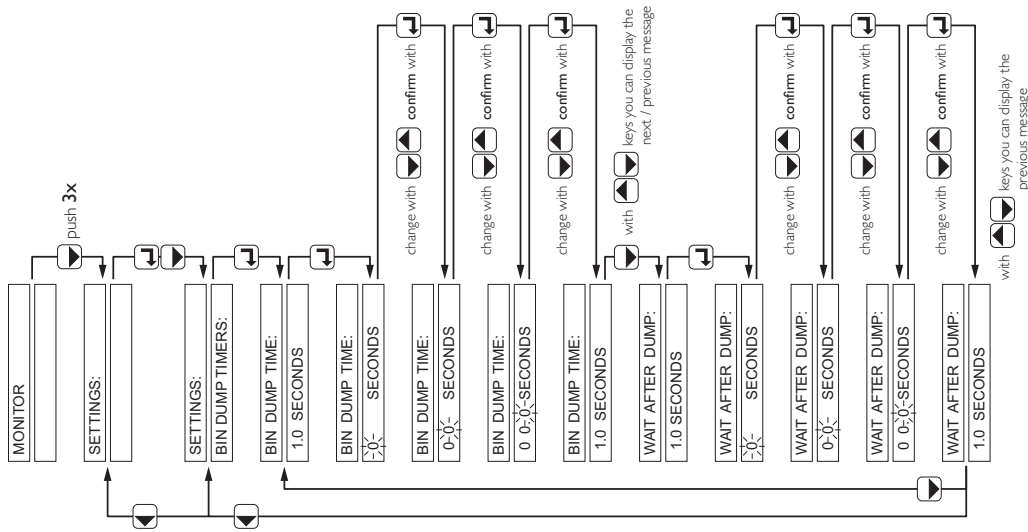
SETTINGS

Compaction start options: 2-wheel bins
4-wheel containers
Number of bins/containers before packer start



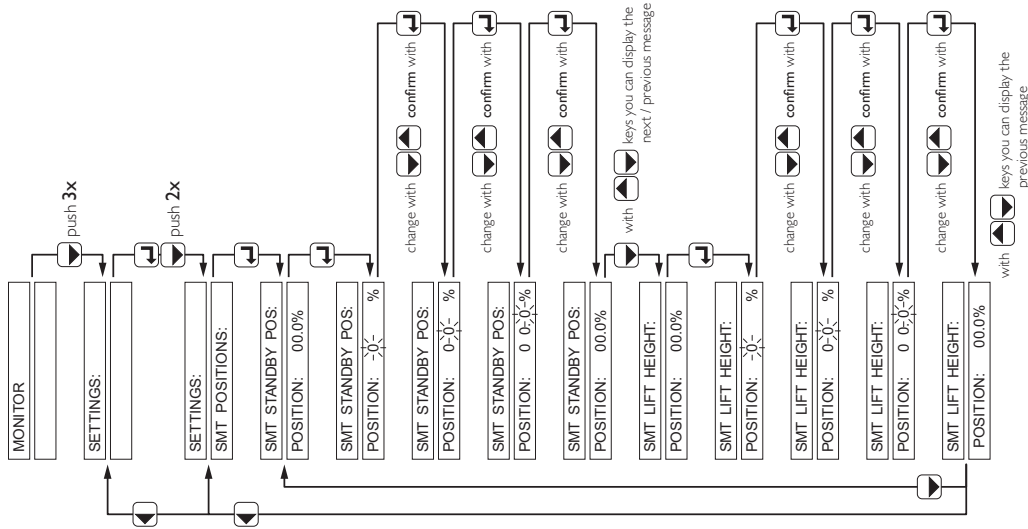
When exceeding the max. or min. value the following message appears:
! VALUE OUT RANGE !
Enter value 999 for factory settings.

Bin DUMP TIMER
WAIT after DUMP



When exceeding the max. or min. value the following message appears:
! VALUE OUT RANGE !
Enter value 999 for factory settings.

Single Man Trade (SMT): Standby position
Lift height



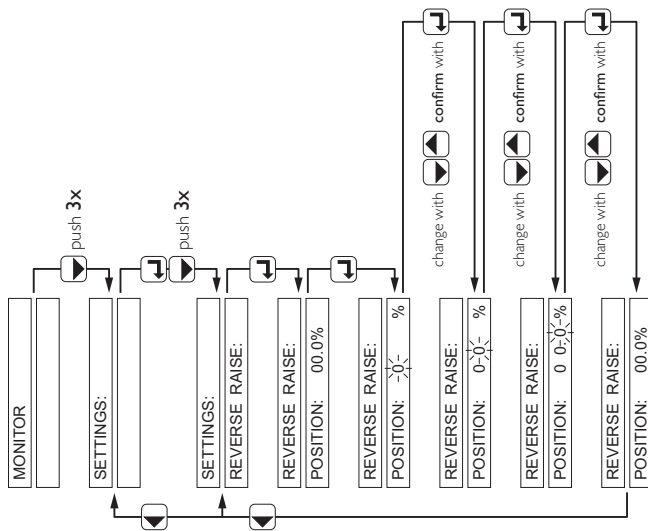
When exceeding the max. or min. value the following message appears:
! VALUE OUT RANGE !
Enter value 999 for factory settings.

3. Bin lift operation

EN

SETTINGS

Raise lifting chairs during reverse (Travel height)

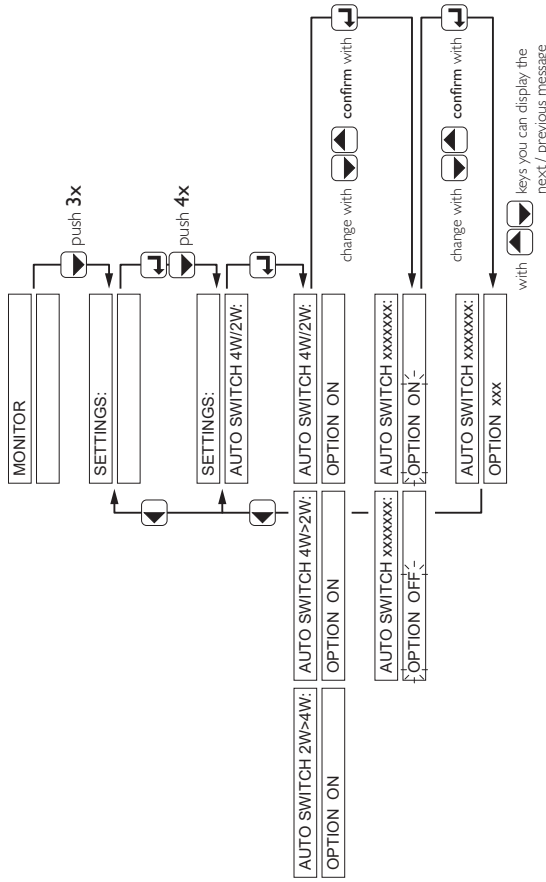


When exceeding the max. or min. value the following message appears:

! VALUE OUT RANGE !

Enter value 999 for factory settings.

Automatically change over from 2- to 4-wheel and/or from 4- to 2-wheel



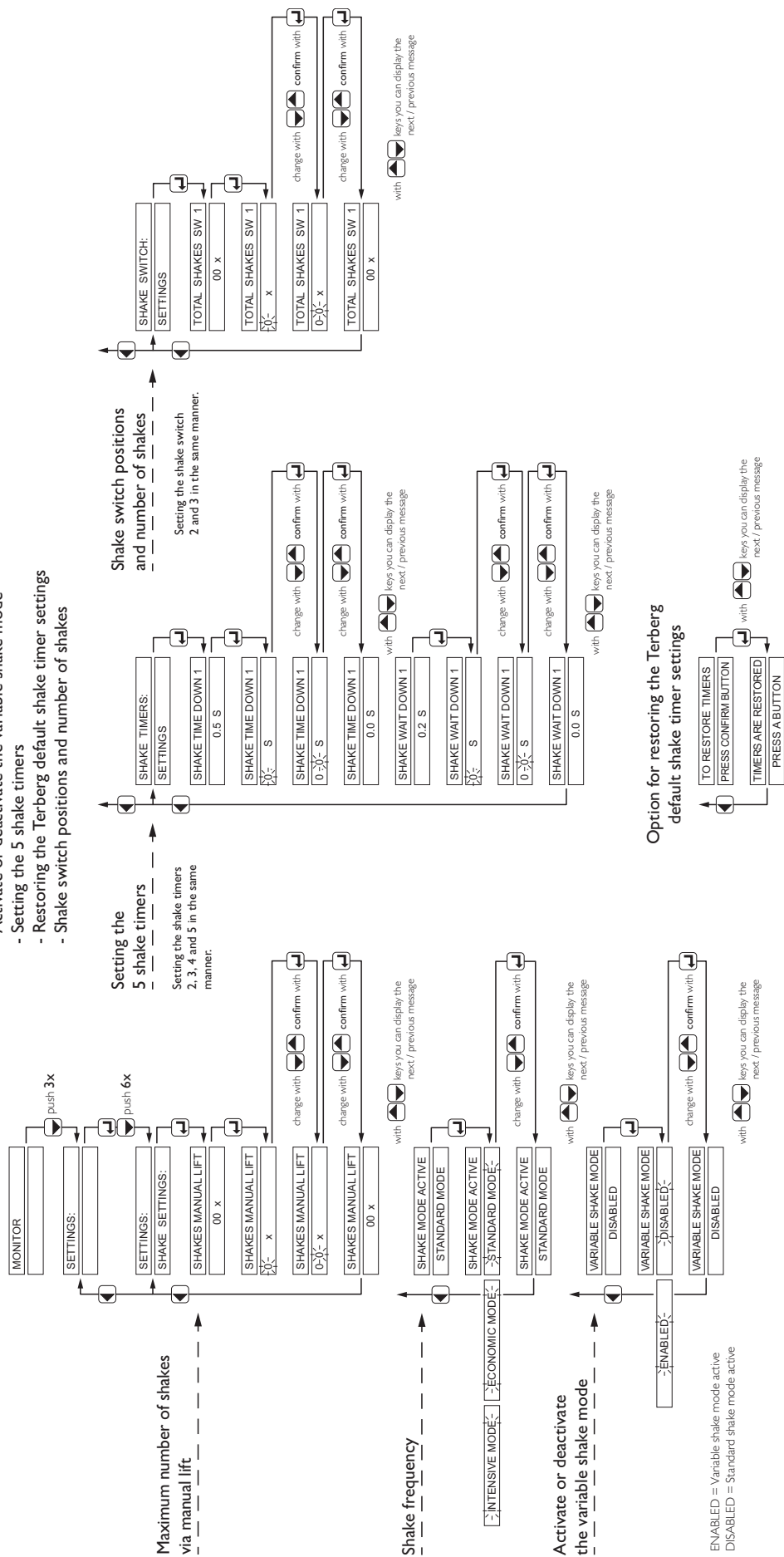
The functions '4W>2W' and '2W>4W' are not accessible if 'AUTO SWITCH 4W/2W' is not turned on (Option OFF).

with keys you can display the next / previous message

SETTINGS

SHAKE: - Maximum number of shakes via manual lift

- Shake frequency
- Activate or deactivate the variable shake mode
- Setting the 5 shake timers
- Restoring the Terberg default shake timer settings
- Shake switch positions and number of shakes



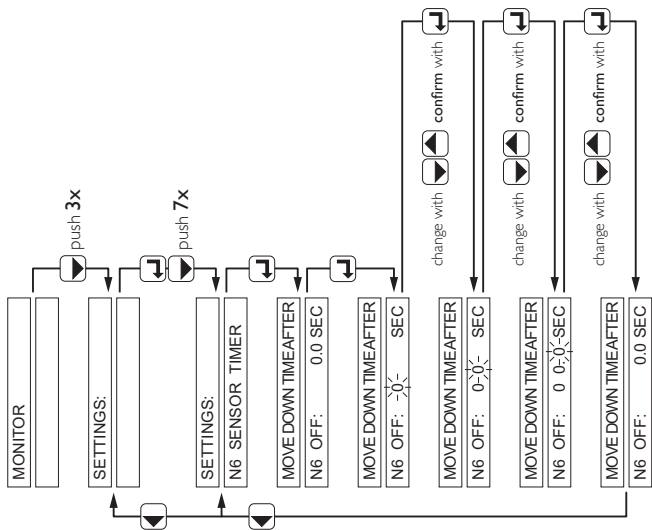
Option for restoring the Terberg default shake timer settings

ENABLED = Variable shake mode active
 DISABLED = Standard shake mode active

3.11.5 Diagnostic System - Settings
 N6 comb sensor / setting time delay, 2-Wheel bins / up and down speed

SETTINGS

N6 comb sensor SETTING TIME DELAY



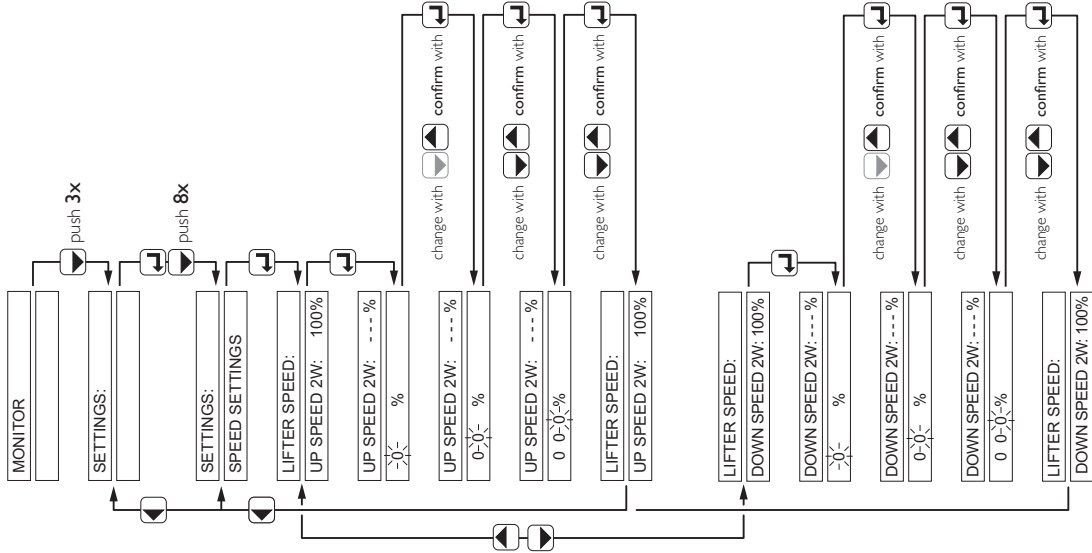
When exceeding the max. or min. value the following message appears:

! VALUE OUT RANGE !

Enter value 999 for factory settings.

When exceeding the max. or min. value the most recently set value appears.
 Max. value = 100 %
 Min. value = 50 %

2-wheel bins UP- and DOWN SPEED



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4.1 Maintenance: general and daily

General

Before starting maintenance, cleaning or repair work, the following points must be observed:

- Apply the handbrake of the refuse collection vehicle.
- Press the emergency stop button.
- When working on the lifting chairs, secure them against lowering again (hoist, props etc.).
- Under no circumstances may any of the safety provisions that are fitted be removed or changed.
- The maintenance intervals prescribed by Terberg Machines B.V. must be adhered to.
- Electrical fuses may never be bridged or replaced by a fuse with a higher value.

Daily maintenance

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



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



For your own safety, never stand under the chairs during cleaning of the bin lift!

- The system may be cleaned with a high pressure cleaner; however the following points need to be strictly adhered:
 - Do not spray directly on to electrical components, control stations or decals!
 - Keep enough distance between the spray lance and the bin lift (30-40 cm distance from component washing).
 - We strongly discourage the use of pressure cleaners with rotating or pulsating nozzles.-

When grease has been removed from moving parts by cleaning the bin lift, these points should be re-filled with grease before taking it back into service.



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

- Check the bin lift's footboards and the handle bars for damage, operation and the mounting (if applicable).
- Check that the status lights in the control stations work, replace them as soon as possible.

4.2 Maintenance: weekly

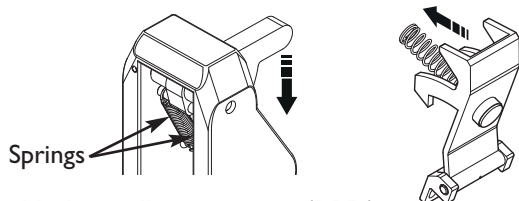
• Working of the controls

Check the working of all controls by carrying out all possible actions with the bin lift using empty bins/containers:

- Emergency stop switches
- Manual operation functions
- Automatic functions
- Catcherbar (works automatically)
- Shaking functions

• Bin security switch and mechanical pedal arm

- Check the spring action and the springs of the bin security switches and pedal arms.



• Under walk protection (RPD)

- Check the working of the safety arms and under walk protection (RPD)

• DIN pick-up arms

- Check the working of the mechanical chair lock (only present with the pick-up arms and Terberg TMDW weighing system options).
- Check that the fall down locks close in the tipping position.

• Decals

- Damaged safety and instruction decals must be immediately replaced.

• Lubricate the bin lift

The bin lift is provided with 10 greasing nipples (see fig. 4.2a).

- The 4 greasing nipples (●) for the main axles can be reached with the chairs in the tipped position. Press the emergency stop button and support the chairs safely against lowering again when working under the chairs (hoist, props etc.).

The 4 greasing nipples (○) for the lifting cylinder axles can be reached with the chairs in the lowest position. The top one via the side wall. The catcherbar mechanism is provided with 2 greasing nipples (○), position subject to change.

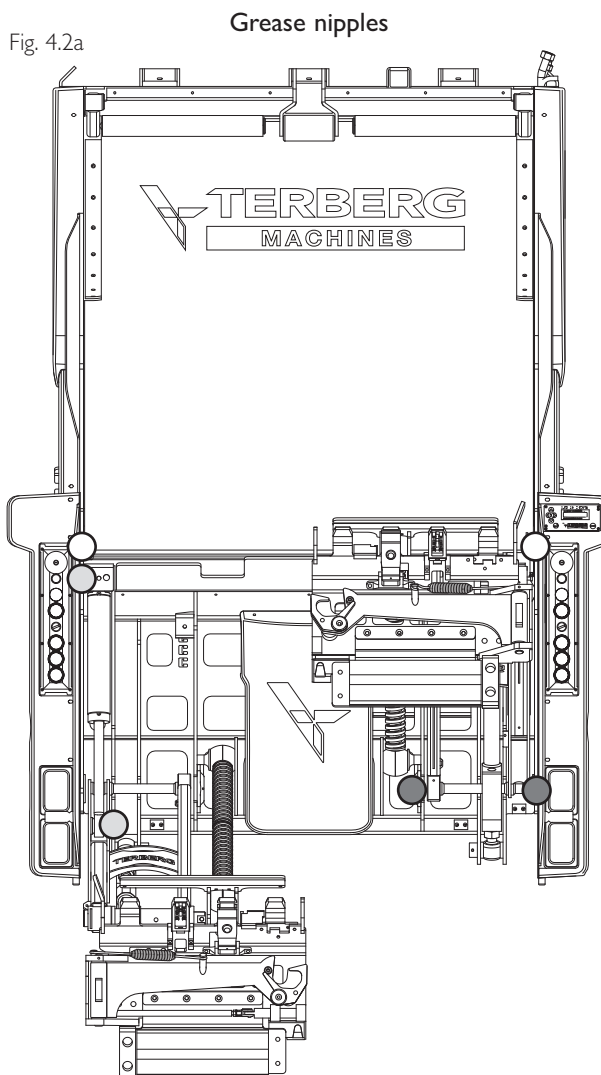
- Remove the red protective caps and clean the greasing nipples. Add grease until you can see new grease between the pivot points.
- Only use qualified acid-free grease types that do not affect the bearings, such as Texaco Multifak EP2 (or equivalent).

The OmniDEKA can be optionally fitted with a centralised greasing system. This system supplies grease to all greasing points. The central greasing point is located on the left hand side of the bin lift.

- This greasing point must be greased on a weekly base. Apply 5 strokes of grease (≥ 10 cc).

• Visual checks

- Check that the teeth of the pick-up comb are aligned correctly.
- Check the fixing and condition of rubber stops, warning edges and protective screens/windows.
- Check the dust suppression curtains (tarpaulin) for tears.
- Check the bin lift for defective parts (warped, bent or broken).
- Check for oil leaks.
- Check the wiring for any damage.



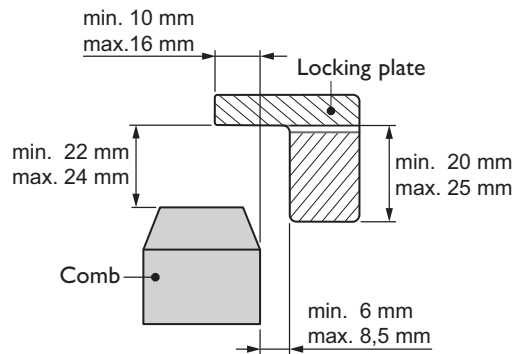
Any faults identified must be rectified before the bin lift is put into service.

4.3 Maintenance: 6-weekly

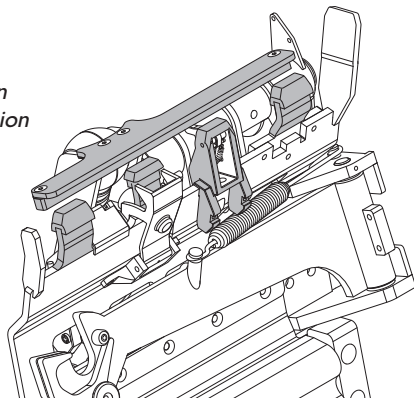
First carry out the weekly maintenance.

• Container lock

Check the clamp opening between the pick-up comb (06) and the locking plate (07), see the illustration below. This must be done with the lifting chair in the highest position. Measure between the left and right tooth and the locking plate!



Lifting chair in
HIGHEST position

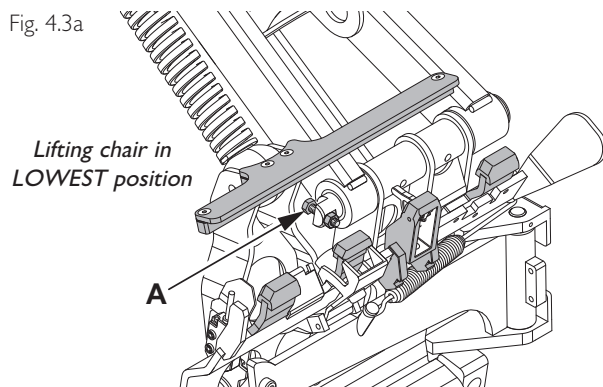


- The horizontal clamp opening can be corrected by means of adjusting bolt **A** (see fig. 4.3a).
- The vertical clamp opening can be corrected by adding or exchanging filling plates (see fig. 4.3b). These are available in 1 and 2 mm thicknesses.

The correction can best be made with the lifting chair in the lowest position.

- Set the lifting chair to the highest position again and check the clamp opening once more.

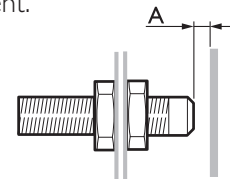
Fig. 4.3a



Lifting chair in
LOWEST position

• Proximity switches

- Check the adjustment.



M12 A: min 0.5 mm
max 1.5 mm

M18 A: min 1.0 mm
max 4.0 mm

• DIN pick-up arms (optional)

- Check the springs.
- Check the distance between the pick-up arms, at the location of the pick-up heads, when they are folded out. This must be 1265 ± 5 mm and must be centred with respect to the machine's centreline. The distance can be corrected by tightening or loosening the stop bolts.

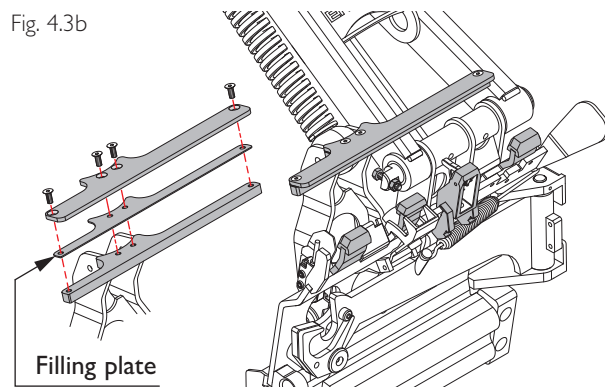
• Footboards (optional)

- Check the springs.
- The footboards can be optionally 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 put into service.

Fig. 4.3b



Filling plate

4.4 Maintenance: annual

First carry out the weekly and 6-weekly maintenance

- **Attachment points**

Tighten all the bin lift's attachment points, such as:

- Mounting bolts of the bin lift system to the refuse collection vehicle or adaptation frame (assembly frame).

The tightening torque is 200 Nm.

- Bin lift footboards (if applicable).
- Check all bolt and nut connections.

- **Check the pick-up teeth for wear.**

- **Bearing play**

Check the bin lift for excessive bearing play.

- Press the two lifting chairs axially towards each other and measure the opening (see fig. 4.4a).

Then pull the lifting chairs axially apart and measure the opening again.

The difference between these two measurements may be no more than **10 mm**.

- Grip the lifting chair with two hands and try to turn it vertically to the left (see fig. 4.4b) and determine distance **X1**. Then rotate the chair to the right and determine distance **X2**.

The sum of these two measurements may be no more than **5 mm**.

Do the same with the other lifting chair.

Fig. 4.4a

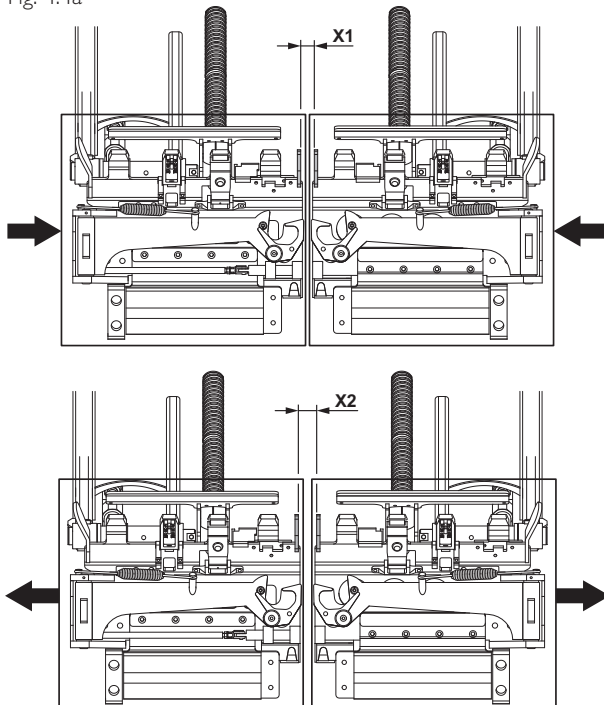
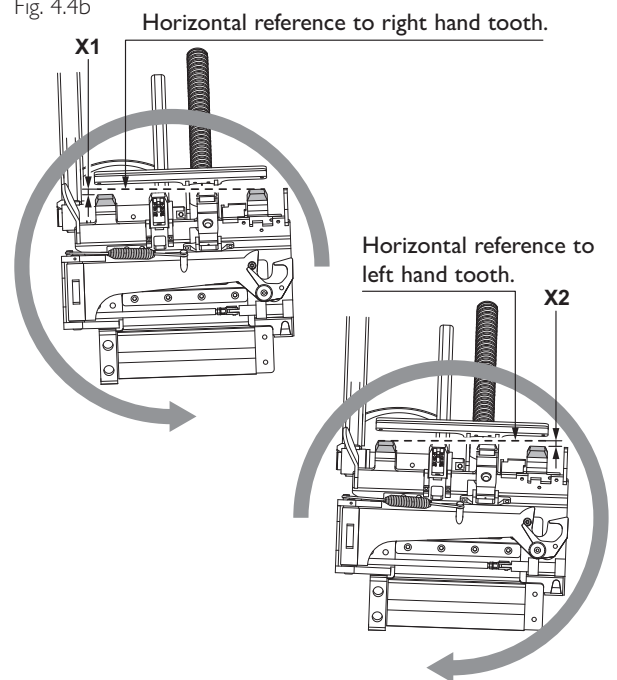


Fig. 4.4b

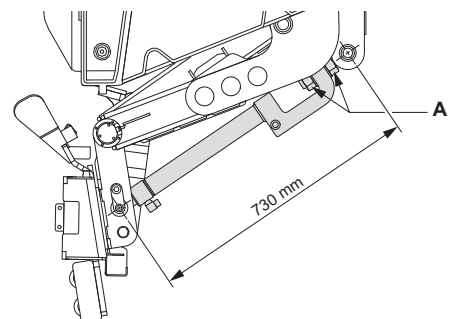


- **Pick-up comb tipping angle**

The tipping angle has been set ex-factory. If the pick-up combs do not make the same angle when in the highest position, this can be corrected by means of nuts **A** (see fig. 4.4c).

- The nominal distance between the axles, centre to centre, must be 730 mm.

Fig. 4.4c



- **Cycle time**

Check the bin lift cycle time.

The cycle time is calculated without the tipping position time (dwell time) and depends on the body height, bin/container weight and oil temperature.

- For the measurements, use a 240 litre or a 1100 litre container. Start the measurement when the wheels leave the ground and stop the measurement when the wheels touch the ground again. The tipping position time must be subtracted from the measurement.
- The cycle time may be no shorter than:
 - 5 seconds for 2-wheel bins,
 - 10 seconds for 4-wheel containers.

4.4 Maintenance: annual (continued)

- **Hydraulic system**

Check the hydraulic system's working pressure. The bin lift is specified for a lifting power of a maximum of 500 kg.

- Working pressure 4-wheel (coupled chairs)
200 bar
- Working pressure 2-wheel (single chair)
90 bar

The lifting pressure of both lifting chairs is monitored by pressure sensors. The lifting pressure can be read off on the Diagnostic System (see chapter 3, par. 3.11.2).

- **Hydraulic hoses**

Check the production date of the hoses.

- The hydraulic hoses must be replaced after 4 years in service. This must be done at the latest 6 years after the production date (shown on the hose ferrule).

- **Electrical wiring**

- Check the electrical wiring, electrical connections and control stations for moisture penetration.

- **Springs**

Check the springs of the lifting chairs and the catcherbar.

- As a precautionary measure, the springs must be replaced after 500,000 cycles per lifting chair.

The counter (optional) can be read off on the Diagnostic System (see chapter 3, par. 3.11.3).



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

4.5 Maintenance (schedule)

Maintenance schedule							
Machine type: OmniDEKA				Date:		Page 1 of 2	
				Machine number:			
	Daily	Weekly	6-weekly	Annual	Description	Additional information: see paragraph	Carried out
Spray cleaning	X	X	X	X	Use a high pressure cleaner to clean the bin lift. Do not direct the jet at electrical components or decals.	4.1	
Footboards and handle bars (if present)	X	X	X	X	Check the footboards and handle bars of the bin lift for damage, correct working and fixation.	--	
Controls	-	X	X	X	Check the working by carrying out all possible functions using empty bins/containers.	--	
Bin security switch and pedal arm (cycle start)	-	X	X	X	Check the action springs.	4.2	
Rear Protection Device (RPD)	-	X	X	X	Check the operation of the underwalk protection (RPD), remove any accumulated dirt at the sensors.	2.5	
Start and 4-wheel recognition sensors	-	X	X	X	Check the working of these sonar sensors.	--	
DIN pick-up arms and chair lock (mechanical)	-	X	X	X	Check the chair lock when opening the L/H DIN pick-up arm. Check that the fall down locks close in the tilted position.	4.2	
Instruction and safety decals	-	X	X	X	Damaged instruction and safety decals must be replaced immediately.	--	
Lubrication	-	X	X	X	Individual greasing points; apply grease (≥ 1 cc). Greasing system; administer 5 pumps of grease (≥ 10 cc).	4.2	
Teeth pick-up combs	-	X	X	X	Check that the teeth of the pick-up comb are aligned.	--	
Bump stops, screens and protective windows	-	X	X	X	Check the fixation and condition of the bump stops, screens and protective windows.	--	
Dust curtains (tarpaulin)	-	X	X	X	Check the dust suppression curtains for tears.	--	
Faults	-	X	X	X	Check the bin lift for any faulty or damaged parts.	--	
Oil leak	-	X	X	X	Check that there are no oil leaks.	--	
Wiring	-	X	X	X	Check the wiring for any damage.	--	
Bin/container locking	-	-	X	X	Check the clamp gap as per drawing between pick-up comb and locking plate.	4.3	
Proximity switches	-	-	X	X	Check the setting.	4.3	
DIN pick-up arms (if present)	-	-	X	X	Check the springs. Check the distance between the pick-up arms.	4.3	
Footboards (if present)	-	-	X	X	Check the springs and sensors when fitted.	4.3	
Fixing points and bolt / nut connections	-	-	-	X	Check security of all fixing points of the bin lift and check all bolt / nut connections.	4.4	

Faults identified must be rectified before the bin lift is put into service!

4.5 Maintenance (schedule), continued

Maintenance schedule (continued)							
Machine type: OmniDEKA				Date:			Page 2 of 2
				Machine number:			
	Daily	Weekly	6-weekly	Annual	Description	Additional information: see paragraph	Carried out
Pick-up teeth	-	-	-	X	Check the pick-up teeth for wear.	--	
Play in bearings	-	-	-	X	Check the bin lift for excessive wear in the bearings.	4.4	
Tipping angle pick-up comb	-	-	-	X	Readjust if necessary.	4.4	
Lifting speed	-	-	-	X	Check the cycle time of the bin lift.	4.4	
Pressure in hydraulic system	-	-	-	X	Check the working pressure of the hydraulic system.	4.4	
Hydraulic hoses	-	-	-	X	Check the production date of the hydraulic hoses and replace if necessary	4.4	
Electrical	-	-	-	X	Check that no moisture has penetrated the electrical wiring, electrical connections and control stations.	--	
Springs	-	-	-	X	Check the springs of the lifting chairs and catcherbar.	4.4	
Faults identified must be rectified before the bin lift is put into service!							

4.6 Trouble shooting

Trouble shoot diagram, electrical	
Error	Check
Bin lift does not operate, no display text (display dark), no green LED at N6 (bin security switch).	- +24V at pin 1 and 2 of the 16-pin plug. - Fuses RCV supply pin 1 and pin 2.
Bin lift does not operate, display text 'EMERGENCY STOP'.	- All emergency stop switches on the vehicle. - +24V supply on pin 12 (normal safe situation) of the 16-pin socket box.
Bin lift does not operate in automatic mode and/or 4-wheel container recognition does not operate.	- If the ultrasonic sensors are free of dirt.
Bin lift does not operate, there is a certain alarm message on the display.	- Check the relevant alarm message in the list, see the following pages.

Trouble shoot diagram, mechanical	
Error	Check
Bin lift is losing bins/containers.	- Check the bin/container locking mechanism for refuse / obstructions. - Check the adjustment of the bin/container lock (see also chapter 4.3).

Valve open diagram (only to be used if the electrical system works properly)

	A1	B1	C1	K1	L1	A2	B2	C2	K2	L2	G
UP left	+	-	+	-	-	+	-	-	-	-	-
DOWN left	-	+	+	-	+	+	-	-	-	-	-
UP right	-	-	-	-	-	+	-	+	-	+	-
DOWN right	-	-	-	-	-	-	+	+	-	+	-
UP 4-wheel	+	-	+	-	-	+	+	+	-	-	+
DOWN 4-wheel	-	+	+	-	+	+	-	-	+	+	-

- + + - = 50%

The diagram illustrates the valve open configuration for the bin lift system. It includes a central valve assembly with solenoids labeled A1, B1, C1, G, A2, B2, C2, K1, L1, K2, and L2. Below the valve assembly are diagrams of the left and right bin lift arms, showing the solenoids L1, K1, K2, and L2. The valve assembly is shown in a top-down view, with solenoids A1, B1, C1, G, A2, and B2 arranged in a row. Solenoids C1 and C2 are positioned below A1 and B1 respectively. Solenoids K1 and L1 are located on the left side of the valve assembly, while K2 and L2 are on the right side. The bin lift arms are shown in a side view, with solenoids L1 and K1 on the left arm, and K2 and L2 on the right arm.

01: EMERGENCY STOP	Emergency stop signal is active.	Check emergency stop buttons on the bin lift and refuse body.
02: TRUCK IN REVERSE	Reverse gear signal is active. A reverse gear signal is produced on the refuse body / truck chassis.	If you want to use the bin lift please put the gearbox into neutral gear.
03: REVERSE L/H RAISE ERROR	The L/H lifting chair has not lifted up to the safe lifting height for travel in the time it usually takes to lift it up. The error is reset when reverse gear is switched off or when chair is on travel position.	Reverse errors usually occur when the bin lift receives no oil from the refuse body in reverse situations. Or the PTO / pump is not active during reverse. So make sure the bin lift can receive hydraulic energy during reverse situations.
04: REVERSE R/H RAISE ERROR	The R/H lifting chair has not lifted up to the safe lifting height for travel in the time it usually takes to lift it up. The error is reset when reverse gear is switched off or when chair is on travel position.	
05: CHAIR LOCKING PIN ERROR	Unexpected movement of R/H chair. R/H chair moves without the controller energises any R/H valves to make it move.	This is probably caused by the L/H chair lifting up the other side by the trade lock pin or any other mechanical link during 2-wheel mode.
06: CHAIR LOCKING PIN ERROR	Unexpected movement of L/H chair. L/H chair moves without the controller energises any L/H valves to make it move.	This is probably caused by the R/H chair lifting up the other side by the trade lock pin or any other mechanical link during 2-wheel mode.
07: ADJUST ZERO WEIGHING SYSTEM	Static zeroing request for weighing systems TMDW9004 / TMDW9009 / TMDW8010. Normal message during start up in the morning.	Please perform a zero adjust sequence by holding down the R/H up and down button simultaneously in domestic mode for a few seconds until the bin lift moves up automatically.
08: LOW SPEED CHECK OIL SUPPLY L/H	L/H chair is moving up too slow in automatic mode, it takes too much time before half height position is reached.	Check oil supply from the truck, check valves and / or pumps.
09: LOW SPEED CHECK OIL SUPPLY R/H	R/H chair is moving up too slow in automatic mode, it takes too much time before half height position is reached.	
10: ERROR LOCK PIN	The bin lift is in trade (4-wheel) mode and there is a mechanical / hydraulic lock pin mounted on this bin lift, still there is too much position difference noticed between the L/H and R/H chair position.	Check if the bin lift runs level without the chair locking pin. Check for mechanical axial and radial play from the position sensors or adjoined bearings. Check / calibrate the position sensors. Check / calibrate the proportional valves.
11: HOPPER PLATE SWITCH	The hopper plate door is open, the bin lift is ready for hand loading of bags only. Hopper plate line 1 or hopper plate line 2 is low, this error is generated as sign the hopper plate door is not closed.	Close the hopper plate door. If this message is displayed even with the hopper plate door closed, please check the functionality and alignment from the hopper plate door sensor.
12: ERROR CYC. START SENSOR NI L/H	An object is detected by the L/H start sensor (NI) much longer than normal.	This can occur if a bin is not taken away from the bin lift once it has been put down after a normal emptying cycle. If this message occurs with no bin or object in front of the sensor or pedal arm please check the sensor and cable.
13: ERROR POSITION SENSOR L/H	This error can be generated by more than one error and is a generally generated position sensor error for the L/H lifting chair. When the bin is removed the error will be reset.	Check for mechanical axial and radial play from the position sensors or adjoined bearings. Check the position sensor(s). Check the cables from the position sensors. Check the analogue values from the position sensors (analogue input 00.0 and 00.1 always higher than 100, lower than 900). Recalibrate the position sensors.

14: ERROR REFUSE SENSOR N10 L/H	L/H refuse (N10) sensor input has detected an object for longer than 180 seconds.	Check for any debris build up in front of the sensor.
15: ERROR REFUSE SENSOR N10 R/H	R/H refuse (N10) sensor input has detected an object for longer than 180 seconds.	Check sensor and sensor cable.
16: CONTROL STATION ERROR	Error if one or more of the following buttons are activated / pressed during start up or after emergency stop start up. Both button control stations are checked. - Up button - Down button - Automatic button - Semi-automatic button	Make sure no button is pressed during start-up or during the release of the emergency stop buttons. Check the button stations for water ingress. Check cables and buttons for damage.
17: ERROR COMB SENSOR N6 L/H	Message if L/H comb switch (N6) is not switched on within x milliseconds after start sensor (N1) is detected.	The bin is presented wrong, please present the bin in a normal way. Check the comb sensor.
18: ERROR CYC. START SENSOR N1 R/H	An object is detected by the R/H start sensor (N1) much longer than normal.	This can occur if a bin is not taken away from the bin lift once it has been put down after a normal emptying cycle. If this message occurs with no bin or object in front of the sensor or pedal arm please check the sensor and cable.
19: ERROR POSITION SENSOR R/H	This error can be generated by more than one error and is a global generated position sensor error for the R/H lifting chair. When the bin is removed the error will be reset.	Check for mechanical axial and radial play from the position sensors or adjoined bearings. Check the position sensor(s). Check the cables from the position sensors. Check the analogue values from the position sensors (analogue input 00.2 and 00.3 always higher than 100, lower than 900). Recalibrate the position sensors.
20: ERROR TRADE SENSOR L/H	L/H side trade (4-wheel) recognition sensor (N11) detects no trade container while the bin lift is in trade mode and the comb sensor (N6) L/H is active.	Check the L/H trade sensor. Check the angle it is looking in (10 degrees upwards). Check the sensor cable.
21: ERROR TRADE SENSOR R/H	R/H side trade (4-wheel) recognition sensor (N11) detects no trade container while the bin lift is in trade mode and the comb sensor (N6) R/H is active.	Check the R/H trade sensor. Check the angle it is looking in (10 degrees upwards) Check the sensor cable.
22: ERROR EMG AND NEUTRALGEAR ACTIVE	During emergency stop or during the release of the emergency stop the neutral gear signal from the refuse body / chassis was not present. Error will be cleared when neutral gear is switched on.	The bin lift can optionally be programmed to raise both lifting chairs to driving height when the neutral gear signal drops. It receives this signal from the refuse body / truck chassis. However the bin lift is not allowed to move up or down spontaneous upon any command directly out of an emergency or start-up situation. If this alarm occurs. The chassis / refuse body does not respect the normal signal sequence. Please check signals from the refuse body.
23: ERROR COMB SENSOR N6 R/H	Message if R/H comb switch (N6) is not switched on within x milliseconds after start sensor (N1) is detected.	The bin is presented wrong, please present the bin in a normal way. Check the comb sensor.
24: MOTOR CONTROLLER LH	For electric bin lifts with CAN to CAN interface only. The L/H motor controller has detected one or more errors.	There is something wrong with the L/H motor controller or L/H electric motor. Please contact your local Terberg dealer.

25: WAIT FOR PACKER	<p>The RCV and bin lift are both equipped with an anti-collision system, this prevents the compactor to pack / collide with the bin or bin lids when a trade bin is inside the compacting area.</p> <p>This message will be on the display when the compactor is moving down towards the bin lift, or is stopped in a possible collision situation.</p> <p>The bin lift will stop lifting / tipping in the bin until the compacting system has reported to be out of the collision zone.</p>	<p>Start the compactor.</p> <p>Make sure the compacting mechanism is out of the collision zone before emptying a trade bin.</p> <p>Check the signals from the refuse body to the compactor.</p>
26: SYSTEM START	<p>The bin lift is starting up / SBC10 is booting and initializing CAN bus.</p>	<p>Normal start-up procedure. This message should disappear within 10 sec.</p> <p>If this message stays active, contact your Terberg service partner.</p>
27: WEIGHT ERROR TRADE BIN CODE: xxx	<p>Weighing system</p>	<p>Message from weighing system, please check weighing system.</p>
28: LOW VOLTAGE START VEHICLE	<p>For electric bin lifts: The battery voltage has been detected being too low during a certain maximum amount of bins emptied.</p>	<p>This message will appear on the screen to inform the user there is something wrong with the battery or the truck is not charging the battery anymore. The bin lift will stop working to prevent damage to the battery and to make sure the truck engine can still start.</p> <p>Charge the batteries by starting the engine. Check the power supply or batteries.</p>
29: PICKUP ARM N7 ERROR L/H	<p>L/H pick-up arm not folded onto chair but the bin lift is in 2-wheel / domestic mode.</p>	<p>Close the pick-up arm when you are working in 2-wheel / domestic mode.</p>
30: PICKUP ARM N7 ERROR R/H	<p>R/H pick-up arm not folded onto chair but the bin lift is in 2-wheel / domestic mode.</p>	
31: IDENT STOP L/H: xxx	<p>A stop signal is given from a weighing or identification system to stop the L/H lifting chair. The xxx nr. explains the following error: If an external so no Terberg VDH or Data manager TMID7009 is mounted: Only message IDENT STOP L/H is displayed.</p> <p>VDH or Data manager TMID7009: - 31: LIST STOP L/H: block bin lift tag is listed for stop. - 31: NO TAG L/H: block bin lift no tag found by identification system. - L/H READER TIME OUT: block bin lift no ready received on check id stop height.</p>	<p>Find out why the identification system is stopping the bin lift.</p>
32: IDENT STOP R/H: xxx	<p>A stop signal is given from a weighing or identification system to stop the R/H lifting chair. The xxx nr. explains the following error: If an external so no Terberg VDH or Data manager TMID7009 is mounted: Only message IDENT STOP R/H is displayed.</p> <p>VDH or Datamanager TMID7009: - 32: LIST STOP L/H: block bin lift tag is listed for stop. - 32: NO TAG L/H: block bin lift no tag found by identification system. - R/H READER TIME OUT: block bin lift no ready received on check id stop height.</p>	

33: IDENT STOP TRADE: xxx	<p>A stop signal is given from a weighing or identification system to stop the bin lift. The xxx nr. explains the following error.</p> <p>If an external so no Terberg VDH or Data manager TMID7009 is mounted: Only message IDENT STOP TRADE is displayed.</p> <p>VDH or Data manager TMID7009:</p> <ul style="list-style-type: none"> - 33: LIST STOP L/H: block bin lift tag is listed for stop. - 33: NO TAG L/H: block bin lift no tag found by identification system. - TRD READER TIME OUT: block bin lift no ready received on check id stop height. 	Find out why the identification system is stopping the bin lift.
34:	Not used.	
35: BIN TOO HEAVY L/H	<p>An optionally or externally mounted weighing system sends out a command to stop the bin lift because the bin is too heavy. This stop signal can be given over conventional identification signals or over Clean Open CAN connection.</p> <p>Electric / pressure weighing systems do not use this alarm nr!! (They use alarm nr. 115).</p>	The bin is too heavy, remove the bin. Check the weighing system.
36: BIN TOO HEAVY R/H	<p>An optionally or externally mounted weighing system sends out a command to stop the bin lift because the bin is too heavy. This stop signal can be given over conventional identification signals or over Clean Open CAN connection.</p> <p>Electric / pressure weighing systems do not use this alarm nr!! (They use alarm nr. 116).</p>	
37: TRADE CONTAINER TOO HEAVY	<p>An optionally mounted weighing system sends out a command to stop the bin lift because the container is too heavy. This stop signal can be given over conventional identification signals or over Clean Open CAN connection.</p> <p>Electric / pressure weighing systems do not use this alarm nr!! (They use alarm nr. 117).</p>	The container is too heavy, remove the container. Check the weighing system.
38: TRUCK / BODY MAXIMUM WEIGHT	An external (under body) weighing system or the bin lifts controller calculated the max. allowed total body weight has been reached.	The truck is at its maximum allowed vehicle weight. Please empty the truck.
39: STOP IN WEIGHING L/H	<p>Weighing systems TMDW9009 / TMDW8010 / VDH9013.</p> <p>This signal is for bin lifts with weighing systems only: The bin lifts controller detected the L/H lifting chair has been stopped inside the weighing window. Therefore the weighing results will be unreliable.</p>	Put the bin down on the ground and retry, do not stop the up- or down motion of the bin inside the weighing window.
40: STOP IN WEIGHING R/H	<p>Weighing systems TMDW9009 / TMDW8010 / VDH9013.</p> <p>This signal is for bin lifts with weighing systems only: The bin lifts controller detected the R/H lifting chair has been stopped inside the weighing window. Therefore the weighing results will be unreliable.</p>	
41: TRUCK TOO SLANT	This signal is for bin lifts with weighing systems only: The inclination sensor from the weighing system has detected that the vehicle is positioned on a slope which is too large to produce a reliable weighing result.	Please reposition the vehicle on a more level surface. If this message occurs even when the vehicle is at a flat surface, please check the inclination sensor or weighing system.

42: WEIGH / ID SYSTEM NOT READY LH	The bin lift is equipped with extended digital I/O CAN modules used for weighing / identification systems from third party. This third party weigh. / ident. system sends no "ready" signal to the bin lift.	<i>Find out why the identification or weighing system is not ready.</i>
43: WEIGH / ID SYSTEM NOT READY RH	Telling the bin lift the RFID identification and/or weighing system is ready for collecting.	
44: WEIGH / ID SYSTEM TRADE PAUSE	Extended digital I/O CAN module used for weighing / identification system AMCS. 4-Wheel (trade) container is stopped to start a weighing or RFID identification.	<i>For AMCS weighing only, static weighing cycle in process.</i>
45: VDH9013 BUSY INITIALIZING SYSTEM		
46: VDH9013 BUSY INITIALIZING SYSTEM		
47: FOOTBOARD STOP	One or more footboards occupied. The bin lift receives this signal from the refuse body. The bin lift should stop any movement.	<i>Make sure nobody is on the footboards when working with the bin lift. If there is nobody on the footboard please check footboards, footboard sensors and signals from the refuse body.</i>
48: WAIT WEIGHING NOT READY L/H	Weighing systems: VDH9013 / TMDW9009 / TMDW9004 / TMDW8010. L/H side of weighing system is busy calculating / not ready to start a new weighing cycle.	<i>Remove bin and wait a few seconds before applying a new bin.</i>
49: WAIT WEIGHING NOT READY R/H	Weighing systems: VDH9013 / TMDW9009 / TMDW9004 / TMDW8010. R/H side of weighing system is busy calculating / not ready to start a new weighing cycle.	<i>If this message is continuously on the screen, please check the weighing system.</i>
50: LOST CONTAINER L/H	L/H side weighing system not ready, bin is lost in or just after the up cycle. Weighing cycle is stopped because the bin lift has detected the bin is no longer on the comb.	<i>If the bin has been presented wrong or the bin is taken from the comb after the up cycle, this is a normal message.</i>
51: LOST CONTAINER R/H	R/H side weighing system not ready, bin is lost in or just after the up cycle. Weighing cycle is stopped because the bin lift has detected the bin is no longer on the comb.	<i>When the bin is still on the comb please check the start (N1) and comb (N6) sensors for signal loss.</i>
52: LOST CONTAINER TRADE	4-Wheel / trade weighing system not ready, container is lost in or just after the up cycle. Weighing cycle is stopped because the bin lift has detected the container is no longer on the comb.	<i>If the container has been presented wrong or the container is taken from the comb after the up cycle, this is a normal message. When the container is still on the comb please check the start (N1) and comb (N6) sensors for signal loss.</i>

53: AREA PROTECTION LEFT HAND	<p>The bin lift has detected that a person or object has entered its L/H working area during automatic mode.</p> <p>A person or object is trying to enter the L/H area underneath the bin lift while the bin lift is in full automatic motion. The bin lift will stop its automatic cycle.</p> <p>The bin can only be taken down manually. The automatic mode is still active so once the bin is removed the automatic mode is enabled.</p>	
54: AREA PROTECTION RIGHT HAND	<p>The bin lift has detected that a person or object has entered its R/H working area during automatic mode.</p> <p>A person or object is trying to enter the R/H area underneath the bin lift while the bin lift is in full automatic motion. The bin lift will stop its automatic cycle.</p> <p>The bin can only be taken down manually. The automatic mode is still active so once the bin is removed the automatic mode is enabled.</p>	<p><i>Never approach the working area from the bin lift when it is in full automatic mode, this is very dangerous!</i></p>
55: AREA PROTECTION SENSOR FAULT L/H	<p>The L/H area protection sensor has a possible defect.</p> <p>The normal sensor detection sequence has not been completed. Therefore the automatic mode is completely disabled. The bin has to be taken down manually and the automatic mode has to be re-enabled manually by the user.</p>	<p><i>There is a status check on the working of the ultrasonic sensor. With the bin lift at pickup height the sensor "always" has to see the bin approaching the bin lift, once the bin is 1 meter from ground, so above sensor level it should not see the bin anymore.</i></p> <p><i>If the area protection sensor or cable is broken or the sensor is blocked by dirt or snow this sequence is not possible and the bin lift will generate this failure message.</i></p> <p><i>Please check the sensor and cable for damage or blockage.</i></p> <p><i>If this alarm occurs together with alarm 90 or 92 this means the detection window is not correctly made, please follow the instructions in alarm 90 and 92 first.</i></p>
56: AREA PROTECTION SENSOR FAULT R/H	<p>The R/H area protection sensor has a possible defect.</p> <p>The normal sensor detection sequence has not been completed. Therefore the automatic mode is completely disabled. The bin has to be taken down manually and the automatic mode has to be re-enabled manually by the user.</p>	<p><i>There is a status check on the working of the ultrasonic sensor. With the bin lift at pickup height the sensor "always" has to see the bin approaching the bin lift, once the bin is 1 meter from ground, so above sensor level it should not see the bin anymore.</i></p> <p><i>If the area protection sensor or cable is broken or the sensor is blocked by dirt or snow this sequence is not possible and the bin lift will generate this failure message.</i></p> <p><i>Please check the sensor and cable for damage or blockage.</i></p> <p><i>If this alarm occurs together with alarm 91 or 93 this means the detection window is not correctly made, please follow the instructions in alarm 91 and 93 first.</i></p>
57: SAFETY ARM LEFT HAND	<p><i>Bin lifts with folding safety arms only.</i></p> <p>- The safety arm is not in the position where automatic bin loading is possible.</p>	<p><i>If you want to collect bins in the automatic mode please open / position the safety arms in their working position.</i></p>
58: SAFETY ARM RIGHT HAND		

59: MOTOR CONTROLLER RH	For electric bin lifts with CAN to CAN interface only. An error has been received from the R/H electric motor controller.	<i>There is something wrong with the R/H motor controller or R/H electric motor. Please contact your local Terberg dealer.</i>
60: CAN BUS ERROR	General bin lift CAN bus error. A CAN bus error can be caused by the following failures: 1. Termination of CAN bus not OK 2. A defect CAN cable. 3. One or more CAN devices are broken or cannot be found by the controller. 4. Wrong bit rate or CAN settings (at installation only). If a specific CAN device is not found by the controller this can be displayed behind the alarm message as well.	<i>Check 120Ω line resistance. Check all CAN related cables Please contact your local Terberg dealer.</i>
61: DATA STORAGE FAILURE	Identification or weighing system backup memory error. No external storage memory is placed in the identification system or weighing system. For weighing system TMDW9004 / TMDW9009 / TMDW8010 only.	<i>Check if a data card is loaded into the on-board data card reader. Make sure the data card has been setup correctly and format is correct. Check if the data card reader power supply is OK.</i>
62: WASHING BUSY L/H	<i>Bin lifts with washing systems only.</i> L/H lifter is in the tipped position and washing is busy. Washing system is sending a signal to the bin lift that it must wait in the tipped position until the washing is fully done.	<i>Wait until the bin washing cycle is completed.</i>
63: WASHING BUSY R/H	<i>Bin lifts with washing systems only.</i> R/H lifter is in the tipped position and washing is busy. Washing system is sending a signal to the bin lift that it must wait in the tipped position until the washing is fully done.	
64: WASHING SYSTEM OUT OF POSITION	Washing system asks the bin lift to stop before it has even reached the tipping position. Washing heads are not fully retracted in the safe position. The bin lift has not even given the washing system a signal it is in the top position.	<i>Incorrect signals from the bin wash system or the bin wash system is offline.</i>
65:	Not used.	
66: PICKUP ARMS WITHOUT LOCK	The lock option is set and DIN-arms are not open / unfolded and 4-wheel / trade unlock sensor is set.	<i>Lock both chairs together when emptying containers with DIN-arms.</i>
67: POSITION OR OUTPUT FAILURE	One of the lifting chairs has moved up or down more than 10% without the opening of valves or by any command from the controller. The L/H chair has moved without output command. The R/H chair has moved without output command. Speed error detected above half height position.	<i>The bin lift could have been pushed up by ground collision. The locking pin is (partially) engaged in 2-wheel mode, making one chair lifting up the other chair. If no logic reason is found like the two mentioned above, please check the position sensors and/or outputs and valves.</i>
68: RCV NOT READY	The compactor / RCV is not producing a "ready to work" signal on the 16-pin plug connections. The bin lift is not allowed to move or ask for hydraulic power from the refuse compactor.	<i>Find out why the bin lift does not receive an "RCV ready" signal from the refuse body. Make sure the refuse body controller is OK. Make sure the gearbox is in Neutral. Make sure the PTO is active.</i>

69: RIDING HANDLE OUT	Riding handle is open / unfolded. For bin lifts with footboards and riding handles only.	<i>Fold away the riding handle if you want to empty bins.</i>
70: ADJUST ERROR LH MOVE LIFTER DOWN	Zero adjust error, VDH9013 weighing system only.	<i>Move lifting chair down and retry.</i>
71: ADJUST ERROR RH MOVE LIFTER DOWN		
72: FOOTBOARD ERROR INPUTS R/L NOT SAFE	L/H or R/H footboard inputs have been detected to be in a non-safe situation.	<i>Make sure nobody is on the footboards when the bin lift is powered up. Check footboard sensors.</i>
73: TMDW8010->TMOPEN NO COMMUNICATION ERR	When on the TMDW8010 CAN weight module the TMOpen protocol is enabled and the client is not responding on the TMDW8010 TMOpen communication port, this alarm message is generated.	
74: MOVE STOP L/H CYLINDER ERROR	2-Wheel domestic bin mode active.	<i>Bin lift is below 50% position and tilting of L/H chair is not in a safe position, only down movement is possible. First try to correct the tilting position.</i>
75: MOVE STOP R/H CYLINDER ERROR	2-Wheel domestic bin mode active.	<i>Bin lift is below 50% position and tilting of R/H chair is not in a safe position, only down movement is possible. First try to correct the tilting position.</i>
76: MOVE STOP TRD CYLINDER ERROR	4-Wheel trade container mode active.	<i>Bin lift is below 50% position and tilting of L/H or R/H chair is not in a safe position, only down movement is possible. First try to correct the tilting position.</i>
77: DE3 IN TRADE CALIBRATION ACTIVE	OmniDEKA bin lift with a 2-position switch instead of a push button to change 2-wheel domestic to 4-wheel trade container mode.	<i>When calibration mode is activated this message appears on the display. Before calibration can be activated we have to change to 2-wheel domestic mode.</i>
78:	Not used.	
79: WEIGHING ZERO ERR TRADE IS ACTIVE	VDH9013 dynamic zeroing activated while the bin lift is in 4-wheel / trade mode. Dynamic zeroing is not possible in 4-wheel mode.	<i>Switch the bin lift into 2-wheel mode before doing a zero adjust.</i>
80: FOOTBOARD STOP LEFT HAND	L/H footboard is occupied and this is an unsafe situation. Bin lift is stopped.	<i>Do not stand on the footboards when you operate the bin lift.</i>
81: FOOTBOARD STOP RIGHT HAND	R/H footboard is occupied and this is an unsafe situation. Bin lift is stopped.	
82: READY DYN ZERO WEIGHING L/H	VDH9013 weighing dynamic zeroing successful done for the L/H side.	
83: READY DYN ZERO WEIGHING R/H	VDH9013 weighing dynamic zeroing successful done for the R/H side.	
84: SERVICE REQUIRED	<i>For electric bin lifts only:</i> Service interval date reached.	<i>The bin lift has reached its service interval date and requires maintenance. This message will start to appear just prior to the date, if the maintenance is not done within 6 months after the maintenance date the bin lift will go into "limp" mode to prevent possible damage. Please contact your local Terberg dealer for more details.</i>

85: PRESSURE SENSOR FAULT L/H	Pressure sensor / analogue input 01.0 for measuring the oil pressure on the L/H side shows wrong information. The analogue value it supposed to send is too low or too high according to specification.	<i>The lifting chairs are lifted up by a crane / there is contact with the ground.</i>
86: PRESSURE SENSOR FAULT R/H	Pressure sensor / analogue input 01.1 for measuring the oil pressure on the R/H side shows wrong information. The analogue value it supposed to send is too low or too high according to specification.	<i>If this is not the case please check pressure sensor and cable.</i>
87: STATUS DYN ZERO L WEIGHING L/H	Error message for dynamic zeroing failure VDH9013.	Error messages: 1. ZERO DRIFT ERROR 2. NO ZERO CALIB POINT 3. REPEAT MEASURE ERROR 4. TIME OUT
88: STATUS DYN ZERO R WEIGHING R/H		
89:	Not used.	
90: LH HSI (TILT) ERRATIC READING	A position sensor difference error caused by position sensor HS1 on the L/H side. <i>Linearity check.</i> This is a timer based interval check, with the bin lift in motion it checks the old position value and the current position value. If the difference in position is too big, this event is remembered in a counter. When the value of this counter reaches a selected maximum nr. of errors (5), this message is displayed.	<i>Check for axial and radial play where HS1 is located.</i> <i>Check the position sensor HS1.</i> <i>Check the sensor signal on analogue input 00.0</i> <i>Check the magnet from position sensor HS1.</i> <i>Check cables and connectors to HS1.</i>
91: LH HS2 (CHAIR) ERRATIC READING	A position sensor difference error caused by position sensor HS2 on the L/H side. <i>Linearity check.</i> This is a timer based interval check, with the bin lift in motion it checks the old position value and the current position value. If the difference in position is too big, this event is remembered in a counter. When the value of this counter reaches a selected maximum nr. of errors (5), this message is displayed.	<i>Check for axial and radial play where HS2 is located.</i> <i>Check the position sensor HS2.</i> <i>Check the sensor signal on analogue input 00.1</i> <i>Check the actuating levers connected to the sensor.</i> <i>Check cables and connectors to HS2.</i>
92: LH HSI (TILT) OUT OF RANGE	The position sensor HS1 on the L/H side is out of range. The analogue input 00.0 value must be between 100 and 900 steps. Any step over or under this value is not a normal situation.	<i>Check for axial and radial play where HS1 is located.</i> <i>Check the magnet from position sensor HS1.</i> <i>Check the position sensor HS1.</i> <i>Check the sensor signal on analogue input 00.0</i> <i>Check cables and connectors to HS1.</i>
93: LH HS2 (CHAIR) OUT OF RANGE	The position sensor HS2 on the L/H side is out of range. The analogue input 00.1 value must be between 100 and 900 steps. Any step over or under this value is not a normal situation.	<i>Check for axial and radial play where HS2 is located.</i> <i>Check the actuating levers connected to the sensor.</i> <i>Check the position sensor HS2.</i> <i>Check the sensor signal on analogue input 00.1</i> <i>Check cables and connectors to HS2.</i>
94: TIP POSITION NOT REACHED	Tipping / top position is not reached in time. This alarm will be on the display together with alarm messages 13 or 19.	<i>Make sure there is no debris or objects blocking the bin lift from reaching the fully tipped position.</i> <i>If no blockage is found please follow instructions on alarm message 13 or 19.</i>
95: ADJUST DYN ZERO WEIGHING L/H	VDH9013 weighing dynamic zeroing is active.	
96: ADJUST DYN ZERO WEIGHING R/H		

97: 4W HEIGHT SENSOR N29 FAULT	OmniDEKA bin lift: Sensor (N29) output fault, the sensor stays in "ON" condition.	This sensor detects 1100 ltr. containers. If no trade container is present on the bin lift, please check the sensor, check the sensor area for objects and check the cables to sensor (N29).
98:	Not used.	
99: PRESSURE TOO HIGH L/H CALIBRATION MODE	Only during calibration mode. Hydraulic oil pressure was too high when moving the bin lift, at the moment position sensor calibration is active.	At the end of cylinder strokes this is normal. If this occurs halfway cylinder strokes please check the mechanical construction and the valves.
100: PRESSURE TOO HIGH R/H CALIBRATION MODE		
101: LH HSI DUAL WIPER FAILURE		
102: LH HS2 DUAL WIPER FAILURE		
103: RH HSI DUAL WIPER FAILURE		
104: RH HS2 DUAL WIPER FAILURE		
105: L/H WINDOW READY MOVE CHAIR DOWN	Only during pressure weighing calibration mode active on L/H side. If you perform the max weight calibration (reference weight on the chair) this message will show on the display and the bin lift will stop lifting when it has fully passed the weighing window. This is to avoid the bin with weight will reach the tipped position.	
106: R/H WINDOW READY MOVE CHAIR DOWN	Only during pressure weighing calibration mode active on R/H side. If you perform the max weight calibration (reference weight on the chair) this message will show on the display and the bin lift will stop lifting when it has fully passed the weighing window. This is to avoid the bin with weight will reach the tipped position.	
107: 4W WINDOW READY MOVE CHAIR DOWN	Only during pressure weighing calibration mode active in 4-wheel (trade) mode. If you perform the max weight calibration (reference weight on the chair) this message will show on the display and the bin lift will stop lifting when it has fully passed the weighing window. This is to avoid the container with weight will reach the tipped position.	
108: R/H HSI (TILT) ERRATIC READING	A position sensor difference error caused by position sensor HSI on the R/H side. <i>Linearity check.</i> This is a timer based interval check, with the bin lift in motion it checks the old position value and the current position value. If the difference in position is too big, this event is remembered in a counter. When the value of this counter reaches a selected maximum nr. of errors (5), this message is displayed.	Check for axial and radial play where HSI is located. Check the magnet from position sensor HSI. Check the position sensor HSI. Check the sensor signal on analogue input 00.2 Check cables and connectors to HSI.

109: R/H HS2 (CHAIR) ERRATIC READING	A position sensor difference error caused by position sensor HS2 on the R/H side. <i>Linearity check.</i> This is a timer based interval check, with the bin lift in motion it checks the old position value and the current position value. If the difference in position is too big, this event is remembered in a counter. When the value of this counter reaches a selected maximum nr. of errors (5), this message is displayed.	<i>Check for axial and radial play where HS2 is located.</i> <i>Check the position sensor HS2.</i> <i>Check the sensor signal on analogue input 00.3</i> <i>Check the actuating levers connected to the sensor.</i> <i>Check cables and connectors to HS2.</i>
110: RH HSI (TILT) OUT OF RANGE	The position sensor HSI on the R/H side is out of range. The analogue input 00.2 value must be between 100 and 900 steps. Any step over or under this value is not a normal situation.	<i>Check for axial and radial play where HS1 is located.</i> <i>Check the magnet from position sensor HS1.</i> <i>Check the position sensor HS1.</i> <i>Check the sensor signal on analogue input 00.2</i> <i>Check cables and connectors to HS1.</i>
111: RH HS2 (CHAIR) OUT OF RANGE	The position sensor HS2 on the R/H side is out of range. The analogue input 00.3 value must be between 100 and 900 steps. Any step over or under this value is not a normal situation.	<i>Check for axial and radial play where HS2 is located.</i> <i>Check the actuating levers connected to the sensor.</i> <i>Check the position sensor HS2.</i> <i>Check the sensor signal on analogue input 00.3</i> <i>Check cables and connectors to HS2.</i>
112: PRESSURE TOO HIGH L/H	Oil pressure too high for the L/H chair; lifting 2-wheel (domestic) bins. The bin lift will stop.	<i>The bin applied to the bin lift is too heavy.</i> <i>An object or debris is blocking the bin lifts movement.</i>
113: PRESSURE TOO HIGH R/H	Oil pressure too high for the R/H chair; lifting 2-wheel (domestic) bins. The bin lift will stop.	<i>The bin applied to the bin lift is too heavy.</i> <i>An object or debris is blocking the bin lifts movement.</i>
114: PRESSURE TOO HIGH TRADE CONTAINER	Oil pressure too high for lifting a 4-wheel (trade) container. The bin lift will stop.	<i>The container applied to the bin lift is too heavy.</i> <i>An object or debris is blocking the bin lifts movement.</i>
115: BIN TOO HEAVY L/H	For bin lifts with dynamic weighing by pressure. The maximum allowed bin weight is reached, the bin lift will be stopped.	<i>The bin applied to the bin lift is too heavy.</i> <i>An object or debris is blocking the bin lifts movement.</i>
116: BIN TOO HEAVY R/H		
117: TRADE CONTAINER TOO HEAVY	For bin lifts with dynamic weighing by pressure. The maximum allowed container weight is reached, the bin lift will be stopped.	<i>The container applied to the bin lift is too heavy.</i> <i>An object or debris is blocking the bin lifts movement.</i>
118: L/H SWITCH TO 2W MOVE LIFTER TO TOP	<i>OmniDEKA bin lift:</i> Tilting sensor (HS1) of the L/H chair is out of range of the safe position and needs to be corrected.	<i>In this case an up and down movement in 2-wheel domestic mode, without a bin on the comb, will correct the tilting.</i>
119: R/H SWITCH TO 2W MOVE LIFTER TO TOP	<i>OmniDEKA bin lift:</i> Tilting sensor (HS1) of the R/H chair is out of range of the safe position and needs to be corrected.	
120: L/H HSI (TILT) CHECK POS OF MAGNET	<i>OmniDEKA bin lift:</i> Position of the L/H HSI position sensor.	<i>The HS1 and HS2 position sensors are sensors which are using a magnet to detect the position. This message appears if the magnetic field is not detected correctly. For example there are black spots because the magnet is too far away from the HALL sensor.</i>
121: L/H HS2 (CHAIR) CHECK POS OF MAGNET	<i>OmniDEKA bin lift:</i> Position of the L/H HS2 position sensor.	
122: R/H HSI (TILT) CHECK POS OF MAGNET	<i>OmniDEKA bin lift:</i> Position of the R/H HSI position sensor.	
123: R/H HS2 (CHAIR) CHECK POS OF MAGNET	<i>OmniDEKA bin lift:</i> Position of the R/H HS2 position sensor.	

I24: CLEANOPEN COMM IDENT IS NOT READY	For bin lifts with an external identification system connected to the bin lifts Clean Open CAN connection port and the bin lift has been setup to stop when this third party identification system is not ready (offline). The bin lift stops to prevent illegal emptying of bins without identification.	
I25: CLEANOPEN STOP COMMUNICATION ERROR	Third party identification system connected to CleANopen CAN Bus. For bin lifts with an external identification system connected to the bin lifts Clean Open CAN connection port and the bin lift has been setup to stop when this third party identification system is not ready (offline), or CAN bus connection fails. The bin lift stops to prevent illegal emptying of bins without identification.	<i>Make sure this identification system is online and ready to communicate.</i>
I26: L/H SPEED ERROR CORRECTION ACTIVE	L/H chair, bin lift speed has been detected as being too high. The bin lift speed is corrected to a lower speed to prevent damage and dangerous situations.	<i>If this occurs during setup, lower the bin lift speed to the allowed speed to solve this problem.</i>
I27: R/H SPEED ERROR CORRECTION ACTIVE	R/H chair, bin lift speed has been detected as being too high. The bin lift speed is corrected to a lower speed to prevent damage and dangerous situations.	<i>If this occurs during normal operation, please check the position sensors and proportional valves. Else please contact your local Terberg dealer.</i>
I28: SMT STOP HIGHER THEN WEIGHING START	Stop position of single man trade (SMT) stop is inside the pressure weighing window, which result in a failure in calculating the bin weight. This message is displayed for correction of the weighing start position to a higher position as the stop SMT position.	
I29: FOOTBOARD BLOCK CATCHERBAR BUTTON	Footboard is occupied and the catcherbar button is pressed. In this case the catcherbar does not change the position and this message is displayed to inform the user why it is not changing the position.	
I30: L/H N6 ERROR BIN NOT DETECTED	Message is displayed if the bin lift is in 2-wheel automatic mode, after lifting chair moves up and the bin on comb sensor N6 lost contact with bin or is not detecting a bin on the detection position.	
I31: R/H N6 ERROR BIN NOT DETECTED		
I32: L/H N11 SENSOR 4 WHEEL BIN ERROR	Message is displayed when (N11) 4-wheel container detection sensor input stays active.	<i>Message will be reset as soon input is deactivated.</i>
I33: R/H N11 SENSOR 4 WHEEL BIN ERROR		
I34: L/H N6 SENSOR COMB NOT REACHED	Message is displayed if the bin lift is in 2-wheel automatic mode, after lifting chair moves up and the bin on comb sensor N6 has no contact within 40cm the chair starts to move up.	Bin lift stops to move up and message is reset by manual move up or down.
I35: R/H N6 SENSOR COMB NOT REACHED		
I36: TRD N6 SENSORS COMB NOT REACHED	Message is displayed if the bin lift is in 4-wheel single man trade (SMT) mode, after the chairs move up and the container on comb sensor N6 has no contact within 40cm the chairs start to move up.	
I37: GOTO POSITION NOT IN RANGE STOP	Message is displayed if the bin lift has to go to a fixed position and the position is out of range of the 40cm from the current position. Bin lift will move to the position which is inside the 40cm and message will be displayed as sign the position to go to is outside the 40cm range.	

<p>138: CUSTOM SPEED SET TEMP. SWITCHED OFF</p>	<p><i>OmniDEKA bin lift:</i> Message displayed if the service engineer has temporary disabled the user speed setting. When the bin lift speed is changed in RunWin the speed, which is set by the customer, has to be disabled. When the service has disabled this setting, this message appears on the SCB10 display. As soon as the power is switched OFF and ON or the service engineer has enabled the customer speed setting with RunWin this message will be erased.</p>	
<p>139: HYDRAULIC WEIGHING IS OFF</p>	<p><i>OmniDEKA bin lift:</i> Message which will be displayed in case the user changes the bin lift speed outside the range an hydraulic weighing is possible.</p>	
<p>140: DOMESTIC BIN ON COMB STOP</p>	<p>The bin lift is in 4-wheel trade mode and there is detected a 2-wheel domestic bin on the comb instead of the expected 4 wheel trade container. The bin lift stops.</p>	<p><i>Move the lifting chairs down, remove bin and set the bin lift in 2-wheel domestic mode.</i></p>