



OPERATION MANUAL FOR HANDI-LIFT 6

Original Version

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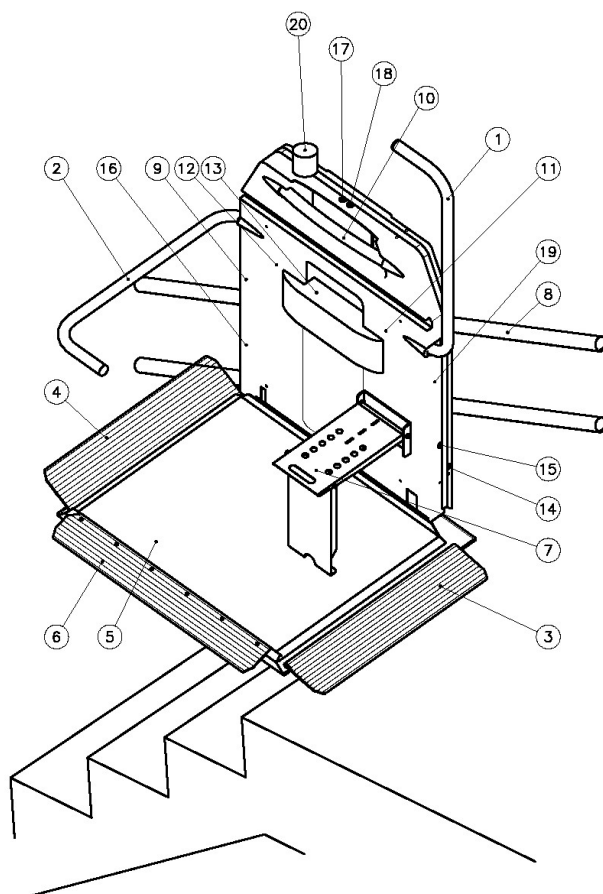
1 Introduction

1.1 Congratulations with your new CAMA Handi-Lift

Thank you for choosing a CAMA Handi-Lift. Please read these instructions carefully before using the lift.

Your CAMA Handi-Lift has been built with careful attention to detail. In order to obtain many years trouble free use of the lift, we kindly ask you to follow the instructions in this handbook with special attention to the care and maintenance requirements. We recommend that you do not undertake maintenance tasks other than the routine care and cleaning explained in this handbook.

1.2 Sketch of Handi-lift EA6



- 1) Upper barrier arm
- 2) Lower barrier arm
- 3) Upper flap
- 4) Lower flap
- 5) Platform
- 6) *Side-access-ramp
- 7) *Folding seat
- 8) Rail
- 9) Cover
- 10) Handle
- 11) Nameplate
- 12) Maximum weight sign
- 13) Operation panel
- 14) Key switch for power on the lift
- 15) Emergency lowering of the lift
- 16) Emergency lowering of the platform
- 17) Emergency lowering of the lower barrier arm
- 18) Emergency lowering of the upper barrier arm
- 19) *Alarm
- 20) *Flashlight

* Extra equipment (*not standard on all lifts*).

1.3 Generally, about the lift

Type EA6 is a fully automatic lift, where the user does not have to operate anything manually, all operation is electrically controlled.

The Handi-Lift consists of a rail made in aluminium as well as a lift carriage with a folding platform. The lift is equipped with barrier arms and ramps on the front and back of the platform. When touching the ramps, the plate under the platform or the safety plate under the carriage the lift will stop automatically in order to prevent jamming danger.

The Handi-Lift is intended for wheelchair users or a seated person (this requires the lift is equipped with a fold down seat). We cannot recommend standing on the lift. The lift can be operated either as self-service or with a helper (the helper may not be on the lift together with the user). The lift is designed for stairs with turns or landings and is made individually with regard to the stairs design. The lift is delivered for indoor as well as outdoor use.

The Handi-lift may not be used by severely handicapped persons without a helper, children as well as people influenced by medicine, alcohol or other drugs. It may not be used to transport construction material, furniture, animals, foodstuff, cleaning equipment, chemicals, kitchen hardware and similar unless the lift is made for these purposes. The lift may never be used for burdens that exceed the lifts capacity. Please note that the lift is equipped with a load cell, which means that if the lift is used with too much load (overload), it will automatically stop after a few centimetres. The control lamp will flash, and the lift will send out a sound signal. The system will be restored by returning to the starting point. (See the passage "What to do if your lift fails to operate"). The Handi-lifts lifting capacity is as standard 225 kg but can be delivered with a 300 kg capacity (see the lift's type sign). Please note that if the lift is installed near any main doors or emergency exits you have to be able to open these when the lift is parked.

In case of fire do not use the lift.

There has to be light (min. 50 lux), where the lift is used, and when maintenance of the lift is made. Furthermore a socket has to be available near the lift installation.

1.4 Before using the Handi-lift

The lift is equipped with different safety features, which **must** be tested before using the lift. If the safety features do not work, the lift may **not** be used and you should contact your dealer.

Please note that you have to drive on to the lift facing downwards. Remember to brake the wheelchair.

As user of the lift you must be attentive that the functions described below works, however it is the installer's task to check the functions during the installation and during the regular examination of the lift.

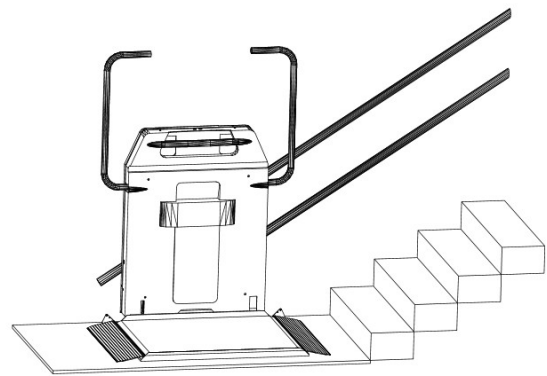
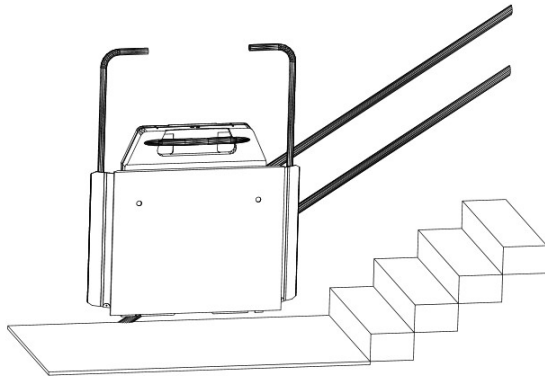
Check that upper and lower barrier arm (*pos 1 and 2 on the sketch in section 1.2*) moves as intended. The lower barrier arm must not open at landings, as it shall prevent that the user can drive off the lift in that direction.

Check upper and lower flap as well as the platform (*pos 3, 4 and 5 on the sketch in section 1.2*). Touching the front flap while driving up and the back flap while driving down checks the flaps of the platform. The lift has to stop automatically when the flaps are touched, and first when the obstruction is removed can the lift drive again. Touching the lower platform plate when driving down the stairs should also stop the lift automatically, and first when the obstruction is removed can the lift drive again.

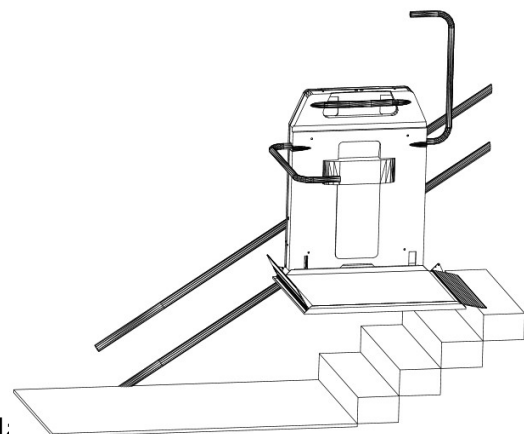
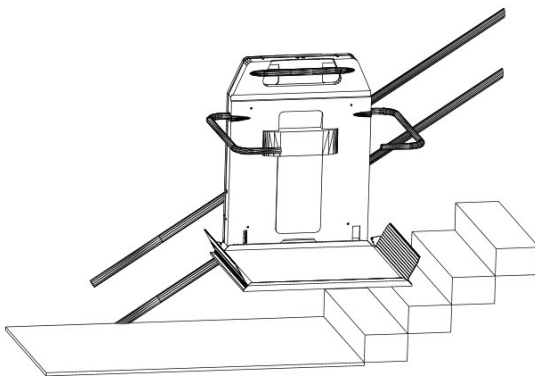
Check the safety shackle, which shall prevent jamming danger. On the back of the Handi-lift in both sides a safety shackle is installed, when touching these, while the lift is driving up or down, the lift shall stop automatically. First when the obstacle is removed, can the lift drive again. The same goes for the safety plate, which is the lifts safety feature, when the lift is in parked position. When it is touched the lift shall stop and first drive again when the obstacle is removed.

Sketch of all the positions:

The sketches below shows the Handi-lift in the different positions, it can be in. The sketches are of a left hand lift.



bottom of the stair.



Hi
the stairs.

2 Charging of the batteries

2.1 Generally, about the batteries

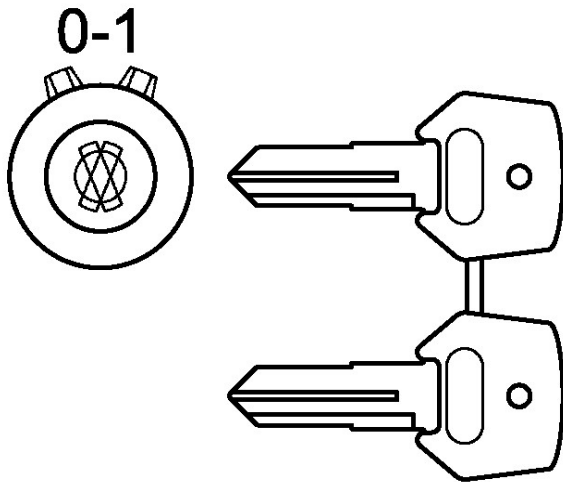
Charging of the Handi-Lift's batteries happens through some charging points, which are placed at the top and bottom of the stair and possibly by any landings. There can be several charging points along the rail.

The charging of the batteries takes place automatically when the lift is parked in one of these positions and the batteries do not require any care.

We expect that the batteries will have a lifetime of approximately 2-3 years at normal use of a single user.

Disposure of old batteries has to be done at approved waste deposits.

2.2 Key switch



The key switch for power on the lift (*Pos 14 on the sketch section 1.2*) is delivered with 2 keys.

The key switch disconnects the power for the lift, so the lift cannot be used, as well as disconnecting the power so the lift does not charge the batteries.

0= Turned off

1= Turned on

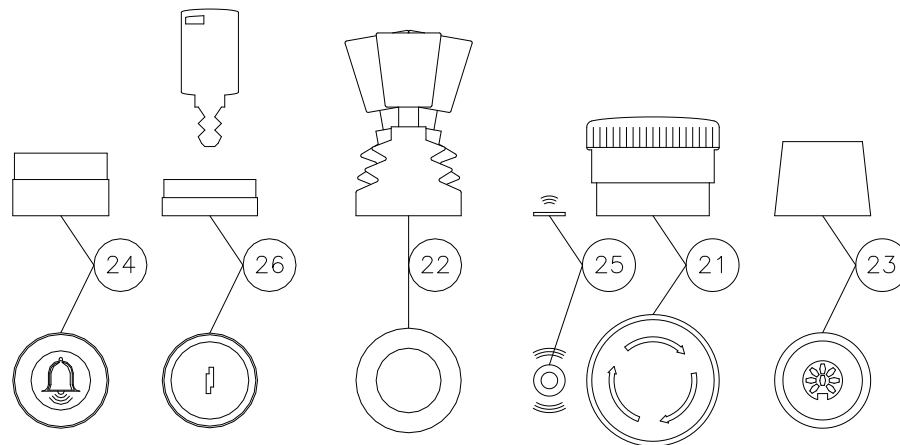
Check that the power supply is turned on in order to secure a continuous charge.

Please note that the key switch disconnects both lift and charge.

A battery-surveillance system is built-in the lift. This system will give a discrete acoustic alarm after 3 min., if the lift is stopped outside the charging point. This surveillance system is put out of use when turning off the key switch.

3 Operation of Handi-Lift EA6

3.1 Operation from the lifts operation panel



- 21) Emergency stop
- 22) Joystick
- 23) *Connection for remote control with spiral wire
- 24) Emergency call
- 25) Light diode
- 26) *Key lock

* Extra equipment (not standard on all lifts).

The Handi-Lift's operation panel is placed as shown on the sketch section 1.2 pos 13.

3.1.1 Emergency stop

Pressing down the red button will activate the emergency stop (*pos 1 on the sketch above*). The emergency button disconnects the power supply to the lift, and if the emergency stop is activated it is not possible to drive with the lift. To disconnect the emergency stop the red button is turned clockwise until the button pops up again, and the lift can drive again. Please make sure that the emergency stop is always turned off.

3.1.2 Joystick

When using the joystick, (*pos 2 on the sketch above*) you operate the Handi-Lift by pressing and holding the joystick in the desired direction. The Handi-Lift stops automatically when it reaches the end of the stair or a landing.

NOTE! If the joystick is released during the driving the lift will stop, and it will take a few seconds before the joystick will start the lift again.

If the lift stops at a landing, and you do not desire to get off the lift, you shall let go of the joystick and wait a few seconds, after which you shall press the joystick in the desired direction again, now the barrier arm will go down again and the lift will start to drive again.

3.1.3 Connection for remote control with spiral wire

The connection for the remote control with spiral wire (*pos 3 on sketch in section 3.1*) is not standard on all lifts; see more in section 3.3. If your lift is not purchased with a remote control with spiral wire from the beginning this connection does not exist on your lift.

3.1.4 Emergency call

The emergency call button (*pos 4 on sketch section 3.1*) is standard on all lifts. Activate the emergency call button by pressing the button, and an alarm will go off as a signal that you need help.

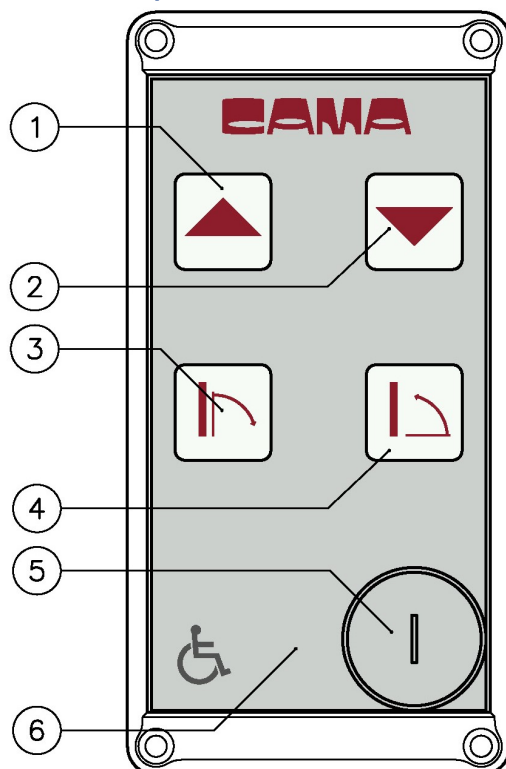
3.1.5 Light indicator

The light indicator (*pos 5 on sketch section 3.1*) blinks when the lift drives, and shines constantly when the lift is parked correctly above one of the charging points. The light will go out when the platform is folded up in parked position.

3.1.6 Key lock

The key lock cuts off the power to the lift, so the lift cannot be used (section 2.2).

3.2 Operation from control box on wall or column



- 1. Up
- 2. Down
- 3. Open
- 4. Close
- 5. Key lock
- 6. Green light diode

The Handi-Lift is a fully automatic lift, where the user does not have to operate anything manually; all operation is electrically controlled.

The operation panel shown on the sketch above is not necessarily standard, as the lift can be operated by a remote control (see section 3.4). The operation panel can be used to call the lift to a desired position, either by the user or a helper. A helper can drive the lift from a control box.

3.2.1 Up

The Up-button (*Pos 1 on the sketch section 3.2*) is used to drive the lift up the stairs, the button needs to be pressed and kept in to get the lift to drive. If the button is released during the drive, you shall wait a few seconds before the button will activate the lift again.

If you are situated at the top of the stairs or at a landing, and the lift is parked at the bottom of the stair, you can use the up-button to call the lift to the desired position.

3.2.2 Down

The Down-button (*pos 2 on the sketch section 3.2*) is used to drive the lift down the stairs. The Down-button works as the up-button, except that it drives the lift down the stairs.

3.2.3 Open

The Open-button (*pos 3 on the sketch section 3.2*) is used to fold down the platform, so you can drive on to the lift. Please note that you have to drive on to the lift with the front downwards. Remember to brake the wheelchair.

The Open-button only works when the lift is parked on a charging point.

Warning! Never fold down the platform if a person or an object is under the platform.

3.2.4 Close

The Close-button (*pos 4 on the sketch section 3.2*) is used when you wish to park the lift. Press the Close-button and the barrier arm goes up and the platform closes automatically. Please note that the close-button only works when the lift is parked on a charging point.

Warning! Never fold up the platform if a person or an object is on the platform.

3.2.5 Key switch

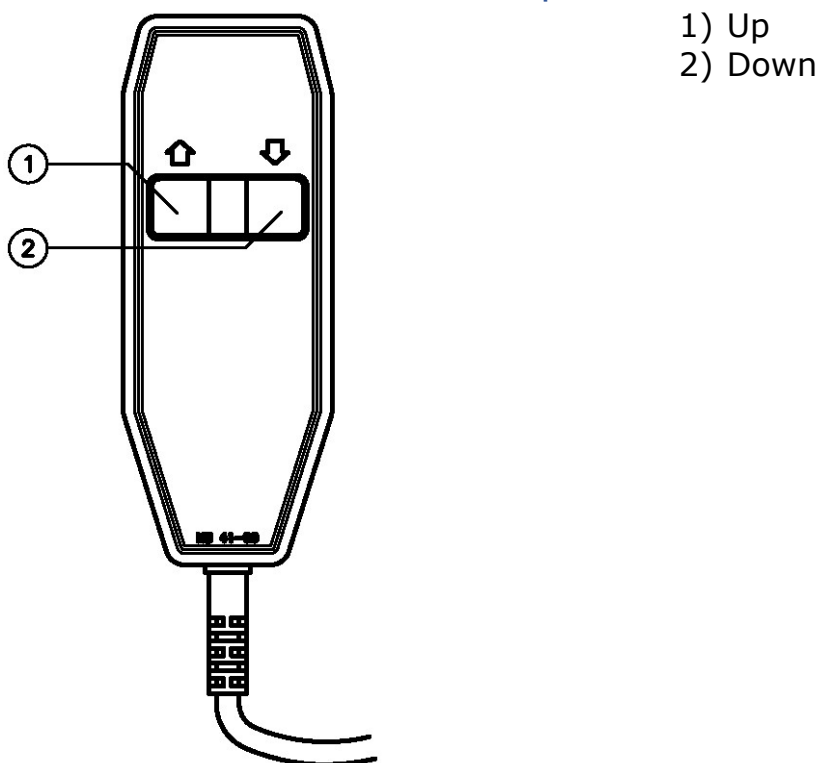
The key switch (*pos 5 on the sketch section 3.2*) is used to lock/unlock the control box and only this control box. By turning the key switch you

turn on the power supply to the control box. The control box is turned on when the key is horizontal.

3.2.6 Light indicator

The light indicator (*pos 6 on the sketch in section 3.2*) is lit when the control box is on.

3.3 Remote control with spiral wire



The remote control with spiral wire is extra equipment and not standard on all lifts. The control is used to operate the lift either by the user or a helper. The control is connected to the control panel on the lift (*pos 3 on the sketch section 3.1*); please note that the guide pins on the plug fits when inserting the plug.

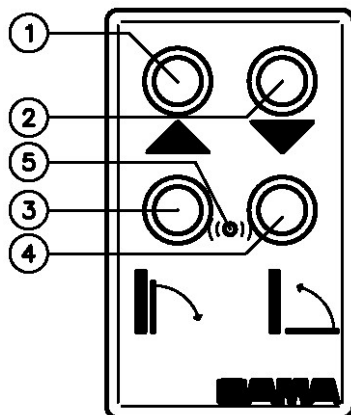
3.3.1 Up

Push the Up-button and keep it down (*pos 1 on the sketch above*), this will make the lift drive up.

3.3.2 Down

Push the Down-button and keep it down (*pos 2 on the sketch above*), this will make the lift drive down.

3.4 Operation with wireless remote control



- 1) Up
- 2) Down
- 3) Open
- 4) Close
- 5) Light indicator

The remote control uses one 9V battery.

The wireless remote control, which is shown on the sketch above is extra equipment and is not standard on all lifts. The remote control can replace the control box (see section 3.2). The remote control can be used to call the lift to a desired position either by the user or the helper. A helper can operate the lift with this control.

3.4.1 Up

The Up-button (*Pos 1 on the sketch above*) is used to drive the lift up the stairs, the button needs to be pressed down and kept in to make the lift drive. If you release the button during the drive, you have to wait a few seconds before the button can activate the lift again.

If you are at the top of the stairs or at a landing, and the lift is parked at the bottom of the stairs, you can use the up-button to call the lift to the desired position.

3.4.2 Down

The Down-button (pos 2 on the sketch above) is used to drive the lift down the stairs. The Down-button works as the up-button, except that it drives the lift down the stairs.

3.4.3 Open

The Open-button (*pos 3 on the sketch above*) is used to fold the platform down, so you can drive on to the lift. Please note that you shall drive on to the lift facing downwards. Remember to brake the wheelchair.

The Open-button only works when the lift is parked on a charging point.

Warning! Never fold down the platform if there is a person or an object under the platform.

3.4.4 Close

The Close-button (*pos 4 on the sketch section 3.4*) is used when you wish to park the lift. Push the Close-button and the barrier arm goes up and the platform closes automatically. Please note that the Close-button only works when the lift is parked on a charging point.

Warning! Never fold up the platform if a person or an object is on the platform.

3.4.5 Light indicator

The light indicator (*pos 5 on the sketch section 3.4*) is lit when the remote control is used.

4 Emergency lowering

Emergency lowering is installed on the lift as an extra safety feature, it is used in the case of a power failure and if the lift stops while in use and the user cannot get off the lift safely.

Warning! Never emergency lower the lift if a person or an object is on the platform.

Never attempt to emergency raise or lower the lift if the lift's drop lock is activated. Contact your maintenance company immediately. We recommend that a technician or a technical minded helper should carry out the emergency lowering.

FIRST TURN OFF THE POWER TO THE LIFT (the key switch on the lift's right side, see section 2.2)

Find the 8mm unbrako screwdriver, which came with your Handi-Lift.

Next you should check if your lift is a right hand or left hand lift. Look at the lift from the bottom of the stairs; if the lift is installed on the right side it is a right hand lift and vice versa.

4.1 Emergency lowering



Remove the rubber cover on the right side (*pos 15 on the sketch section 1.2*); insert the screwdriver in the hole that appears. If it is a right hand lift, you turn the screwdriver anti-clockwise to drive the lift down and clockwise to drive the lift up. If it is a left hand lift you turn the screwdriver in the opposite direction.

4.2 Emergency raising of the barrier arms



Remove the rubber cover on the top (*pos 17 and 18 on the sketch section 1.2*); insert the screwdriver in the hole closest to the barrier arm you wish to raise. Turn the screwdriver in the arrows direction to raise the barrier arm.

Warning! NEVER raise the barrier arm if the lift has not reached the bottom completely and **NEVER** raise the lower barrier arm when the lift is parked at a landing or at the top of the stair.

4.3 Emergency raising of the platform

Remove the rubber cover on the left side (*pos 16 on the sketch section 1.2*); insert the screwdriver in the



hole that appears. Turn the screwdriver in the arrows direction to raise the platform.

Warning! Never raise the platform if a person or an object is on the platform.

5 Extra equipment

5.1 Side-access-ramp

The side-access-ramp (*pos 6 on the sketch section 1.2*) is only used when there is a specific wish or when there is not enough room to drive off the lift at the bottom of the stairs.

Please note that you shall drive on to the lift facing downwards. Remember to brake the wheelchair.

5.2 Folding seat

Walking impaired persons can use the folding seat (*pos 7 on the sketch section 1.2*). The folding seat is manually operated and is folded down by tilting it, before sitting down make sure that the support leg is folded out completely and is steadily placed on the platform. Please note that if you do not fold up the folding seat after use a spring will automatically fold up the seat when the platform is folded up.

5.3 Alarm

Alarm (*pos 19 on the sketch section 1.2*) is only used when there is a specific wish or demand that an alarm shall make noise when the lift is driving. If the lift is installed in a public place an alarm is not extra equipment but mandatory.

5.4 Flashlight

Flashlight (*pos 20 on the sketch section 1.2*) is only used when there is a specific wish or demand that a light shall flash when the lift is driving.

5.5 Rain cover

On external lifts it is possible to get a rain cover, which protects the lift against the weather and vandalism.

5.6 Flashlight and buzzer

On lifts, where you cannot see the entire rail from the control box/remote control, or where the customer asks for it, flashlight and buzzer can be equipped to warn about danger on the stair.

6 What to do if your lift fails to work

If the advice below does not solve your problem, please contact your maintenance company.

Symptom	Cause	Solution
The lift will not start (no light in the control lamp) The lift beeps	Emergency stop on lift is activated	The emergency stop is released by turning it to the right in the arrows direction
	Overload (see section 1.3 regarding load cell)	Go back to the starting point and minimize the load
The lift will not drive up	Safety limit switch at the ramp closest to the stair is activated	The ramp is pushed towards the stair (safety switch is deactivated)
The lift will not drive down	Safety limit switch at the ramp away from the stair is activated	The ramp is pushed away from the stair (safety switch is deactivated)
	Safety switch at the safety plate in parked position	Remove the obstacle. Contact the maintenance company if you are having problems doing so
	Safety switch at the safety shackle	Remove the obstacle. Contact the maintenance company if you are having problems doing so
Barrier arms will not go up automatically in lower position	There is an obstacle under the lift	Drive the lift up a bit and remove the obstacle under the lifts platform. Contact the maintenance company if you are having problems doing so
The lift stops between the floors	Upper or lower ramp end switch on the platform is activated	Release the ramp end switch or remove the obstacle. Contact the maintenance company if this is not possible

7 Warnings

NEVER allow more than one person on the lift. (See maximum load on the nameplate on the lift)

ALWAYS observe the lift's path

NEVER allow children to play with the lift.

NEVER let water get in touch with the electric parts in the lift.

NEVER put objects on the rail or stair, where they could get in touch with the lift when in use.

ALWAYS remember to brake the wheelchair, so it does not move when driving.

ALWAYS drive on the lift facing downwards.

NEVER attempt to help the barrier arms raise or lower.

Never attempt to emergency lower/raise the lift if the lifts drop lock is activated. Contact the maintenance company immediately.

Please note that snow can cause a breakdown. Remove all snow from the lift's path and the landings **BEFORE** using the lift. White frost on the rail can cause a breakdown.

8 Service

The Handi-Lift is delivered mounted and tested by trained and by CAMA ApS authorised personnel. The frequency of the compulsory maintenance will in Denmark be determined after the installation by an impartial person. Cama recommends that the Handi-lift is maintained once a year as a minimum.

Possible errors between the inspections must be reported to the supplier or a by them approved person immediately.

For safety reasons we recommend that only original spare parts are used to repair the lift, and the repair is carried out by authorised personnel. Should unoriginal parts be used, and the repair be carried out by unauthorised personnel the warranty is not longer valid.

9 Cleaning

Before starting the cleaning of your lift, the power on the lift **MUST** be turned off (*see section 2.2*) Remember to turn on the power to the lift again after the cleaning.

The Handi-Lift is made of material, which is easy to wipe off. The painted metal and plastic parts must be wiped off with a damp not wet cloth. You may under no circumstances use abrasive cleaners, bleach or solvent-based cleaners, as these will damage the surface. Please remember that excess water can cause problems if it enters the lift's electrical parts.