



OPERATION MANUAL FOR HANDI-LIFT 7

Original Version

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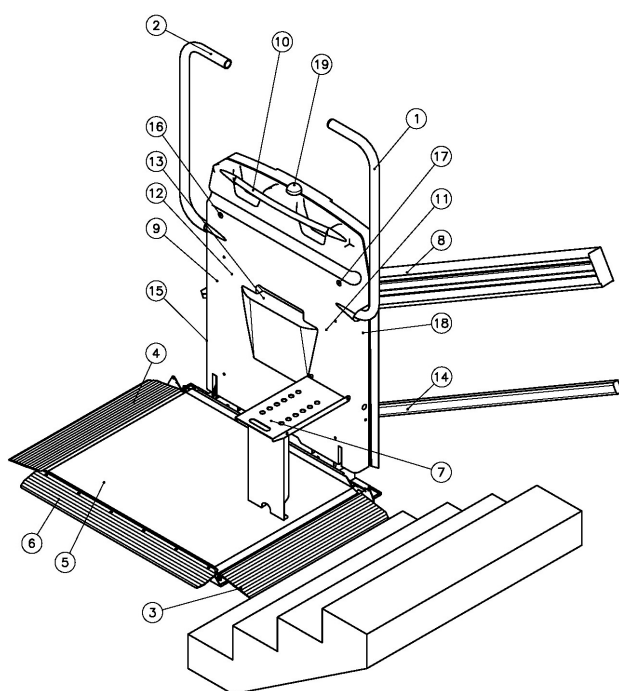
1 Introduction

1.1 Congratulations with your new CAMA Handi-Lift:

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

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

1.2 Sketch of Handi-lift EA7:



- 1) Upper barrier arm
- 2) Lower barrier arm
- 3) Upper flap
- 4) Lower flap
- 5) Platform
- 6) *Side access ramp
- 7) *Fold down seat
- 8) Rail
- 9) Cover
- 10) Handle
- 11) Type sign
- 12) Maximum weight sign
- 13) Operation panel
- 14) Support rail
- 15) Emergency lowering of platform
- 16) Emergency raise of lower barrier arm
- 17) Emergency raise of upper barrier arm
- 18) *Alarm
- 19) *Flash light

* Extra equipment (not standard on all lifts).

1.3 Generally about the lift:

Type EA7 is a fully-automatic lift, where the user does not have to operate anything manually, all operations are electrically controlled.

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

The Handi-Lift is designed for a wheelchair-user or a seated person (this demands a fold down seat). We cannot recommend standing up on the lift. The lift can either be operated by the user or a helper (the helper may not be on the lift together with the user). The lift is designed for straight stairs and is manufactured individually with consideration to the stair and its width. The lift can be delivered for both indoor and 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, animal, 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 weight limit. Please note that the lift is equipped with a weight cell, which means that if the lift is used with too much load (overload), the lift 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 lifts type sign). Please note that when the lift is parked you must be able to open main doors and emergency exits.

In case of fire do not use the lift.

At the lift installation a main power switch is installed, where the power to the lift can be cut off. The main power switch is only used during lift maintenance. 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 you use the Handi-lift:

The lift is equipped with various safety features, which **must** be tested before you use the lift. If the safety features do not work, you **cannot** use the lift and you shall contact your maintenance company.

Please note that you shall drive on the lift with the front downward. Remember to brake the lift.

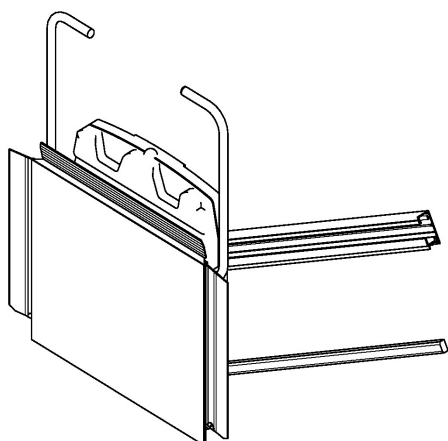
As user of the lift you need to note if the functions described below works as they should, however it is the installer's task to check the functions during the installation and during the regular maintenance inspections on the lift.

Check that upper and lower barrier arm (*pos 1 and 2 on the sketch in section 1.2*) moves as they shall. Lower barrier arm may not open at landings, as it shall prevent the user from driving off the lift in that direction.

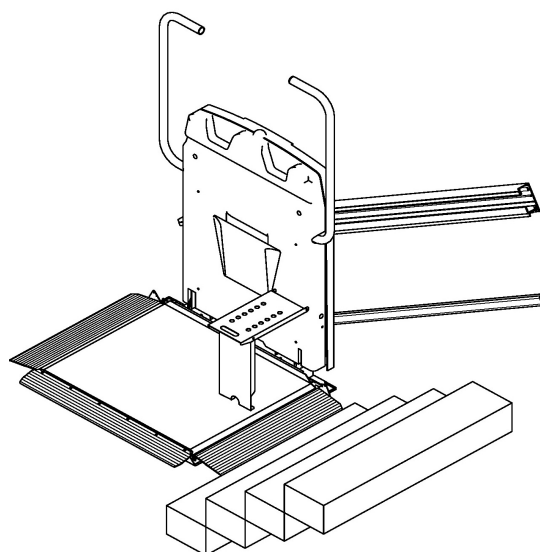
Check upper and lower flap on the platform (*pos 3, 4 and 5 on the sketch in section 1.2*). Touching the upper flap while the lift is driving up and the lower flap while the lift is driving down checks the flaps on the platform. The lift shall stop automatically when the flaps are touched, and it cannot drive again until the obstacle is removed. Touching the platforms under plate when the lift is driving down the stairs shall also stop the lift automatically and first when the obstacle is removed can the lift drive again.

Sketch of all the positions:

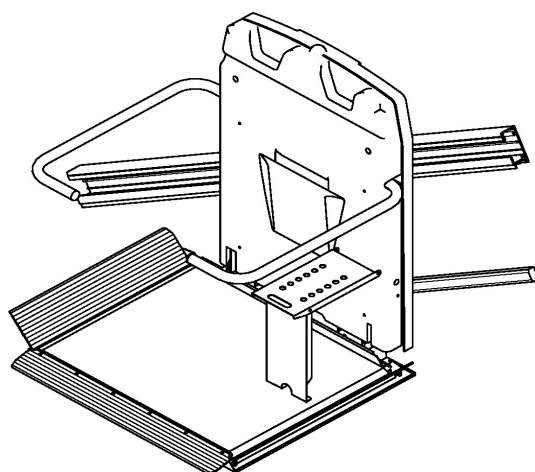
The sketch below shows the Handi-lift in the various positions it can be in. The sketches show a left hand lift.



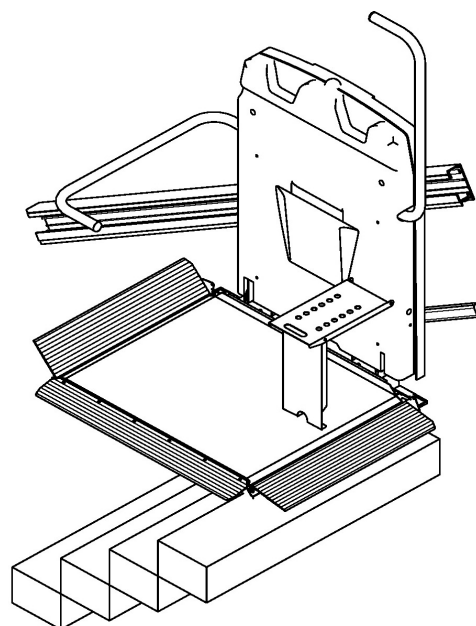
Handi-lift in parked position.



Handi-lift ready for use at the bottom of the stair.



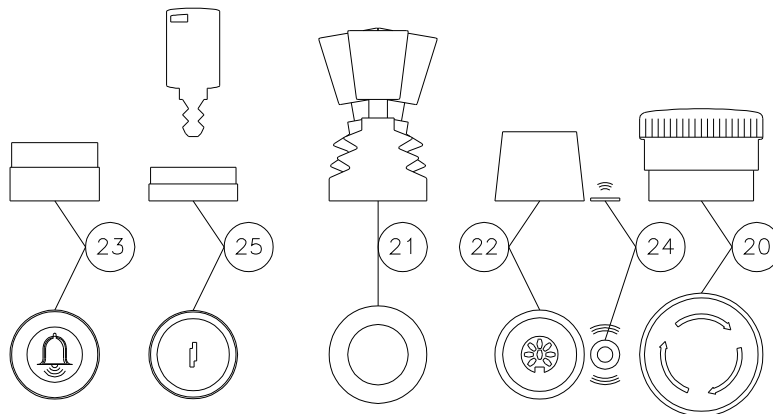
Handi-lift when driving.



Handi-lift at landing at the top of the stairs.

2 Operation of Handi-Lift EA7

2.1 Operation from the lifts control panel:



20) Emergency stop

21) Joystick

22) *Connection for remote control with spiral wire

23) Emergency call

24) Light diode

25) *Key lock

* Extra equipment (not standard on all lifts).

The control panel of the Handi-lift is situated as shown on the sketch section 1.2 pos 13.

2.1.1 Emergency stop:

If the red button is pushed down the emergency stop will be activated and a light will appear (pos. 1 on the sketch above). The emergency stop will cut off the power supply for the lift, and if the emergency stop is activated it is not possible to drive with the lift. To release the emergency stop you need to turn the red button clockwise until the button comes up again and the lift can now drive again. Please make sure that the emergency stop always is released.

2.1.2 Joystick:

You use the joystick, (*pos 2 on above sketch*) on the Handi-Lift by pushing the joystick in the direction you wish to drive. The Hand-lift stops automatically when it reaches the end of the stairs or a landing.

Please note! If you let go of the joystick while driving the lift will stop and it takes a couple of seconds before the joystick will start the lift again.

2.1.3 Connection for remote control with spiral wire:

The connection for the remote control with spiral wire (*pos 3 on sketch in section 2.1*) is not standard on all lifts; see further information in section 2.3. If the lift is not bought with remote control with spiral wire from the beginning this connection is not on your lift.

2.1.4 Emergency call:

The emergency call button (*pos 4 on sketch in section 2.1*) is standard on all lifts.

Activate the emergency call button by pressing the button and an alarm will start as a signal that you need help.

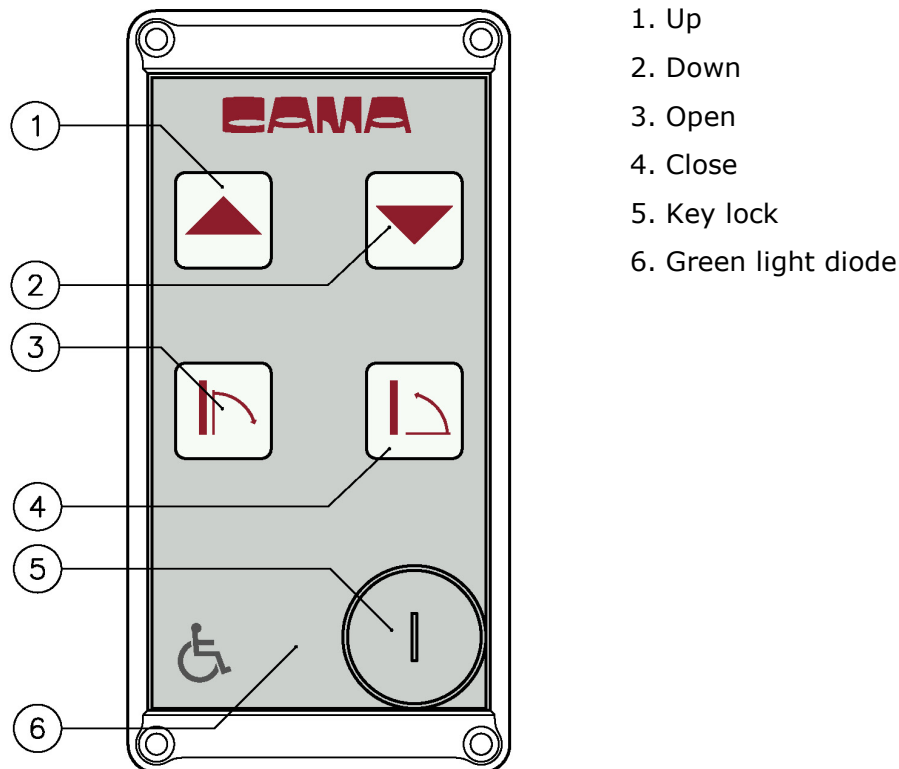
2.1.5 Light diode:

The light diode lights green (*pos 5 on sketch in section 2.1*) when there is power on the lift and the emergency stop is deactivated. The lift can only be used when the green light is on. If the light diode is flashing there is overload on the lift.

2.1.6 Key lock:

The key lock cuts off the power to the lift, so the lift cannot be used.

2.2 Operation from control box on wall or column:



The control boxes can vary in look, but the symbols for the functions are the same on all type of boxes.

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

The control box as shown above is not necessarily standard, as the lift can be operated by a remote control (see section 2.4). The control box can be used to call the lift to the desired position either by the user or a helper. A helper can operate the lift from the control box.

The control box is installed at the top and the bottom of the stairs, but can in some cases also be installed in a special column. **Control boxes with power supply** can only be used when the green lamp is lit on both control boxes. The control boxes can be locked with the key lock and the green light is turned off on both control boxes. On **control boxes with battery supply** the green light will first be lit when one of the buttons is pushed. The key lock will only lock the control box in question. The control box uses 3 AA batteries and these will be replaced during maintenance or when needed.

2.2.1 Up:

The UP-button (*Pos 1 on sketch in section 2.2*) is used to drive the lift up the stair, the button needs to be pushed down and held down in order to get the lift to drive. If the button is released during the drive, you need to wait a couple of seconds before the button will activate the lift again.

If you are standing at the top of the stairs or on 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.

2.2.2 Down:

Down-button (*pos 2 on sketch in section 2.2*) 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.

2.2.3 Open:

The Open-button (*pos 3 on sketch in section 2.2*) is used to fold the platform down, so you can drive on the lift. Please note that you need to drive on the lift with the front downwards. Remember to brake the wheelchair.

The Open-button only works when the lift is parked at upper or lower end position.

Warning! Never open the platform, if there is a person or an object under the platform.

2.2.4 Close:

The Close-button (*pos 4 on sketch in section 2.2*) is used when you want to park the lift. Push the Close-button down and the barrier arms goes up and the platform is closed automatically. Please note that the Close-button only works when the lift is positioned at the upper or lower end position

2.2.5 Key lock:

Warning! Never close the platform, if there is a person or an object on the platform.

Control box with battery supply

The key lock (*pos 5 on sketch in section 2.2*) is used to lock the control box and only this control box. By turning the key you will turn on the power supply to the control box. The control box is turned on when the key is horizontal.

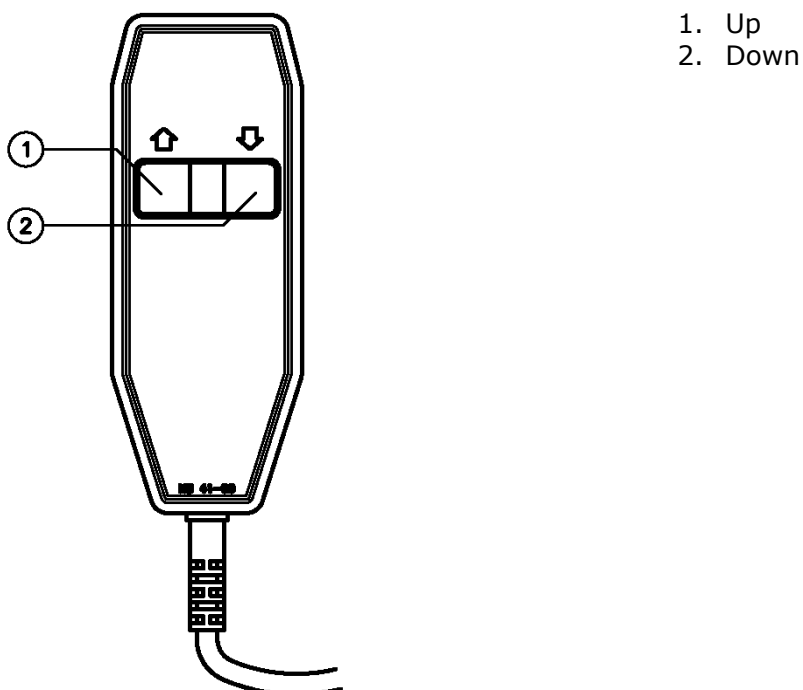
Control box with power supply

The key lock (pos 5 on sketch in section 2.2) is used to lock both control boxes and the green light is turned off on both control boxes.

2.2.6 Light diode:

The light diode (*pos 6 on sketch in section 2.2*) is lit when the control box is turned on.

2.3 Remote control with spiral wire:



The remote control with spiral wire is extra equipment and not standard on all lifts. The remote control with spiral wire can replace the function of the joystick and is often used by a helper. The remote control is connected to the control panel on the lift (*pos 3 on the sketch in section 2.1*); please observe that the guide pins on the plug fits, when you insert the plug.

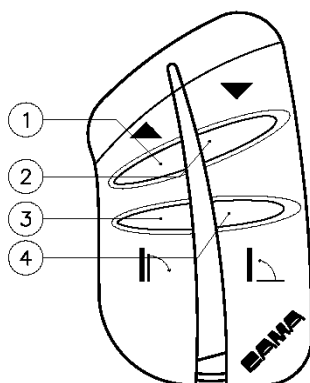
2.3.1 Up:

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

2.3.2 Down:

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

2.4 Operation with wireless remote control:



1. Up
2. Down
3. Open
4. Close

The wireless remote control, as shown on the sketch, is extra equipment and is not standard on all lifts. The remote control can replace the control box (see section 2.2.). The remote control can be used to call the lift to the desired position either by the user or a helper. A helper can operate the lift with this control. **OBS: when using the wireless remote control the lift MUST be under supervision.**

2.4.1 Up:

The up-button (Pos 1 on the above sketch) is used to drive the lift up the stairs, push the button down and hold it down to get the lift to drive. If you let go of the button when driving, you will have to wait a couple of seconds before the button can activate the lift again.

If you are positioned at the top of the stairs 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.

2.4.2 Down:

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

2.4.3 Open:

The open-button (*pos 3 on above sketch*) is used to fold the platform down, so you can drive on 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 works only when the lift is parked on upper or lower landing.

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

2.4.4 Close:

The close-button (*pos 4 on the sketch in section 2.4*) is used when you wish to park the lift. Push the close-button and the barrier arms go up and the platform is closed automatically. Please note that the close-button only works when the lift is parked on upper or lower landing.

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

3 Emergency lowering

Disconnect the power to the lift on the main switch!

Find the 8mm Umbraco screwdriver that came with the lift.

3.1 Emergency raise of the barrier arms:

← ←
EMERGENCY RAISING

Remove the rubber plug on the lifts front cover. (*pos 16 and 17 on the sketch in section 1.2*); put the screwdriver in the hole for the barrier arm you which to raise. Push the screwdriver all the way in to release the barrier arm. The barrier arm can now be opened.

Warning! You must never raise the lower barrier arm, if the lift is not parked at the bottom of the stairs. **Contact your dealer if you have emergency raised the barrier arm.**

3.2 Emergency raise of the platform:

→
EMERGENCY RAISING

Remove the rubber plug in the left side of the lifts front cover (*pos 15 on sketch in section 1.2*); Put the screwdriver in the hole and turn it clockwise in order to raise the platform (close the platform).

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

3.3 Emergency lowering of the lift:



In order to emergency lower the lift you need to dismantle the lift's front cover in order to get access to the emergency turning handle on the driving motor. In order to drive the lift up the handle is turned clockwise and to drive the lift down the handle is turned anti-clockwise.

Warning!

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

Never try to emergency lower the lift up or down, if the lift's drop lock is activated. Contact the dealer immediately.

We do not recommend that the emergency lowering of the lift is carried out by others than the technicians of your dealer's company.

4 Extra equipment

4.1 Side-access-ramp:

The side-access-ramp (*pos 6 on sketch in 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 have to drive on the lift with the front downwards. Remember to brake the wheelchair.

4.2 Fold down seat:

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

4.3 Alarm/emergency call:

Alarm (*pos 18 on sketch in section 1.2*) is only used if there is a specific wish or demand that an alarm shall make a sound when the lift is driving. If the lift is placed in a public place alarm/emergency call is not extra equipment, but is compulsory.

4.4 Emergency release:

Emergency lowering without removal of the front cover can be installed as a further safety feature and it works like this:

Remove rubber plug at the top of the lifts cover. Insert the screwdriver in the hole; push the screwdriver to the bottom in order to get the pinion in mesh inside the lift and turn. The screwdriver is turned clockwise to get the lift to drive up and to get the lift to drive down the screwdriver is turned anti-clockwise.

Warning! Never emergency lower the lift, if there is a person or an object on the platform. **Never try to emergency lower the lift up or down if the lifts drop lock is activated. Contact the dealer immediately.** We do not recommend that emergency lowering is carried out by others than the technicians of your dealers company.

In case of power failure or if the lift stops while in use and the user cannot get off the lift safely, the lift can be emergency lowered to a secure position: TURN OFF THE POWER TO THE LIFT FIRST. Next you insert the emergency turning handle in the shaft and turn the handle in the shown direction.

4.5 Flash light:

Flash light (*pos 19 on sketch in section 1.2*) is only used if it is a specific wish or demand that a light shall flash when the lift is driving.

4.6 Rain cover:

On outdoor lifts you can get a rain cover, which will protect the lift against sun, wind and weather as well as vandalism.

4.7 Light and sound:

On lifts where it is not possible to see the entire driving range of the lift from the control boxes, or where the client requires it, the lift can be equipped with flash light and sound in order to warn about danger on the stair.

4.8 Vandal proof barrier arms:

The lift can be delivered with vandal proof barrier arms, so the barrier arm is springy in order to protect the motors in the lift.

5 What to do if your lift fails to operate

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

Symptom	Cause	Solution
The lift will not start (no light in the control lamps)	Disconnected on the safety switch	Turn on the safety switch
	Emergency stop on lift is activated	Release emergency stop by turning it to the right in the arrows direction
	Fuses in the main switchboard or RCCB-relay	Change fuses or activate RCCB-relay
The control lamp is flashing and the lift is blipping	Overload (see section 1.3 concerning load cell)	Drive back to the start point and minimize the load.
Lift will not drive up	Safety limit switch at the ramp closest to the stair is activated	The ramp is pushed towards the stair (limit switch is deactivated)
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 (limit switch is deactivated)
Barrier arms will not drive up automatically at the bottom position (only valid at fully automatic lifts)	There is an object below the lift	Drive the lift a bit up and remove the obstacle under the lift platform. Please call the maintenance department if the obstacle is difficult to remove

Lift stops between the landings	Fuses in main power board or RCCB-relay	Change fuses or activate RCCB-relay
	Upper or lower ramp limit switch on platform is activated	Release ramp limit switch or remove obstacle. Call the maintenance department if this is not possible

6 Warnings

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

ALWAYS observe the lift's lane.

NEVER allow children to play with the lift.

NEVER allow water to come in contact with the electrical parts in the lift.

NEVER place objects on the rail or on the stair, where they can come in contact 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 the lift up or down if the overspeed governor is activated. Contact the maintenance company immediately.

Please note! Snow can cause a breakdown. Remove all snow from the lift's lane and the landings **BEFORE** using the lift.

7 Service

The Handi-Lift is delivered mounted and tested by trained and by Cama authorised personnel. The number of examinations of the lift per year depends on the law in your country, however Cama recommends that the Handi-Lift is examined minimum once a year. Possible errors between the examinations must be reported to the supplier or a by them approved person immediately.

For safety reasons it is recommended that you only use original spare parts and that the reparation is carried out by authorised personnel. Should non-original spare parts be used and the repair carried out by unauthorised personnel the warranty is no longer valid

8 Cleaning

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

The Handi-Lift is made of material, which is easy to wipe off. The painted metal and the 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.