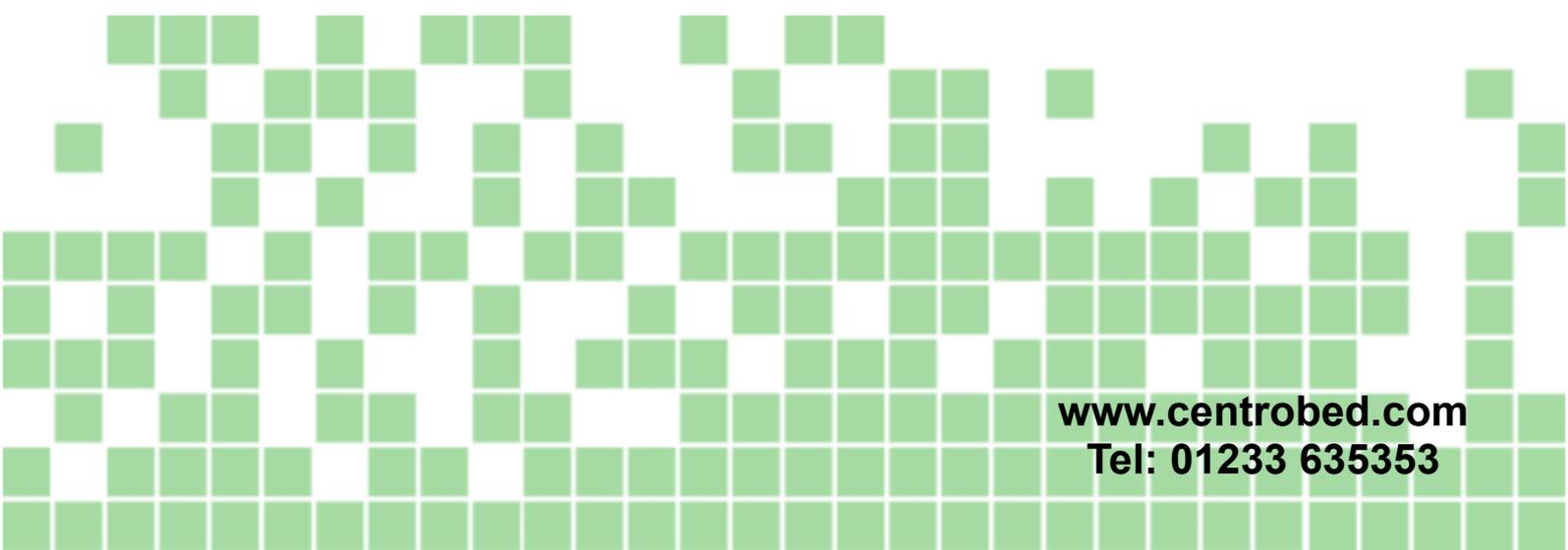


**Caspian Pillow Lifter**



**[www.centrobed.com](http://www.centrobed.com)**

**Tel: 01233 635353**

# INSTRUCTIONS FOR USE

## Equipment installation instructions

To set up the equipment you will need the following:

Caspian Frame, Control Unit \2 and a Hose.

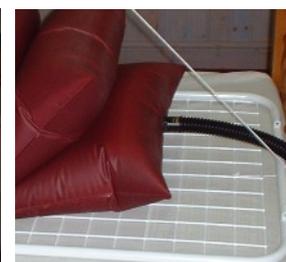
All of these are supplied by Centromed. The Control Unit could be a Hi Lo, quiet or dual output version. The Hose is supplied with the Control Unit. The Frame may come with a cover. There are four different covers available, these are a low risk pressure relieving foam in 117cm (46 inches) and 152 cm (60 inches) and medium risk pressure relieving foam in the same lengths.

## Fitting

The frame can be used on almost any bed as it lays on top of the mattress, see pictures below for details. The Hose will need connecting to the black connectors on the lower of the three bellows and the Control Unit. Plug the Control Unit in to a mains outlet and switch on.



*Caspian Pillow Lift on a bed*



*The hose connection*

## Caspian Pillow change instructions

If you need to remove or change the pillow for any reason, first you will need to undo the knot that holds the safety cord to the bottom frame. Then you will need to pull the string through the hole in the pillow. Now you can slide the pillow off the top frame and replace it by following the process in reverse. Please see pictures below.



*Safety cord on bottom frame*



*Hole in pillow for safety cord*



*Safety cord on top frame.*

## Using your Caspian

Control Unit Plus 2 users should disregard this passage and read the instructions that came with your Control Unit Plus 2. The handset is a pneumatic device, which uses air to activate the main switches that are located inside the control unit. No electrical component whatsoever is connected to either the bed or the user. It has two buttons, the green one to raise the Caspian and a white one to lower the Caspian.

When the Caspian Frame reaches 90° the control unit will operate a safety device stopping it from raising any further.

## Application

The Caspian is a fully portable device for people who experience problems getting in and out of bed or getting to a sitting position. The Caspian is easily fitted to beds, and can support a patient in variable positions for added comfort.

## Variators

The Caspian is available in several variants these include different types and sizes of covers, and control unit options.

## Control Units

The Caspian comes with the standard Hi / Lo pump unless a special version is requested. These special versions include the Qutee version with slow movement and very little noise. A dual unit called the Control Unit Plus is available to power both your Leg Lifter and your Caspian. This unit is also available in a Qutee super quiet version. Each of the above versions are available with an Environmental Control option for connection to Possum or Fox environmental control systems (ECS).



## Servicing

The Caspian should be serviced once a year. The unit should be cleaned, tested for electrical safety (P.A.T.) and have its' handset backup batteries replaced.

## Repairs

Note: If this equipment was supplied by Centrobed, you may contact us on the details given towards the back of this manual. If the equipment was supplied to you by another company, please contact this supplying company with regards to repairs.

## Safety Warnings

This unit is mains powered. Ensure it is disconnected from the mains before opening the case. This unit is intended to be serviced by qualified personnel only. When using a pillow lift please ensure you are aware of the risk to partner, animals, children etc when lowering the device.

## Parts available from Centrobed

100/S Case	100/F Front Panel
106 Air Switch	106/B Safety Air Switch
107 Twin Tubing per meter	107/A Single Tubing per meter
108S Fan Motor unit	109 Solenoid
110 Mains Switch	111 Fuse Holder and Fuse
112 Wiring Loom	119A Outlet Pipe
124C Caspian Top Frame	125C Caspian Bottom Frame
133 2/4 Cord	134 Fuse 5Amp 250V 20mm
140 Rod End Cap	146 1/2" BSP Plug
152 Mains Lead	160 Brass Screw M3 x 12mm
160A Brass nut M3	183 Front Panel Overlay
902 Cable Tie Small White	903 Cable Tie Black
910 M3 Ring Terminals	913 Terminal 0.25 Blue
915 Terminal 0.187 Bare	925 Sealant
929 Screw No.8 x 19mm	942 Terminal 0.187 Red
943 Terminal 0.25 Red	969 Screw M3 x 16mm
CBL Caspian Bellows	CPR Caspian Short Rod
CR Caspian Long Rod	H Hose
HB Button Handset	HE Hose Extended
LHB Lever Style Handset	

## Frame repair flowchart explanations

A. Test the Caspian frame with a spring gauge available from Centrobed. If the frame inflates / deflates OK and can hold 20 lb. on the spring gauge for 10 minutes it should work properly in the field. Reasonable inflation time is 10 or 30 seconds (dependant on Hi Lo setting), and deflation time of 20 to 30 seconds. To use the spring gauge have the frame inflated to about 30° on a bench, then attach the spring gauge to the upper and lower frame at the opening end, inflate further until the gauge reads 20 lb. It may be difficult to set 20lb exactly, in this case take a reading between 20 to 25lb and remember it.

B. Test the frame as in section A. If it leaks see section D. If it is slow to inflate / deflate see section C.

C. To replace the seal lay the frame open and pull the bellows from the lower frame, clean all traces of the old seal from the frame and the bellows and fit a new seal to the frame. Before removing the seals upper paper cover, trial fit the bellows ensuring that the hole in the frame will align with the hole in the bellows. It may be necessary to pull the bellows quite taught to align the holes. Finally, remove the upper paper cover from the seal, and align the hole in the bellows with the hole in the frame, ensuring the bellows lay flat and completely without creases on the seal.

D. With the spring gauge fitted and the frame inflated to 20 lb. test the area around the end of the hose with soapy water, if there is any bubbling around the hose ensure it is fitted properly and not damaged. If it is damaged, replace it with a new one.

E. With the spring gauge fitted and the frame inflated to 20 lb. test the bellows with soapy water, if there is any bubbling replace with a new one ensuring it is fitted correctly see section F.

F. To replace the bellows remove an end cap from the rod holding the bellows, withdraw the rod about 150mm (6 inches) and slide the bellows off the rod. Slide a new bellows on to the rod ensuring the hose connection in the bellow is in the lowest bellow. Refit the rod and end cap. Test the frame as in section A.

G. If no leak has been found on the frame, see the control unit repair section for help on leaks at the control unit ends



J. Check which type of handset you have first, there are 3 types. 1) Green and white push buttons with integral twin tubing, 2) Yellow or grey large circular buttons without integral twin tubing, 3) Blue or Yellow topped lever style without integral twin tubing. Type 1 handsets disconnect from the control unit at the front panel and replacements are supplied with twin tubing. Type 2 & 3 handsets disconnect at the handset end and replacements are not supplied with twin tubing. The different types of handset are fully interchangeable. To change a type 1 handset, carefully pull the tubes from the barbs in the front panel, and reconnect the new handset. To change a type 2 or 3 handset, pull the tubing from the handset and reconnect the new handset. Both types of handset will require testing to check that the connections are the correct way round.

K. If the Control unit does not work after the handset has been changed, replace the air switch.

L. To change an Air Switch it is necessary to remove the lid of the equipment. CAUTION this equipment is mains powered and should be isolated from the mains before it is opened. To remove the lid undo the 6 (six) screws in the upper case, (2 in each side and back), squeeze the sides of the lid inward to release the lid from the handle moulding. The air switches are mounted on the inside of the front panel. The "up" air switch has only 2 (two) wires while the down air switch has 3 (three) wires. Pull each wire from the switch to be changed and attach it to the new switch in the corresponding position, then unscrew the old switch from the front panel and attach the new one. Refit the lid before testing the unit.

M. Test the unit operates correctly now the new switch has been fitted. If it does not the wiring should be checked.

N. To check that the wiring is in place it will be necessary to remove the lid of the equipment. CAUTION this equipment is mains powered and should be isolated from the mains before it is opened. To remove the lid undo the 6 (six) screws in the upper case, (2 in each side and back), squeeze the sides of the lid inward to release the lid from the handle moulding. The wiring is based around the two air switches mounted on the front panel, but also included are the mains switch, solenoid valve and fan-motor. The blue wire from the top of the mains switch goes to the fan motor housing, and then continues to the solenoid valve. The brown wire goes from the top of the mains switch to the middle terminal on both of the air switches. The white wire goes from the terminal closest to the front panel (lower terminal) on the down air switch to the fan motor housing. The red wire goes from both air switches (top terminals) to the solenoid valve. If all of these wires are in place it is possible to check those from the fan motor to it's housing. See section R. to remove and reassemble the housing. Refit the lid before testing the unit.

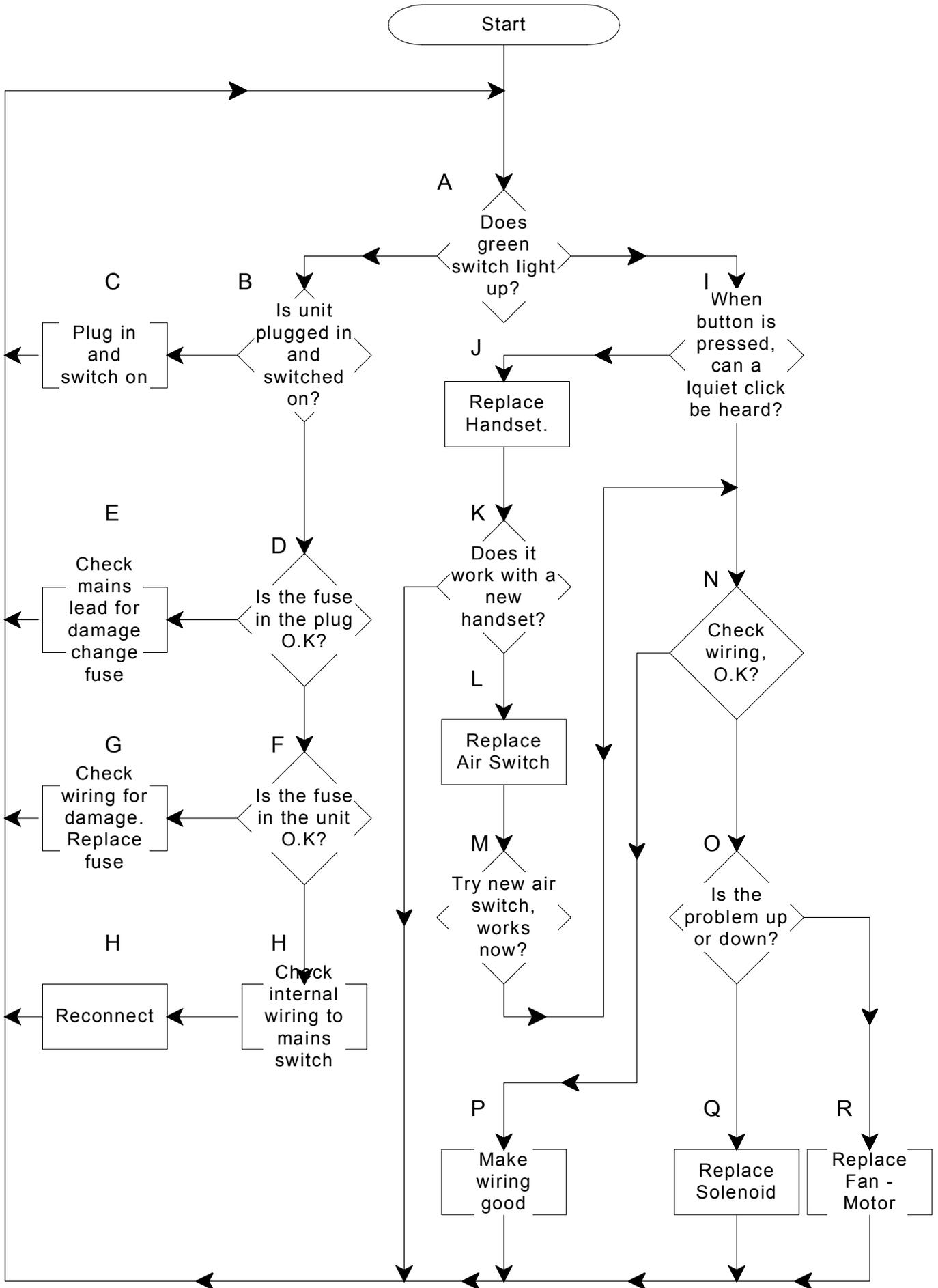
O. If everything checked so far is OK the problem must be with the solenoid or the fan motor. With the unit plugged in and switched on, press the up button. If the unit only gives a loud click, replace the fan motor as described in section R. If the unit only gives a whining noise but blows out no air, replace the solenoid valve as described in section Q.

P. If there is a fault with the wiring it should be repaired to IEC60601-1 if you are unsure of the correct way to do this return the unit to Centromed for repair. Refer to section N for description of wiring circuit.

Q. See section R. and remove the fan motor. With the fan motor removed it will be possible to access the internal fitting holding the solenoid valve to the lower fan motor housing. Remove this fitting and the fitting holding the solenoid valve to the front panel. Disconnect the wires from the solenoid valve and remove it from the control unit noting the position of any rubber seals. Refit the new valve with the seals. Refit the lid before testing the unit.

R. To replace the fan motor it will be necessary to remove the lid of the equipment. CAUTION this equipment is mains powered and should be isolated from the mains before it is opened. To remove the lid undo the 6 (six) screws in the upper case, (2 in each side and back), squeeze the sides of the lid inward to release the lid from the handle moulding. Remove the 10 (ten) screws from the fan motor housing and prise apart. Noting the orientation of the fan motor, pull it from the lower housing and disconnect the wires from the fan motor. All of the sealant should be removed from the housing so the new fan motor can be fitted. Reconnect the wires to the fan motor (it is unimportant as to the way round) and fit the fan motor to the lower housing. Sealant should be used between the upper and lower housings. The upper housing screwed back into position ensuring that the wires are not trapped between the housing flanges. Leave the sealant to dry for at least 1 hour. Refit the lid before testing the unit.

# Hi/Lo control unit repair flowchart



# TECHNICAL INFORMATION

## Specifications

Country of Origin . . . . .	England
Name of Equipment . . . . .	Caspian
Description of Equipment . . . . .	Bed Raising Aid
Voltage . . . . .	230 V ~ (A.C.)
Power Supply Frequency . . . . .	50 Hz
Power Consumption . . . . .	2.9 A Peak
Power Consumption Stand-By . . . . .	1mA
Fuse in Control Unit . . . . .	T5A 250V
Fuse In Plug . . . . .	5A Mains Fuse
Class . . . . .	II
Type . . . . .	BF
Electrical Safety Standard . . . . .	BS EN 60601-1
EMC Standard . . . . .	BS EN 60601-1-2
Duty Cycle . . . . .	100%
Weight Limit Low Setting . . . . .	15 Stone (95.3 Kilos)
Weight Limit Hi Setting . . . . .	20 Stone (127 Kilos)

## Other important information

Class II means this equipment is double insulated.  
Type BF is the level of patient protection this equipment gives.  
This is ordinary equipment intended for indoor use only.  
Do not use this equipment near explosive gases, anaesthetics etc.  
Clean this frame and pillow with warm soapy water and allow to dry before use.  
Clean the control unit with a slightly damp cloth.

## Interference

Interference should not occur between this and other equipment, such as televisions, radios and other electronic equipment. If you have any interference involving your Caspian, try relocating the Control Unit and / or the other equipment. Also, try connecting them on different mains circuits.

## Recycling

There are no toxic components inside your Caspian, so it can be disposed of quite safely in the normal manner. Alternatively, it can be returned to Centromed for recycling. The life expectancy of this equipment is about five years.





## Contact information



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## Services

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