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## Introduction

- *It is important that, when you meet your trainees for the first time, they are put at ease and informed what the course entails; and what is expected in the way of achievement upon completion of the course.*
- *Introduce yourself and give a brief history with regard to your knowledge and experience of the products being demonstrated.*
- *Ask all trainees to introduce themselves, and give a brief background of their Superglide product knowledge, if any. This information is vital, as it will allow you to see at what level the training should be conducted.*
- *Ask all trainees to complete the attendance sheet, and inform them that the outcome of the training assessment upon completion, and test results will be entered into their personal records or Dealer records.*
- *Give all trainees a copy of the Training Manual, to which they can refer for assistance with their training.*
- *Show all trainees the installation video.*

## Course Content

*Explain to each trainee what is being covered during the training session and what is expected upon completion.*

- A** *Acorn/Brooks Slimline Indoor and Outdoor - ISO / UL Models and HD (Heavy Duty)*
- B** *Sit Stand / Perch Variations*
- C** *Surveying*
- D** *Installation & Testing / Commissioning*
- E** *Servicing & Testing / Commissioning*
- F** *Report Completion (for Acorn employees)*
- G** *Fault Finding*

## Post Training

*After training has finished, provide each trainee with an exam paper, equivalent to the level of training they have received; Beginner, Intermediate or Advanced. Mark the exam papers and go through the results with the trainee thoroughly, highlighting any errors or non-understanding of course content.*

*Acorn employees will undergo continuous training, and if required, ongoing technical training in accordance with their position.*

# STAIRLIFT TRAINING

## Demonstration of Stairlift

### 1.1 SEAT

#### ***What does the paddle / toggle switch do?***

The toggle switch allows the Stair lift to move in direction of control, "hold to run in direction of travel". The toggle switch will always override the remote controls.

#### ***How do you use the paddle / toggle switch?***

The toggle switch is positioned where the hand would normally rest on top, or at the end of the chair arm. Operation is by light and constant control in the "hold to run" type and will stop stair lift if released.

#### ***What is the seat lock for?***

The seat lock when released allows the seat to be turned at the top of the stairway for user to get off stair lift safely, it will also when locked in position stop the stair lift from running.

#### ***How do you use the seat lock?***

Gently press lever downwards, hold firmly and turn seat to desired position, release and lock in position.

#### ***What does the seat interlock do?***

Interlocking down side arm and if not in correct position the stairlift will not operate. (Can still be called with remote controls)

### 1.2 CARRIAGE

#### ***What does the digital display do?***

When any safety aspect of the stair lift is activated, or any error with workings on the stair lift, the digital display will show an error code on the single digit LED which assists with diagnostics of the problem for quicker rectification.

#### ***How do you use the key switch?***

When key is inserted and turned to the run position, the stair lift will operate and the key cannot be removed. When key is in the OFF position, key can be removed preventing misuse of the stair lift and digital display LED will show a single digit code (dependent on stairlift model).

#### ***What does the battery isolation switch do?***

The battery isolation switch is located on the upper safety cover and incorporates a circuit breaker device which when switched to the OFF position disconnects battery supply to the circuit board.

#### ***How do you use remote control and sensors?***

The sensors for the remote control units are situated on both the upper and lower carriage safety covers. Line of sight is required for optimal operation. The remote control units are "hold to run" type, press the RED (or UP)\* button for UP travel and press the GREEN (or DOWN)\* button for DOWN travel. Always remember the user will override the remote control units by using the toggle switch on the seat.

#### ***How do I re-programme the remote control units?***

There may be occasions when the remote control units will lose programming due to outside interference. If this happens, you can reset your remote control by sending the stair lift to the bottom of the rail. Then turn the seat so that the digital display LED is showing a single digit code (dependent on stairlift model). Press the toggle on the chair arm in the downward position (even though the stair lift will not go down any further), at the same time pressing any button on the remote control for approximately 5 seconds. When the seat is turned into the correct position, the remote control units will be correctly programmed.

# STAIRLIFT TRAINING

## Demonstration of Stairlift

### 1.2 CARRIAGE

#### ***What do the safety edges and limit switches do?***

The stair lift is fitted with safety stop switches on upper and lower edges of the carriage, upper, lower edges and underside of the footrest. Travel cannot continue in the same direction as emergency stop signal when operated. The stair lift will always travel away from an obstruction when activated.

#### ***How do the safety edges and limit switches operate?***

All safety edges / covers are spring loaded, when in contact with any obstruction the spring is depressed and activates a limit switch bringing the stair lift to a stop until obstruction has been cleared and safety devices reset. The stair lift will not operate with the safety devices disabled.

#### ***How do you use the footplate?***

The user is seated with their feet supported on the footrest. The footrest surface is slip resistant. When not in use the footrest can be put into the folded position to allow access to the stairway. A qualified technician will carry out levelling of the footrest surface during installation of the stair lift.

#### ***How do you use the hand-winding wheel?***

The hand-winding wheel is supplied in the unlikely event that the stair lift needs to be moved manually to a safer position. To use the hand-winding wheel remove grommet from top of body cover and insert wheel onto motor spindle and wind in desired direction. Always ensure stair lift is turned OFF at isolation switch before hand winding to prevent any accidental use of the stair lift during this operation.

#### ***What does the OSG do?***

The over speed governor is designed to prevent uncontrolled descent of the stair lift at all times. The stairlift travels at a speed no greater than 0.15m/s, should this be exceeded the OSG will activate and bring stair lift to a controlled stop.

### 1.3 RAIL

#### ***What are the Charge strips?***

The charge strips are contact points at the TOP and BOTTOM of the rail.

#### ***What do the Charge strips do?***

The charge strips transfer 15v AC from transformer to the control board charging system for the safe recharging of the stair lift batteries.

#### ***What does the Transformer do?***

The transformer reduces the input mains voltage to a safe 15v AC to the rail charge strips.

#### ***What is the racking?***

The racking is a toothed gear rack shielded in a channel along the full length of the Aluminium rail attached by screws. Sometimes the racking is supplied in two or three pieces, which are jointed at the installation process.

#### ***What does the rack do?***

The racking contacts with the Pinion gear of the carriage to ensure a safe smooth operation during travel.

# STAIRLIFT TRAINING

## Demonstration of Stairlift

### 1.4 SIT STAND / PERCH

#### ***What is the difference in use between the Sit stand and the Perch units?***

Perch unit can be used where there is a narrow staircase and the Sit stand unit can be utilised by multiple users with different requirements.

#### ***Why sit stand?***

The sit stand unit is mainly utilised for users who have problems bending their knees and can still stand on the foot-plate with seat folded holding onto the safety security bar attached for stability. The sit stand unit can also be utilised by multiple users with different requirements.

#### ***Why perch?***

The perch unit is mainly utilised where there is a narrow stairway and a normal carriage cannot be installed for a user who has difficulty bending legs enough to be able to sit down.

### 1.5 MANUAL HANDLING

#### ***How do you lift safely?***

All employees on starting work with company should undergo Kinetic training during induction process.

*Use correct handling techniques*

*Ensure good vision*

*Change position regularly*

*Avoid over reaching and stretching*

*Adjust work surface heights*

*Relax where possible*

*Use mechanical aids*

#### ***What are other safety aspects?***

Safe working practices should be observed at ALL times in regards to local requirements and regulations.

# STAIRLIFT TRAINING

## Operations Plus

### 2.1 PHONE DIAGNOSTICS

#### ***How do you communicate with customers?***

Always ensure that you talk to the customer in a polite telephonic manner, listen to what the customer has to say, do not try to guess what the customer is describing, wait until the customer has finished, record all details and assist in a professional manner, pass on any relevant information to other parties involved.

#### ***Easy diagnostics***

Utilise the information that the customer is describing to you utilising your technical knowledge of the product to quickly identify cause of fault to enable a quick response and rectification of the fault.

#### ***Things to look for***

Unusual operation, keywords, fault codes, environment, customer frailty and urgency of remedial work to be completed. Also the availability of technical assistance.

### 2.2 DIGITAL DISPLAY

#### ***Fault codes***

The fault diagnostic system has 28 clearly readable status codes (dependent on stairlift model) that inform and aid prompt diagnostics and repairs by service personnel.

#### ***How to identify the fault codes?***

The diagnostic LED situated on the upper carriage safety cover will display an alphanumeric fault code when stair lift is in an unsafe condition.

#### ***How would you talk customer through the status codes?***

Ask customer if the handbook is readily available or nearby, explain where to look on the carriage to find the LED, which displays the status code, and where to find this information in the handbook. Ask customer to explain what status code is being displayed on the LED, if possible discuss with customer possible actions to be taken to rectify problem to clear the status code. If fault cannot be cleared contact technical assistance and arrange with customer suitable time to call.

### 2.3 TYPES OF STAIRLIFT AND ACCESSORIES

#### ***Types of stair lift***

Indoor  
Outdoor  
HD (Heavy Duty)

#### ***What is the difference between the Outdoor and Indoor stairlift?***

The outdoor stairlift has different components and is treated differently.

#### ***Accessories***

Sit stand  
Perch  
Infill box  
Manual hinge  
Powered hinge  
Powered Swivel/Footrest

# STAIRLIFT TRAINING

## Operations Plus

### ***How to use different types?***

Each type of stair lift or accessory is unique to requirements of each individual user dependant on their mobility. The type is also dependant on stairway accessibility.

## ■ 2.4 CUSTOMER QUESTIONS

### ***How do you get information from customer?***

Listen to customers concerns  
Try and picture what could be wrong  
Utilise the diagnostic information to identify fault.

### ***Ask the correct questions***

What happened?  
How did it happen?  
Where is stair lift presently situated?  
Are any status codes displayed on the LED?  
Is anything damaged?

## Surveying

## ■ 3.1 MEASURING

### ***Straight staircase***

There are points of measurement that need to be recorded when measuring for a straight staircase.

Overall length of staircase, always remember to add 8"/200mm for the overhang to allow the carriage to stop level with top step of stairway.

Width of staircase at its narrowest point

Clearance at bottom of staircase, a minimum of 26"/660mm is required

Clearance at top of staircase from nose of the top landing to the nearest obstruction

The number of steps on the stairway

Rise one step

Tread one step

You must also specify if the measurement taken is recorded in inches or centimetres, also if it is a left or right hand stair lift (by looking up the stairway) that is required.

# STAIRLIFT TRAINING

## Surveying

### **Overhang**

Always allow 8"/200mm overhang when measuring stairway for a straight rail, this allows the footplate of the stair lift to sit level with top step of landing.

### **Infill box**

Take measurement from nose to riser of one step

Transfer measurement to quarter landing

Take measurement of top step (the one that the infill box will come level with)

Measure width

Measure length

### **Stair alterations**

A stair alteration is required when you do not have enough room for the stair lift to park to enable the user to get ON and OFF safely.

### **Curved rails**

Where possible it is probably a safer and cheaper option to install 2 straight lifts rather than a curved.

A curved lift is unique to your Stairway and cannot be moved should you relocate making this an expensive option.

## 3.2 OBSTRUCTIONS

### **What to look for?**

Visually check the site making sure obstructions such as window cills, pipes, bulkheads, newel posts etc have been allowed for. Examine the stairway, remove any objects that may get damaged or could cause a tripping hazard when the rail is brought onto the property. Also examine for any existing damage to decorations, floor coverings, furniture, furnishings, windows and doors etc.

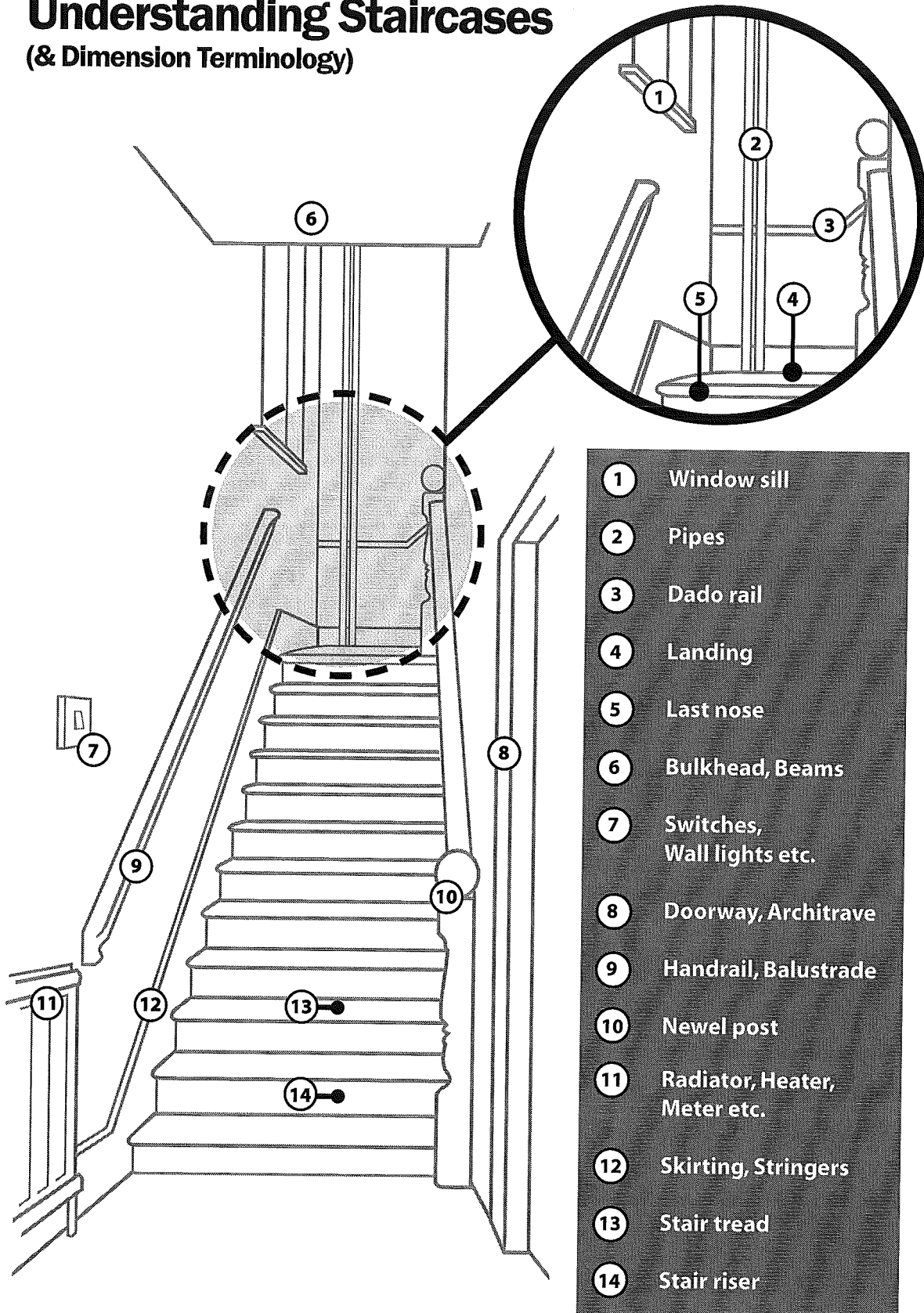
### **Do's and Don'ts**

Do not remove handrail until the rail has been installed in case of mis-measure or abort



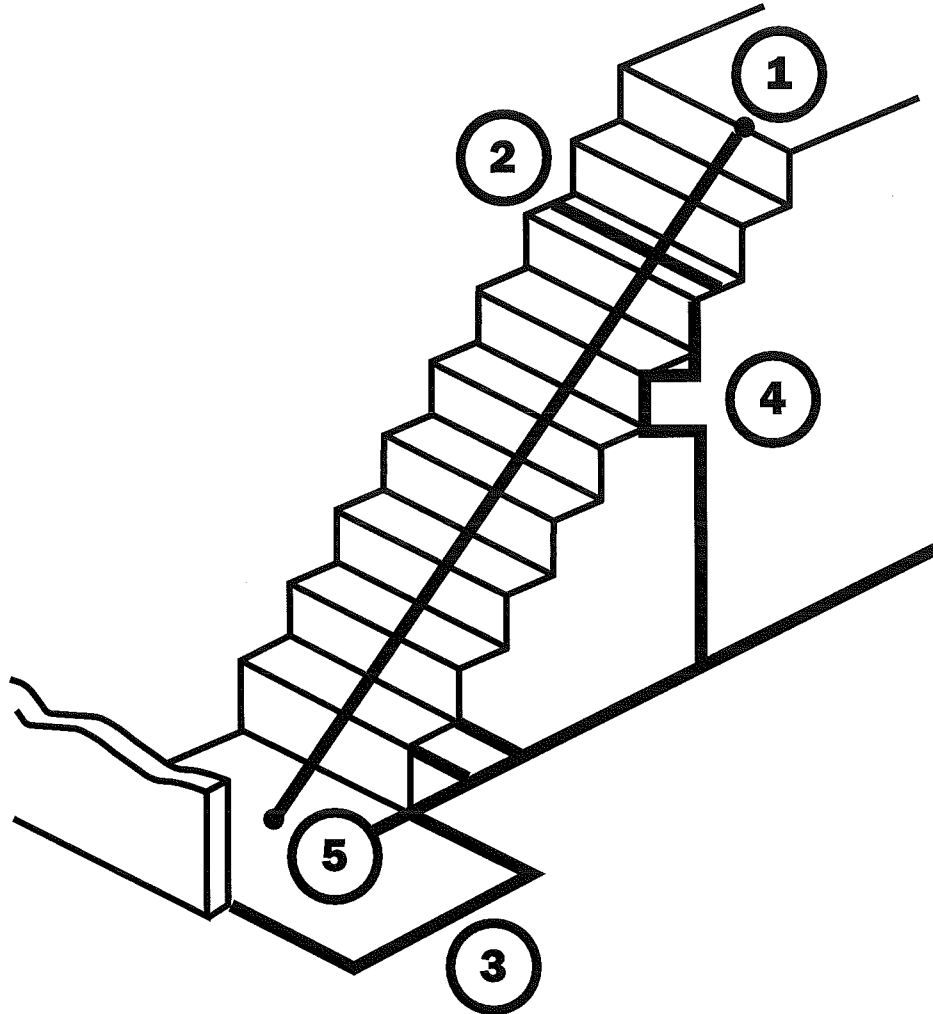
# STAIRCASE SURVEYING

## Understanding Staircases (& Dimension Terminology)



# STAIRCASE SURVEYING

## Five Step Basic Measurements for a Staircase

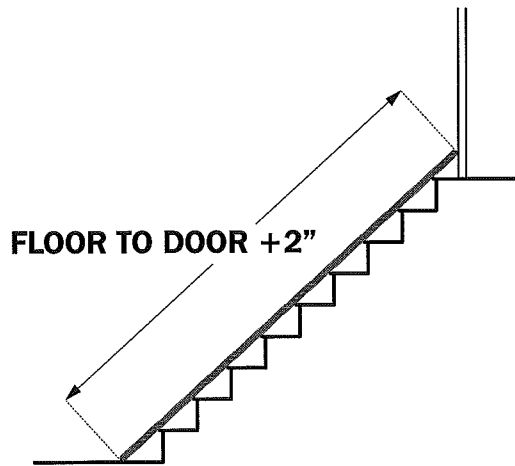


- 1 OVERALL LENGTH (top nose to floor)
- 2 STAIRCASE WIDTH (at narrowest point)
- 3 BOTTOM CLEARANCE (minimum of 26"/660mm)
- 4 'RISE' OF ONE STEP
- 5 'TREAD' OF ONE STEP

These are the five basic measurements you need to measure a staircase correctly.

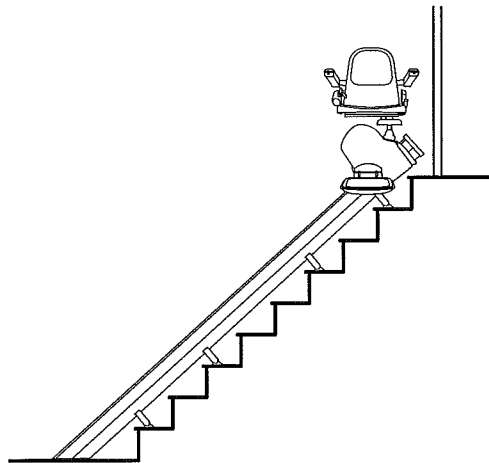
# STAIRCASE SURVEYING

## Door at the Head of the Stairs



Measure from the floor to the door;  
add 2" /50mm to measurement.

Include 4x Extender brackets with the  
order.

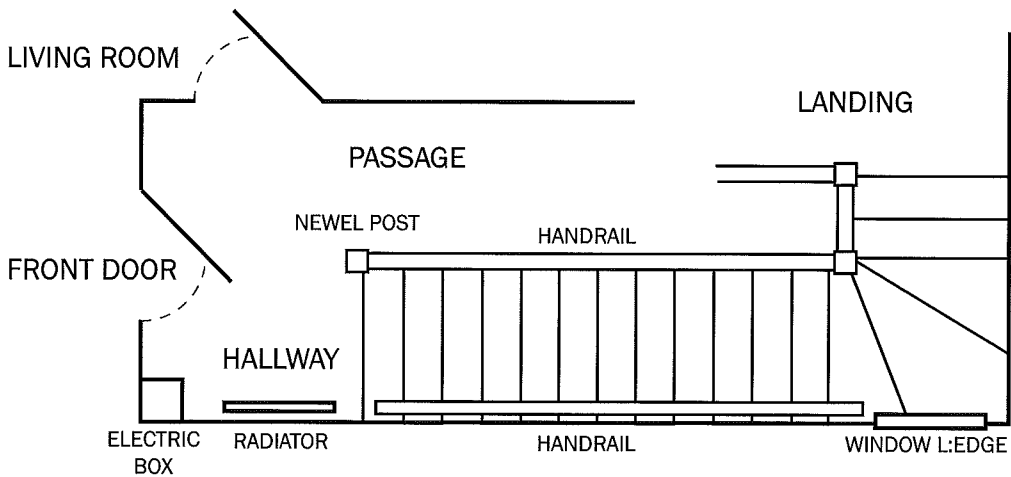
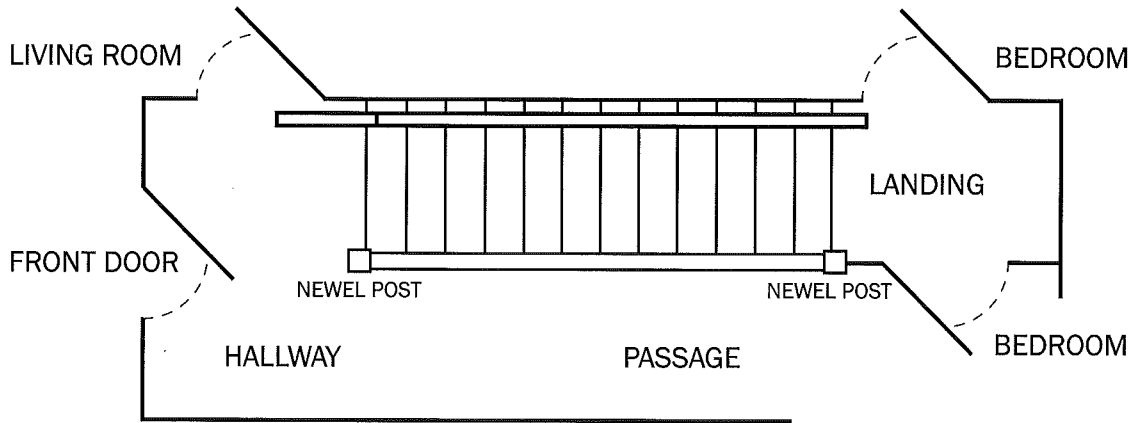


The rail is lifted away from the landing  
at the top. This reduces the amount of  
overhang required. It also raises the height  
of the footplate to bring it back inline with  
the landing.

**NOTE – This rule only applies to measurements where the door is less than 5"/127mm from the edge of the landing. Any door that is more than 5" away from the landing, a standard overhang can be accommodated and there is no reason to lift the rail at the top.**

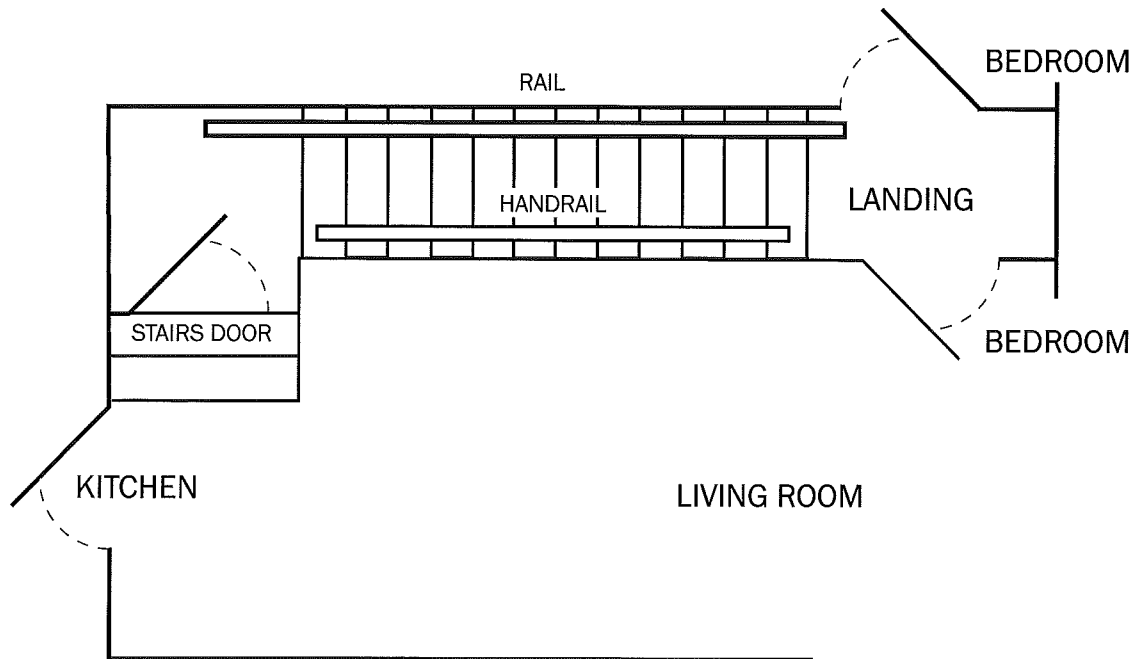
# STAIRCASE SURVEYING

Obstructions to look out for (look for nearest power points)



# STAIRCASE SURVEYING

Obstructions to look out for (look for nearest power points)



**This is a typical 1930's terraced house with staircase built into the middle of the house.**

**(Showing quarter landing at bottom)  
Could be fan steps at bottom.**

**Narrow steps, low headroom, minimum space, lack of power points.**



# INSTALLATION PROCEDURES

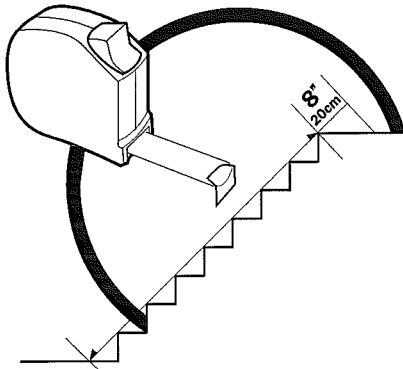
## Rail Cutting Instructions

In situations where a stock rail needs to be reduced in length, the following points must be observed.



**BEFORE CUTTING AND DRILLING, MAKE SURE YOU WEAR THE CORRECT PERSONAL PROTECTIVE EQUIPMENT**

1.



**Measure the stairway first.**

The measurement must be taken from the landing at the top of the staircase to the floor at the bottom.

Measure in a straight line, with the tape measure resting on the nose of each step. Make a note of this measurement.

Add **8" (203mm)** (Overhang) to the stairway measurement to give the total length of the rail required.

Examples	Stairway	Overhang	Rail length required
	148"	+ 8"	= 156"
	3750mm	+ 204mm	= 3954mm



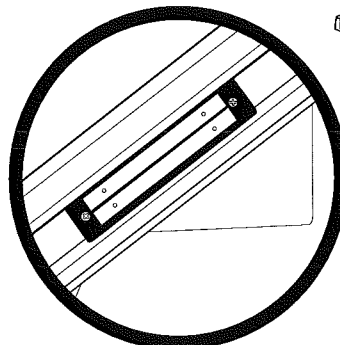
All cuts must be made at the very top of the rail. **DO NOT** cut at the joint, as this is a precision cut to allow the two pieces to join accurately.



All measurements of the rail must be made on the underside of the rail (the side opposite to the gear rack). As this is the side that rests on the stairway.

2. To cut the rail, first remove the uppermost section of gear rack.

Note that the gear rack is **6" (150mm)** shorter than the rail itself.

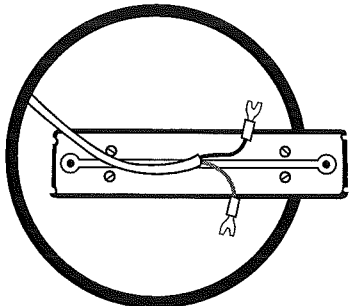


3. Now remove the upper charge point, which is affixed to the side of the rail.

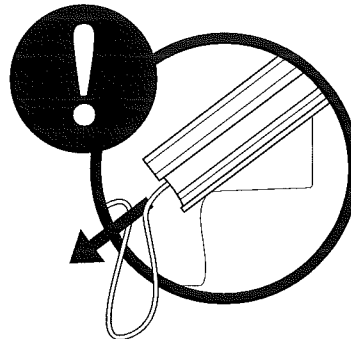
# INSTALLATION PROCEDURES

## Rail Cutting Instructions

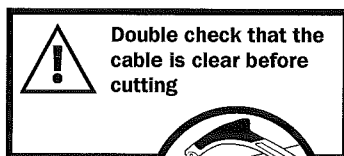
4. Disconnect the blue and brown cables from the reverse of the charge point plate.



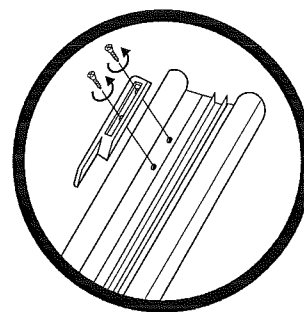
5. Temporarily pull the cable back through the rail to prevent it from being cut.



6. Cut the rail to the required length, using a chop-saw, skill-saw or broad-bladed hacksaw.



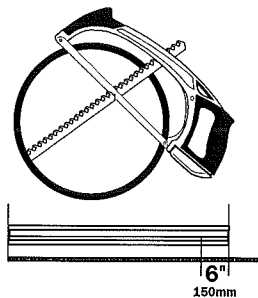
7. The top stopping limit ramp (screwed to the upper surface of the rail, near the top) must also be removed.



8. The upper section of gear rack must now be reinstalled.

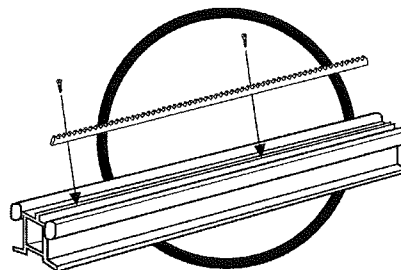
This must be shortened by the same amount so that it remains **6" (150mm)** shorter than the aluminium rail section.

For safety reasons, it is important that the difference in length between the gear rack and the rail section is maintained.

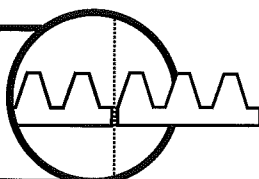


### Re-installing the Gear Rack

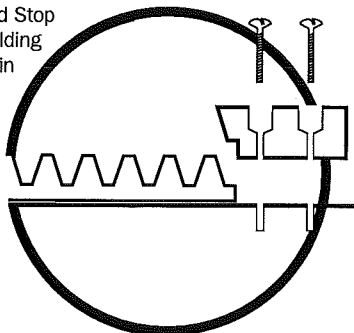
9. Screw the gear rack back into position through the remaining holes.



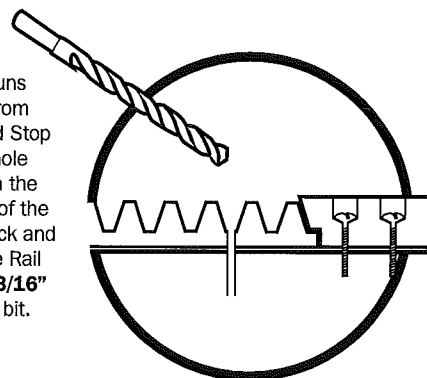
**When cutting the gear rack make sure you leave a step for the END STOP to fit against.**



10. Screw the End Stop back down holding the gear rack in position for drilling.



11. Two to three runs down from the End Stop drill a hole through the centre of the gear rack and into the Rail with a **3/16" (5mm)** bit.

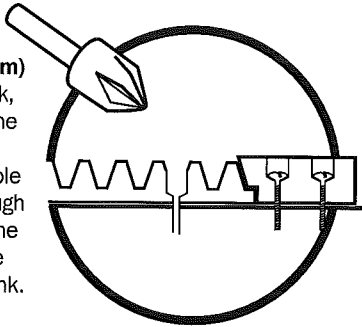




# INSTALLATION PROCEDURES

## Rail Cutting Instructions

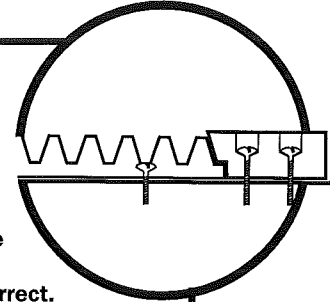
- 12.** Using a  $5/16"$  (8mm) Countersink, bore into the top of the previous hole giving enough depth for the head of the screw to sink.



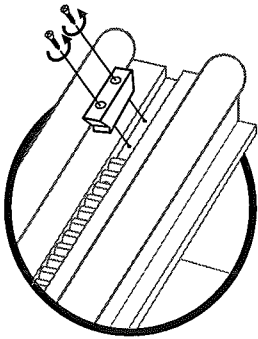
- 13.** Screw the gear rack down.



It is important that the screw head is sunk sufficiently for the gear to run smoothly preventing any damage. If the screw head is still prominent, adjust the hole depth until correct.



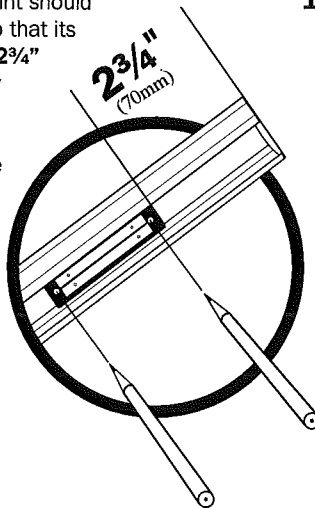
- 14.** Remove the End Stop so that the Carriage can be installed onto the rail.



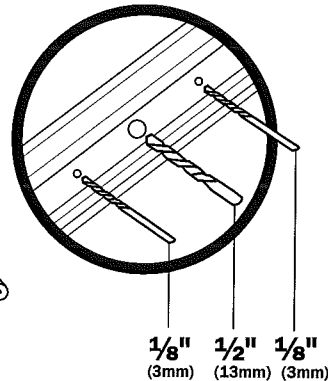
### Re-installation of the charge point

- 15.** The charge point should be mounted so that its upper edge is  $2\frac{3}{4}"$  (70mm) below the cut.

Use the charge point molding as a template.



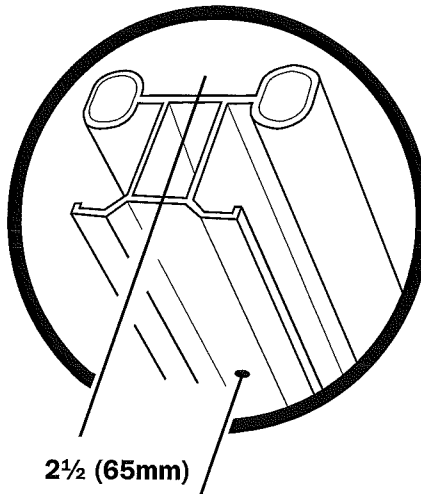
- 16.** Drill  $2 \times 1/8"$  (3mm) holes for the mounting screws. Drill a  $1/2"$  (13mm) hole between the two markings.



### 16a. ONLY IF REQUIRED



When cutting the stock rail to size, you may no longer have the transformer cable entry hole on the underside of the rail present. If this is the case, you will need to re-drill this hole and re-insert the rubber grommet.

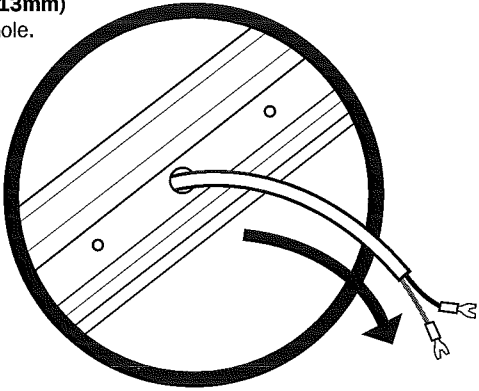


Drill a  $1"$  (10mm) hole on the underside of the rail  $2\frac{1}{2}"$  (65mm) from the top end.

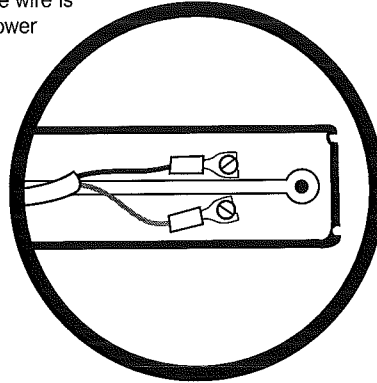
# INSTALLATION PROCEDURES

## Rail Cutting Instructions

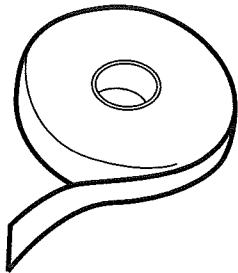
- 17.** Pass the charge point cable through the  $\frac{1}{2}$ " (13mm) hole.



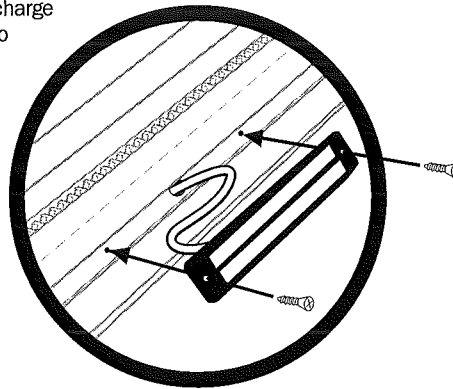
- 18.** Ensure that the brown wire is attached to the uppermost strip on the charge point and the blue wire is attached to the lower most strip.



- 19.** Also ensure that none of the metal components of the charge point or its wiring (aside from the fixing screws) are in contact with the rail itself by insulating with electrical tape.



- 20.** Re-position the charge point with the two screws, returning any loose cable back into the rail.

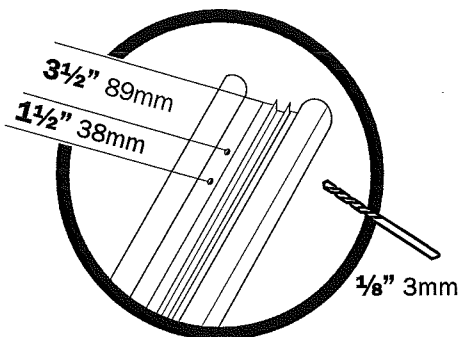


## Re-installation of the top limit ramp and end stop

- 21.** Use the top stopping limit ramp as a template and mark the rail  $3\frac{1}{2}$ " (89mm) from the top.

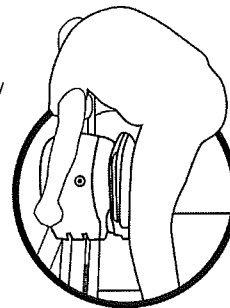
Then mark for the second hole  $1\frac{1}{2}$ " (38mm) from the first hole.

Drill into the rail at the markings with a  $\frac{1}{8}$ " (3mm) drill.

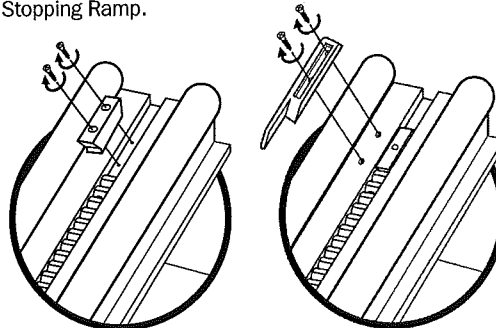


- 22.** The rail is now ready for assembly and fixing to the staircase.

Once the rail is in place run the carriage down giving sufficient access for the End Stop and Stopping Ramp to be fitted.



- 23.** Screw down the End Stop and Stopping Ramp.



# INSTALLATION PROCEDURES

## Rail Jointing Instructions

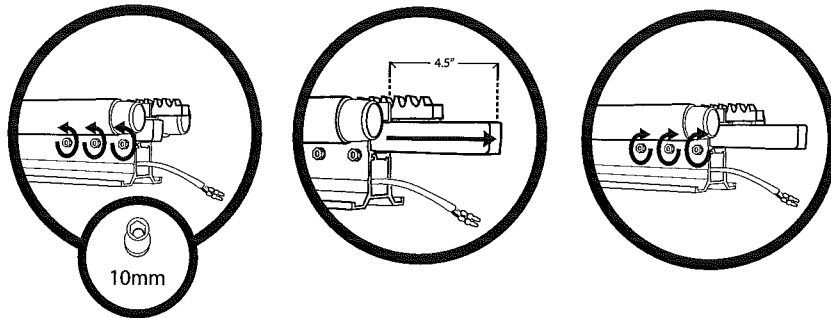
The stairlift rail is shipped in two pieces that are spliced together during installation.

The upper and lower charge points and upper and lower stopping limit ramps are installed on the rail sections at the factory.

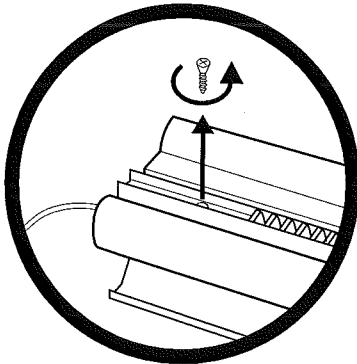


**Before positioning, it is recommended, whenever possible, to join the rail together at the base of the stairway making assembly easy.**

1. On the bottom rail, loosen the 3 pinch bolts and slide out the 1 inch square joint-bar until it protrudes approximately 4½ inches (114mm). Tighten the 3 pinch bolts.



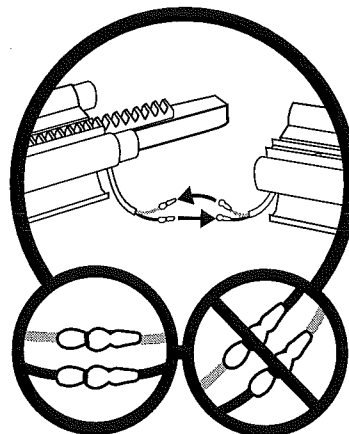
- 2.



On the upper section of the rail, temporarily remove the screw from where the gear rack will go when fully assembled.

3. Connected to the lower charge point and running through the inside of the lower rail section is a two wire cable that terminates with two female wire connectors.

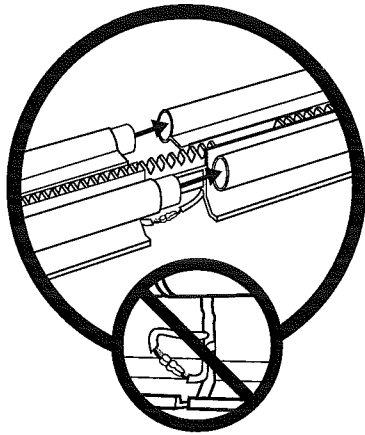
Connect the male and female wire connectors of the rail cable together (brown to brown, blue to blue).



# INSTALLATION PROCEDURES

## Rail Jointing Instructions

4.

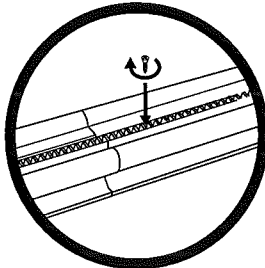
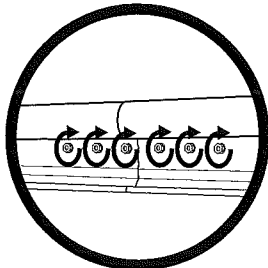


The two rail sections now need to be fixed together.



**IMPORTANT!**  
Make sure that the wiring isn't trapped between the edges of the rail preventing a flush join.

5.



Re-tighten the pinch bolts to hold the joint-bar securely in place, using 2 x 10mm spanners.

Replace the screw into the gear rack and back into the upper rail.



**Do not remove the handrail until the rail has been installed, in case of mis-measure / abort.**

# INSTALLATION PROCEDURES

## Seat Post Gaitor Assembly

### Gaitor Assembly Removal:

Remove the four screw caps from the gaitor bezel screws, undo the four screws and remove the bezel.

### Remove the cable tie.

Pull apart the gaitor and remove from the seat post.

### Gaitor Assembly Replacement:

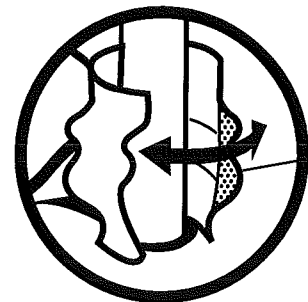
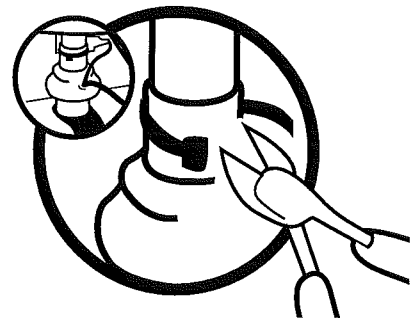
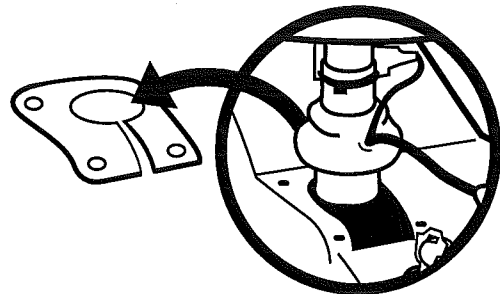
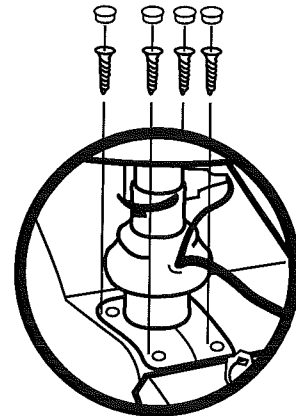
Place the gaitor around the seat post and close.

Fit a fresh cable tie around the neck of the gaitor.

Refit the gaitor bezel, screw back into place and replace the screw caps.

### Outdoor Gaitor:

This is fully closed so does not allow water in. Slide the outdoor gaitor to the top to be able to remove the main cover. Remove seat to slide the gaitor on and off. (To do this remove the through bolt on the post which separates the seat from the post)



# INSTALLATION PROCEDURES

## Manufacturer Information

**Name:** Acorn Mobility Services Ltd.  
**Address:** Spring Mills, Norwood Ave, Shipley, BD21 2AX, United Kingdom  
**Tel:** 01274 717730  
**Fax:** 01274 531993



**IMPORTANT! READ THESE PROCEDURES THOROUGHLY PRIOR TO STAIRLIFT INSTALLATION OR SERVICING**

This information is meant for Acorn authorised engineers in order to ensure servicing of the stairlift in a correct manner. Authorised engineers are persons trained by Acorn Mobility Services Ltd. and who are sufficient in practical and technical knowledge to safely install the stairlift.

## Health and Safety Hazards

The following health and safety hazards should be considered when servicing the stairlift:

- *The risk of loose clothing or body parts getting trapped*
- *Injury resulting from drilling, inappropriate use of tools etc*
- *Direct or indirect electrical contact*
- *Falling down the stairs*
- *Never use worn tools*
- *Correct manual handling procedure (refer to Acorn "Manual Handling" document)*
- *Falling tools*
- *Tripping hazards on the stairway*
- *Use of necessary protection (safety glasses etc)*
- *Follow the current regulations regarding safe working practices*

Prior to carrying out any electrical testing, be aware of the considerations detailed in Annex I.

# INSTALLATION PROCEDURES

## Installation Tools

<i>Drill (Hammer action)</i>	<i>Multimeter AC/DC/Ohms</i>
<i>3mm HSS drill bit</i>	<i>Torch / Hand lamp</i>
<i>7mm masonry drill bit</i>	<i>Tape measure</i>
<i>No2 / No3 Philips Screwdrivers</i>	<i>Level</i>
<i>Flat electrical/terminal screwdriver</i>	<i>Side cutters</i>
<i>13mm open/ring spanner</i>	<i>Wire strippers</i>
<i>17mm open/ring spanner</i>	<i>Torque Wrench</i>
<i>Socket ratchet</i>	<i>Set of metric Allen keys</i>
<i>Socket extension</i>	
<i>13mm socket</i>	

## Preparation on site

**It is recommended that the following examinations be carried out prior to taking the rail into the customer's property:**

- *Visually check the site making sure that all obstructions such as windowsills, pipes, bulkheads, newel posts etc have been allowed for*
- *Examine the stairs, remove any removable objects that may get damaged or could cause a tripping hazard when the rail is brought into the property*
- *Identify existing damage to:*
  - *Decorations*
  - *Floor coverings, furniture and other furnishings*
  - *Windows, doors, etc*
- *Agree with customer all damage prior to installation, make note on work report*
- *Do not remove the handrail until the rail has been installed, in case of mis-measure/abort*

# INSTALLATION PROCEDURES

## **IMPORTANT NOTE:**

***Digital Display Codes shown in this section refer to the ISO Model of the Acorn Superglide. See the DISPLAY CODE section for other stairlift models.***

## **Installing the Rail**

- 1.** Position the rail as one complete assembly on the staircase, with the lower (angled) end resting on the floor, at the bottom of the stairs and the steel toothed rack uppermost.
- 2.** Position the stair brackets underneath the rail - one on the first step, Position the remaining stair brackets evenly up the stairway ending with one on the very top step or on the landing (depending on odd/even number of stairs). If jointed rail one each side of join.
- 3.** The stair brackets clamp to the underside of the rail and are secured by tightening the long 13mm nut/bolt, which runs right through each bracket.
- 4.** Position the bracket so that it's footrest sits squarely on the stair tread and tighten the two short 13mm nut/bolts on either side of the bracket. Do not fix the bracket to the stair tread, at this time.
- 5.** With the rail correctly sitting on the stairs the handrail if fitted can now be removed



# INSTALLATION PROCEDURES

## Installing the Carriage



**WARNING! Take care when handling the carriage assembly, as this is a heavy component. Before unpacking carriage it is recommended if possible to unpack box at Top of Stairway using Acorn packing/unpacking instructions provided.**

1. Remove the adjustable upper stopping limit ramp moulding from the rail and mechanical stop if fitted. Place the carriage on the top of the rail using safe handling aid supplied. Insert plastic inserts to Rail top for Carriage installation.



**WARNING! Take great care not to damage any of the three micro-switches that protrude from the underneath of the carriage body**

2. Carefully slide the carriage onto the top of the rail until it stops. At this point the motor drive pinion must be accurately located on the gear rack. Remove safe handling aid. Ensure that the carriage is 'square' to the rail, with the 'up-side' raised so that all of the carriage rollers are in line with the rail. Switch on Battery isolation switch, use the activator ring, and drive Carriage onto Rail using remote controls. Remove transit screws attached to both upper and lower carriage safety edges and stickers then fit blanking plugs supplied into holes. Remove plastic inserts from Rail.
3. Remove the footrest hinge cover and remove the main cover. To remove main cover, refer to Annex III procedure A
4. Set the seat post using a spirit level and tighten the six side bolts using a 13mm socket torque wrench set to 36Nm. Ensure anti-slip clamp and washers are in correct horizontal position.

# INSTALLATION PROCEDURES

## OSG Safety Test

1. Hold the rocker arm of the Overspeed Governor (OSG) out so that it can engage with the cam.
2. Hand wind in the downward direction. The OSG should engage and rotate the safety gear and operate the safety switch until fault code 'F7' is displayed
3. Reset using the Handwinding wheel, turning in the upward direction.

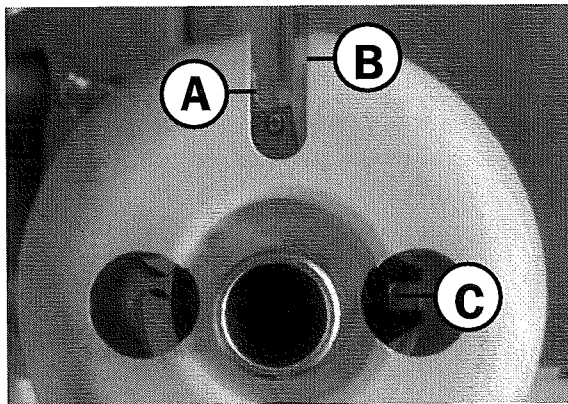


**IMPORTANT: Do not continue with the installation if the safety gear does not function correctly.**

4. Note correct function on work report and continue with carriage installation.

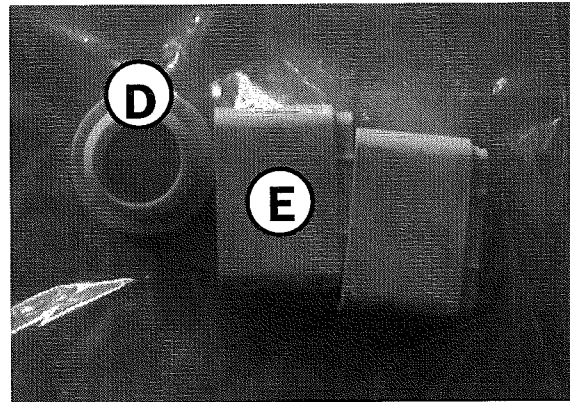
## Installing the Seat

There will still be a RIGHT hand and LEFT hand seat available.  
**Instructions shown here are for a RIGHT hand lift.**



Line up the **(B)** index cover slot, **(C)** the plastic actuator (pointing down the stairs) and the **(A)** seatpost slot (facing the wall) on the carriage. *(Right hand shown)*

**IMPORTANT – If you do not set this before you fit the seat, you will damage the cover and the plastic actuator!**

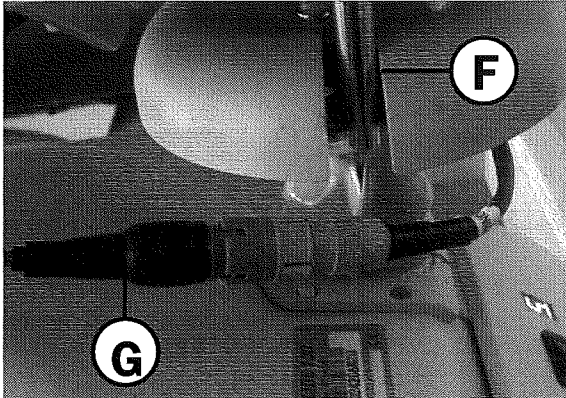


With the seat you will get following:

**(D) Seatpost plug**

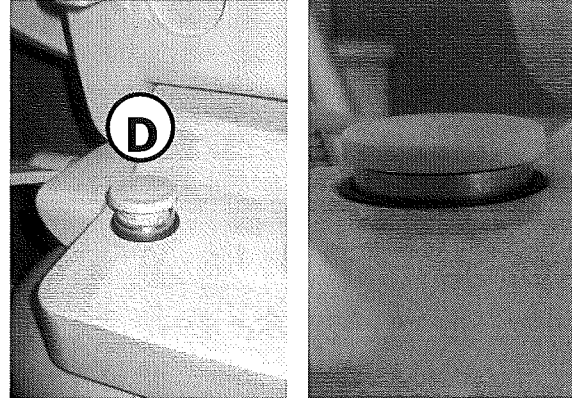
**(E) Two Covers** for setting the seat to a wide arm version.

# INSTALLATION PROCEDURES



Place the seat onto the seatpost tube while pressing the seat paddle **DOWN**. This allows the seatpost pin (**F**) to fit into the seatpost slot and the index cover slot as shown. **Release the paddle when the seat is fully down on the seat post tube.** The pin should drop into the slots.

Connect the seat to carriage harness (**G**).  
*(If power options are fitted, there will be another harness to connect to the carriage)*



Fit the Seatpost plug (**D**) and tap it until it is fully down as shown.

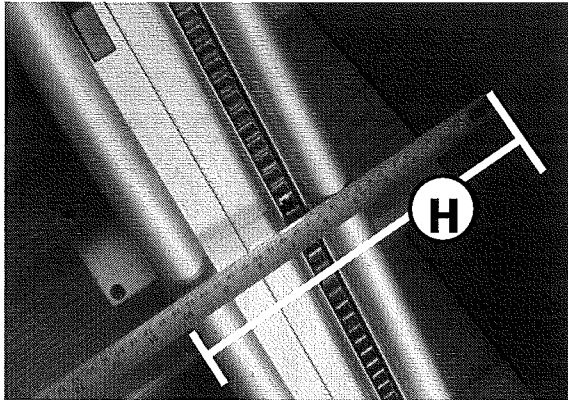
**IMPORTANT – This plug should ALWAYS be fitted. If it is missing, please report it and arrange for a replacement and revisit to fit one.**

- **The rail can be moved closer to the wall than an existing seat will allow. [The current seat will need the rail to be at 10”(250mm) from the wall.]**
- **The new seat will need the rail to be at 8 ¼ “(210mm) from the wall.**
- **If the arms are adjusted outwards to make a WIDE seat version, the dimension to the rail from the wall needs to be 9 ¼ “(235mm).**
- **Also note that adjusting the arms outwards will increase the space taken to turn the seat (the Minimum Clear Width) by 2” (50mm).**

## **This seat has INTERLOCKED ARMS!**

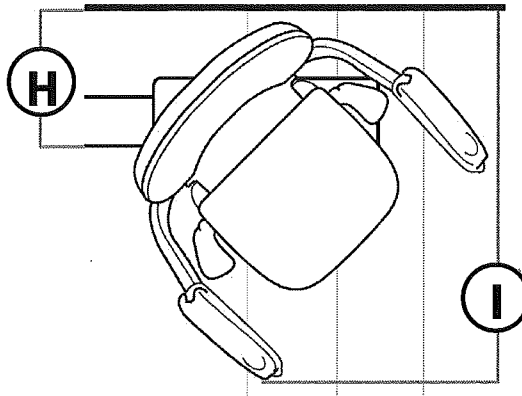
The **DOWNSIDE** arm needs to be fully in the down position for the carriage to run from the arm toggles. Please explain this to the user in the demonstration!

# INSTALLATION PROCEDURES



**(H)** Distance from front of rail to wall or stringer

Standard setting (Minimal) = 8¼" (210mm)  
Wide arm setting = 9¼" (235mm)

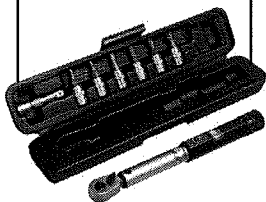


**(I)** Width of staircase required to swivel

Standard width arm = 25 ½" (645mm)  
Wide arm setting = 27 ½" (695mm)

**ALWAYS MAKE SURE THERE ARE ADEQUATE CLEARANCES TO ANY OBSTRUCTIONS ALONG THE PATH OF THE LIFT, WITH THE SEAT FITTED, BEFORE FULLY SECURING THE RAIL INTO POSITION.**

A torque wrench with a 5mm allen key is required.



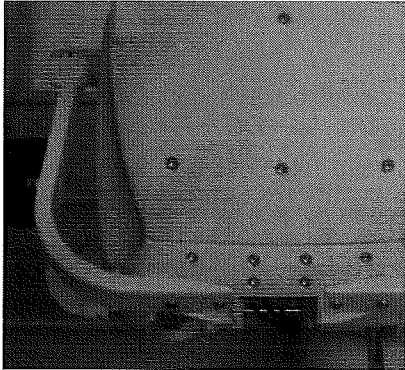
The new seat has a width of 17 ½ "(445mm) inside the arms for the clients comfort. If the client needs more allowance, the seat can be simply adjusted to suit by adding 2" (50mm).

**Please note** if the rail is already installed, it may have to be moved away from the wall/Stringer to allow the seat to swivel. It should move a minimum of 1" (25mm) further away.

**The minimum width to swivel on the staircase will increase by 2" (50mm)**

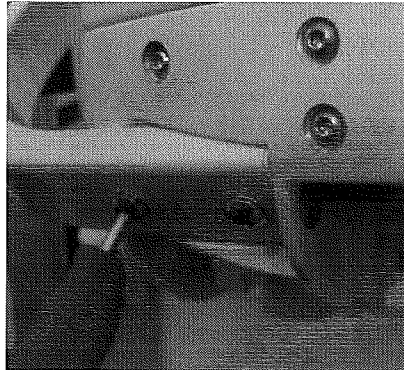
# INSTALLATION PROCEDURES

## How to set the arms width if required



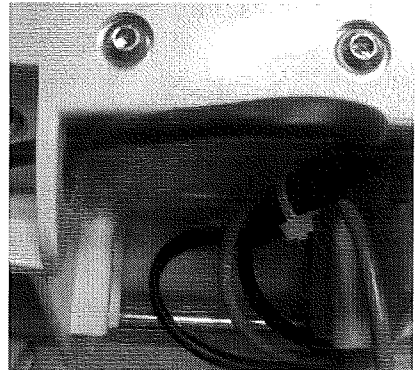
### STEP 1

Rotate new standard seat to access screws that hold the seat arms in place.



### STEP 2

Loosen and remove the two screws from the left hand arm assembly as shown with a 5mm allen key.



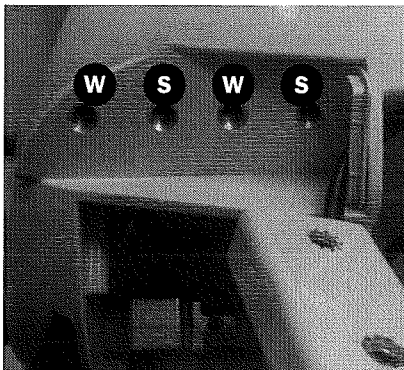
### STEP 3

Loosen the cables slightly from the cable tie. Please make sure the cables are not pulled from the seat PCB under the cover. **If the cables are separated from the pcb under the seatbase, the arm controls may work intermittently or not at all!**



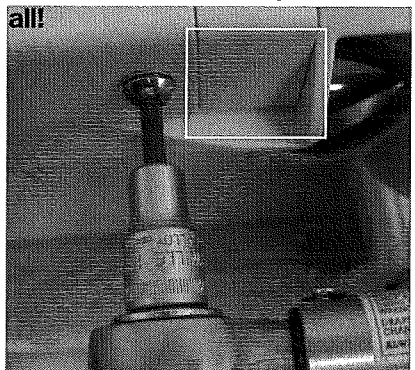
### STEP 4

Ensure the spacers inside the arm tube do not slip out. If they do, the fastenings may crush the tube.



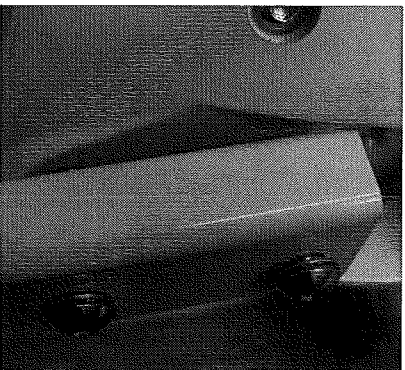
### STEP 5

There are 4 holes available for fixing the arm assembly. Holes **S** are for the standard width arm and **W** are for wider arm setting.



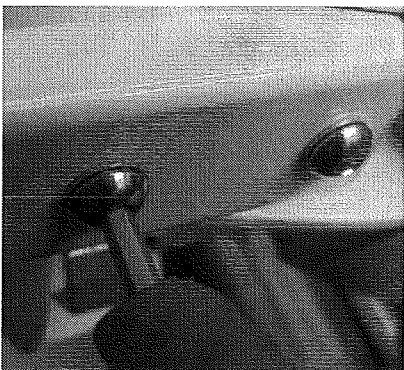
### STEP 6

Ensure the XL tube endcap is in place (*highlighted*).



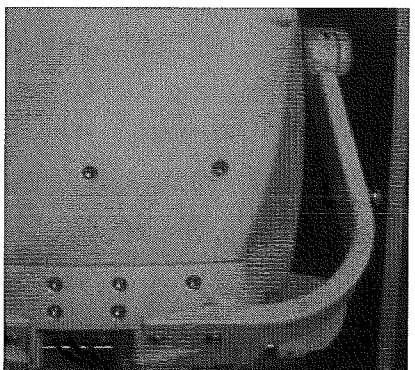
### STEP 7

Relocate the fixings in the seatbase.



### STEP 8

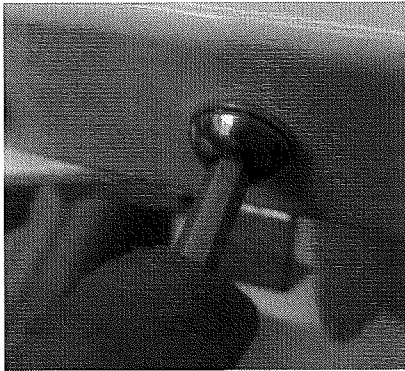
Secure arm fixings with a 5mm allen bit and **TORQUE TO 20Nm. (177 pound-force inches).**



### STEP 9

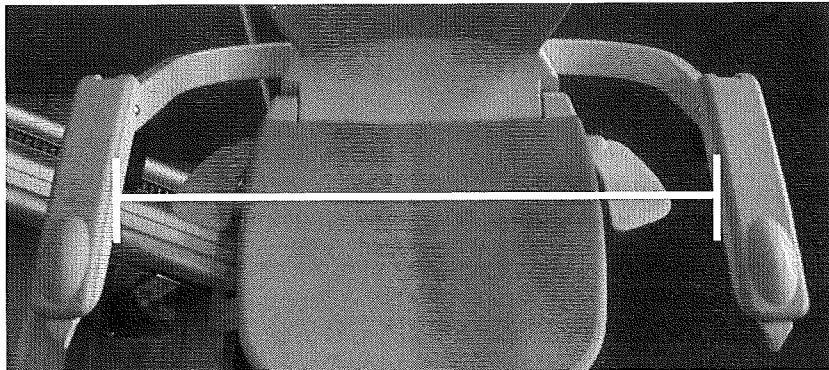
Repeat for other arm and endcap.

# INSTALLATION PROCEDURES



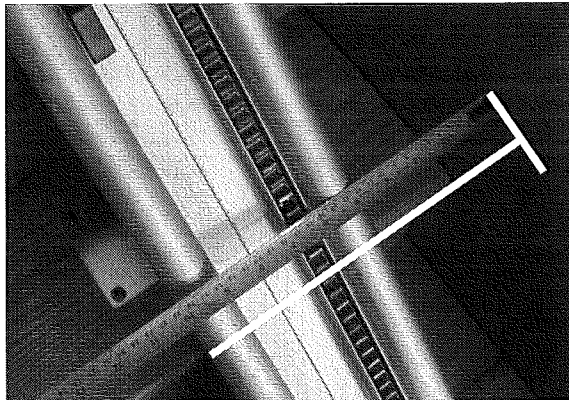
## STEP 10

Secure arm fixings with a 5mm allen bit and **TORQUE TO 20Nm. (177 pound-force inches).**



## STEP 11

The seat should now have the arms at the widest configuration required for the client at 19 1/2 " (495mm).



## STEP 12

Ensure the rail is at the minimum distance away from the wall/stringer to enable the seat to swivel.

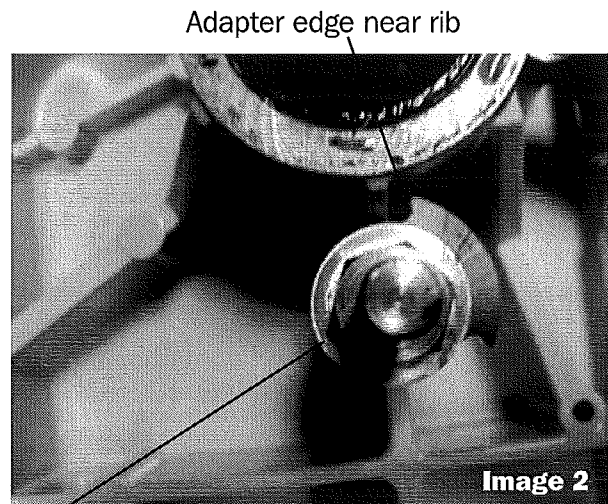
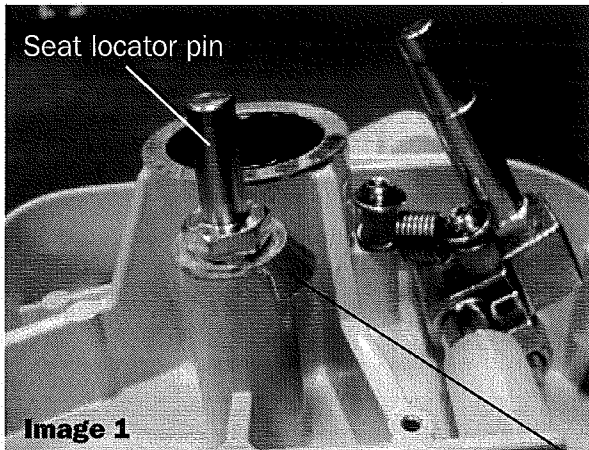
**Standard seat width = 8 1/4" (210mm) from the wall**

**Wide seat setting = 9 1/4" (235mm) from the wall**

**TEST – Check arm controls work and the seat doesnot hit obstructions when carriage is traveling**

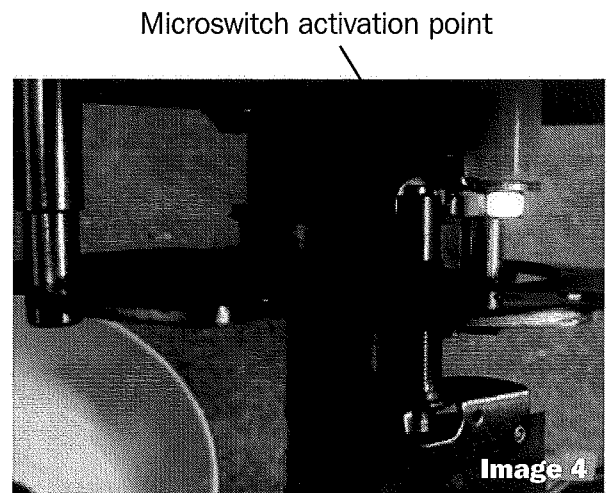
# INSTALLATION PROCEDURES

## Configure a 130 New Seat to fit a Superglide (FAT) carriage



Adapter

1. Remove Seat Locator Pin (See image 1) and fit the Adapter (815-002280) as shown.
2. Rotate the adapter until the position is as shown in image 2.



3. Retighten the Seat Locator Pin.
4. The plunger swivel switch should activate as shown (image 4). If it does not, adjust the adapter or the microswitch rotation for correct activation.
5. Test the swivel microswitch operation when the seat is swivelled.

# INSTALLATION PROCEDURES

## Fixing down the Rail

1. Visually check that the rail is parallel to the adjacent wall, and looking up the stairs, behind the seat that the stairlift will not catch the wall on the way up.
2. Also check that there are no obstructions such as windowsills. There should be approximately 25mm between seat back and the wall to avoid trapping hazards.
3. Once checked and final position verified, screw the rail brackets down to the stairs using the screws provided. (Four per bracket).

## Connecting the Transformer

**The transformer from the carriage box now needs to be connected to the charge system wiring as follows:**

1. Insert the transformer lead through the hole on the underside of the rail (rubber gland). Pull out these wires from end of Rail and join the wires from the transformer into the connector block.
2. Push the jointed wires and connector block back into the end of the Rail and push the rail end cap from the fitting kit over the end of the rail.

## Safety Checks

**Checklist must be completed after installation and recorded on the installation work report. Tick the appropriate box and make supplementary notes as required.**

### *Check controls*

1. Press the toggle switch in the 'UP' direction. The stairlift should start to travel upwards
2. Press the toggle in the 'DOWN' direction. The stairlift should start to travel down

### *Check remote controls*

1. Pressing the up button causes the lift to ascend after a short delay
2. Pressing the down button causes the lift to descend after a short delay
3. If reprogramming is required, carry out Annex III procedure K



# INSTALLATION PROCEDURES

## Safety Checks

### ***Check safety sensors***

1. Footrest 'top' side sensor - with the lift ascending, push topside spring-loaded edge of footrest - lift should stop immediately. LED Display will show 'E1'
2. Footrest 'bottom' side sensor - with the lift descending, push bottom-side spring-loaded edge of footrest - lift should stop immediately. LED Display will show 'E2'
3. Footrest base sensor - with the lift descending, push the base of the footrest up - lift should stop immediately. LED Display will show 'E2'
4. Carriage 'top' side sensor - with the lift ascending, push the top-side spring-loaded moulding attached to the carriage, immediately surrounding the rail - lift should stop immediately. LED Display will show 'E3'
5. Carriage 'bottom' side sensor - with the lift descending, push the bottom-side spring-loaded moulding attached to the carriage immediately above the rail - lift should stop immediately. LED Display will show 'E4'

### ***Check stopping limits***

1. Bottom stopping limit operative - run the lift right to the bottom of the rail - lift should automatically come to a 'soft' stop at the foot of the staircase
2. Top stopping limit operative - run the lift right to the top of the rail - lift should automatically come to a 'soft' stop at the top of the staircase

### ***Check seat swivel switch***

Turn the seat toward the top of the stairs away from the riding position. The LED display should show 'E5' and the stairlift will not operate

### ***Check battery isolation switch***

Turn the battery isolation switch to the OFF position. The LED display should go blank and the stairlift will not operate

# INSTALLATION PROCEDURES

## Safety Checks

### ***Check key switch***

Turn the key switch to the off position. The LED display should change to 'E9' and the stairlift will not operate

### ***Hand winding***

Remove the blanking plug from top of cover, insert the Hand winding wheel and turn a few turns observing the correct movement of the stairlift in both directions.

### ***Labeling***

Check all labels are fixed to the stairlift. For reference to labels see Annex V

### ***Check correct fixing of carriage to rail***

Ride the stairlift up and down once, ensuring the ride is smooth and stable and that the stairlift stops in the correct positions at top and bottom.

### ***Demonstrate Stairlift to User***

Correct operation of the stairlift, troubleshooting procedures and a description of the safety features must be demonstrated to the customer prior to hand over.

You should observe the user using the stairlift once upwards and once downwards AT LEAST until you are certain that they are able to use it safely.

If the user is unable to operate the stairlift correctly and safely, the stairlift should be removed, unless it is to be operated by an attendant. In this case, the attendant should be present at the installation.

**You should ensure that the user is aware that a seatbelt must be worn at all times.**

## Maintenance

Ensure that the purchaser is informed of requirements for the examination, testing and servicing of the stairlift and any associated national regulatory requirements.

If the customer is satisfied with the installation, ask customer to sign and date the completed service report.

If information relating to these tests is required, please contact Acorn Stairlifts Technical Support on:

<b>USA</b>	<b>888-563-0410</b>
<b>UK</b>	<b>0871-200-2448</b>
<b>AUS/NZ</b>	<b>02-9485-8590</b>
<b>CANADA</b>	<b>1-855-997-7712</b>

# INSTALLATION PROCEDURES

## Avoiding Unsafe Installations

- The installer should not proceed with an installation if, for any reason, it is considered unsafe. Further advice should be sought from Technical Support on:  
  

<b>USA</b>	<b>1-407-487-0955</b>
<b>UK</b>	<b>01274 584455</b>
<b>AUS/NZ</b>	<b>02 9485 8590</b>
- If the user exceeds the Safe Working Load of 127Kg or 300lbs, or 159Kg and 350lbs for heavy duty model the installation should not proceed
- If any of the final safety checks fail, they should be repaired and re-tested before the stairlift is put into service. Under no circumstances should any safety feature be overridden or disabled
- In the event that there is no wall or solid vertical surface behind the stairlift in its intended position, or on an open plan stairway the installation should not proceed until adequate shielding has been fitted
- If the angle of the stairs is greater than 55° or less than 23° the installation should not proceed. (This is the same for an outdoor lift. Power swivel option no less than 36° unless you order a taller powered seatpost unit)

## Decommissioning

1. Disconnect the transformer from the mains supply, disconnect transformer lead from top of the rail
2. Remove the top limit ramp and end stop from racking.
3. Refit transit screws to Upper and Lower safety covers
4. Run the carriage to the top of the rail until the drive gear disconnects from the gear rack
5. Uncouple seat lead and lift the seat off
6. Lift the carriage off the end of the rail and make sure the battery isolation switch is turned off
7. Unscrew the stair brackets from the stairs and remove from the rail.



# SERVICING PROCEDURES

## Servicing Tools

<i>Drill (Hammer action)</i>	<i>External Circlip Pliers</i>
<i>3mm HSS Drill bit</i>	<i>Vice Grips</i>
<i>7mm masonry Drill bit</i>	<i>Side Cutters</i>
<i>Set of flat blade &amp; Philips Screwdrivers</i>	<i>Wire Strippers</i>
<i>Flat electrical/terminal Screwdriver</i>	<i>Multimeter AC/DC/Ohms</i>
<i>Socket Ratchet</i>	<i>Torch/Hand lamp</i>
<i>Socket Extension</i>	<i>Tape measure</i>
<i>Set of Sockets (8-19mm)</i>	<i>Level</i>
<i>Set of metric open Ring Spanners (8-19mm)</i>	<i>Calibrated Torque Wrench</i>
<i>Set of metric Allen Keys</i>	

## Servicing Procedure

The following procedure should be carried out within the first Year of installation and at least once per year thereafter:

1. During initial contact with the customer, ask if there have been any problems or issues with the stairlift since the last service. This information may be of use during the service of the stairlift and included within the Engineers Report.
2. Carry out visual and physical checks on the following:
  - All safety edges. Activate each safety edge in turn checking that the appropriate status code is displayed on the LED display. Lubricate safety edge if required
  - Key switch. Ensure that while in the 'off' position, the key can be removed and the LED display will show 'E9'
3. Carry out the following cycle tests:
  - 1st cycle: While seated in the chair, run the stairlift unit from the bottom to the top of stairs
  - 2nd cycle: Repeat step 2a but this time return the stairlift unit from top to the bottom of stairs

- During travel:**
- Check for any abnormal or adverse noises or vibrations
  - Check that the seat's rotational safety switch is operating correctly by swiveling the seat out of its required operating position. The stairlift unit **must** stop if rotated out of the travel position
  - Check that the footrest safety edges are operating correctly by activating each in turn. The stairlift unit **must** stop if any of the safety edges are depressed
  - Check that the upper and lower safety covers are operating correctly by activating each in turn. The stairlift unit **must** stop if any of the safety edges are depressed

# SERVICING PROCEDURES

## Servicing Procedure

4. Connect the Multimeter and carry out the following checks (ensure *all* readings are recorded on the installation/servicing worksheet):
  - Check the condition of the stairlift carriages main batteries.  
For procedure, refer to Annex II test B - Battery test
  - Check the battery charging system. For procedure, refer to Annex II test D
  - Check the condition of the motor. For procedure, refer to Annex II test E

### Main Battery Replacement:

Both batteries must be replaced every 3 years as per the battery manufacturer's recommendations. For stairlift battery replacement refer to Annex III procedure C

*Note: Batteries must be disposed of in accordance with local regulations*

5. Remove the Multimeter
6. Remove the stairlift from the rail as follows:



**WARNING! Take care when handling the carriage assembly, as this is a heavy component.**

- Remove the upper limit stop and end stop from racking
  - Drive the stairlift off the top of the rack
  - Isolate the battery by switching the battery isolation switch to the '0' position
  - Disconnect and remove the seat
  - Lift the carriage of the rail (NOTE: Handling Warning)
7. With the stairlift removed from the rail and laid on its side, carry out the following checks:
    - Check the condition of the rollers and clean if required
    - Carry out a visual and physical check of all limit switches. Clean and lubricate as required
  8. Check the condition of the Overspeed Governor (OSG) as follows:
    - Hold the rocker arm of the OSG out so that it can engage with the cam
    - Wind the Hand Winding wheel in the downward direction until the OSG engages rotates the safety gear and operates the OSG safety switch.
    - Reset the OSG by winding the Hand Winding wheel in the upwards direction
    - Lubricate if required

# SERVICING PROCEDURES

## Servicing Procedure

9. Lift and replace stairlift onto the rail (NOTE: Handling Warning)
10. Refit the seat to the stairlift seat post and connect
11. Re-connect the battery by switching the battery isolation switch to the 'I' position
12. Run the stairlift down the rail – far enough to allow replacement of the upper limit stop. Replace the upper limit stop and metallic end stop to racking.
13. Run the stairlift back to the top of the rail, checking that the upper limit stop activates the limit switch stopping the unit in the correct position
14. With the stairlift either at the top or bottom of the stairs carry out the following checks on the seat:
  - Check that the tilting movement of the arms are free from obstruction
  - Check whether the arm pivoting bolts are firmly fixed. Tighten and lubricate if required
  - Check that all of the seat's screws and fixings are firmly in place. Tighten if required
  - Check the general condition of the seat
  - Check the down arm interlock on the seat is working
15. Check the operation of the seat belt
16. Check all rail bracket fixings and tighten if required
17. Check the voltage at both the lower and upper charge points as detailed in the charge circuit tests B and Annex II (ensure all readings are recorded on the installation/ servicing worksheet)
18. Clean and wipe down the rail
19. While sitting on the stairlift, run the unit up and down the rail and carry out all checks as listed in the installation safety checks
20. Check the remote control to ensure it is operating correctly

### **Remote Control Battery Replacement:**

The batteries of the remote control must be replaced annually as per manufacturer's recommendations. For battery replacement refer to Annex III procedure E

**Note: Batteries must be disposed of in accordance with local regulations**

21. Ask the customer to operate the lift in the seated position to ensure they are satisfied with its operation. The seatbelt *must* be worn during demonstration, and every time the user is operating the stairlift.
22. If the customer is satisfied, ask customer to sign and date the completed service report.

# SERVICING PROCEDURES

## ANNEX I - Considerations prior to testing

### Tools Required:

An electrical tester (Multimeter) capable of measuring the following ranges;

- A.C Volts 0 - 20 or greater,
- D.C Volts 0 - 50 or greater,
- D.C Amps 0 - 10 or greater
- Ohms (continuity) 0 - Infinity

### Care Before Proceeding with Testing:

Great care must be taken when measuring certain voltages that the meter is set to the correct setting otherwise the wrong reading will be given or possible damage to the meter could result.

Before testing for a charging problem it is necessary to establish that there is power to the wall socket. This can be tried by simply trying another appliance in the socket such as a power tool or table lamp. If there is no power at the socket it is probably a fuse blown or a circuit breaker tripped.

It is also necessary to check that the battery voltage is good, as batteries that are too low will not power up the onboard charging system. Test the battery voltage by removing the main cover, set the meter to D.C volts and place one lead onto the positive terminal of one of the batteries and the other lead to ground (metal part of the chassis, like the seat post). The reading on the meter should read 25 - 26 volts for fully charged batteries. If the batteries read less than 15 volts they will require replacing. For stairlift battery replacement procedure, refer to Annex III procedure A.

Once it has been established that there is power to the wall socket, and that the batteries are in serviceable condition, the necessary checks can be made to the charging system. If the charging circuit is operating correctly and a routine check is just to be made, the D.C amps test as detailed in Annex II procedure D should then be carried out.



# SERVICING PROCEDURES

## ANNEX II - Test Procedures

*Tests required in accordance with the BS5776: 1996, ISO9386-2 and BSEN 81:40:2008 standards*

### **A) Ohms Test (Continuity)**

Used for testing of the charging system.

#### **Test Procedure:**

1. Move the lift off the charge point and isolate the battery by switching the battery isolation switch to the 'O' position
2. Remove the plastic end cap from the top end of the rail
3. Pull out the wires from the end of the rail to gain access to the connector block
4. Remove one of the transformer wires from the connector block. This will take the transformer out of the circuit to avoid false readings
5. Set the meter to Ohms and check it displays a '1' to indicate an open circuit
6. Connect the two leads of the meter together and check it displays a '0' to indicate a closed circuit

**Note:** *If the display on the meter does not indicate either a '0' or '1', check that the meter setting is correct, the leads are correctly plugged in and meter's battery is OK.*

7. Connect one lead to the blue wire at the block and the other lead to the metal of the rail. The meter should read 1 (open circuit)
8. Repeat step 8 but with lead connect to the brown wire
9. Check between the blue and brown wire, the meter should still read 1 (open circuit)

If the meter reading is less than 1, a short circuit is present in the rail wiring which will result in transformer failure. The short circuit must be located and rectified before any further voltage checks can be made. Likely places for the wires to short are behind the charging strips and at the joint in the rail. Once any repairs are made it will need to be re-checked with the meter.

# SERVICING PROCEDURES

## ANNEX II - Test Procedures

### B) A.C Volts Test

Used for testing of the rail charging strips and transformer.

#### *Test Procedure:*

1. Set the meter to A.C volts
2. Connect the meter leads between the blue and brown wires at the connector block
3. Take a reading from the meter

The reading should be between approx.15 and 18 Volts A.C, indicating that the transformer and wire are operating correctly. If the A.C voltage value is zero (or less than 15 volts) the transformer requires replacing and re-testing.

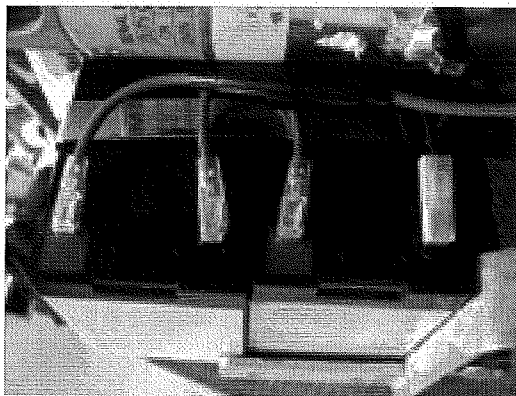
4. Next locate the upper charging strip on the rail and carry out a test between the two brass strips. The meter should read between 15 - 18 volts A.C
5. Repeat the test described in step 4 for the bottom charge strip to test the rail wiring. If no voltage shows at one or both of the charging points, this indicates a break in the rail wiring so will require repair and re-testing
6. With the lift parked on a charge point and the main cover removed locate the brown and blue wires that plug onto circuit board. (Connection reads 'charge').
7. Remove the plug and test between the two wires in the plug

The reading should be between 15 and 18 volts A.C. If the A.C voltage value is zero, this indicates that there is a pick-up problem. The likely cause would be that either one of the plungers is stuck in the depressed position or the pick-ups are out of line with the charge strips.

8. Re-connect the plug to the circuit board

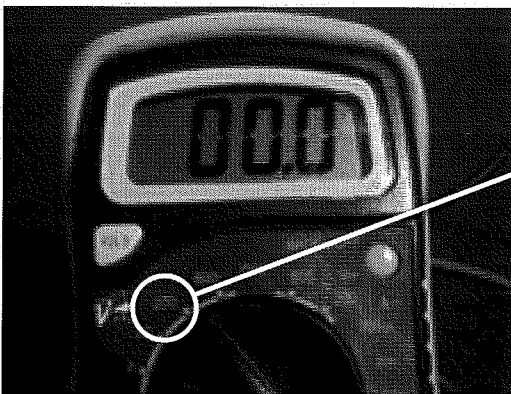
# SERVICING PROCEDURES

## ANNEX II - Test Procedures



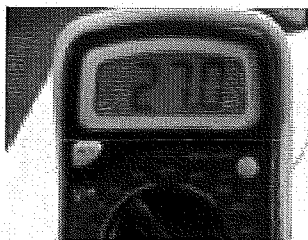
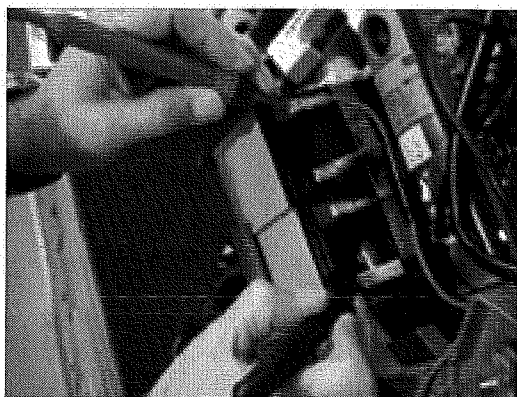
### C) Battery Voltage Test

- 1: Drive the lift off charge point, and turn lift off using the ON/OFF switch (Carriage up per safety cover)
- 2: Remove the footrest hinge cover and remove the main cover. To remove the main cover refer to Annex III procedure A
- 3: This will give you access to the batteries. (picture)



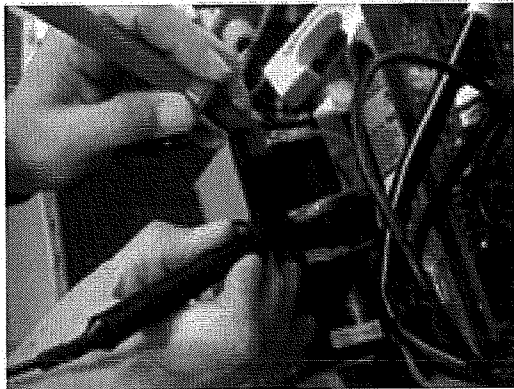
- 4: Set the Multimeter to D/C volts, set to nearest value above 24V scale  
NOTE: Multimeters may vary.

- 5: Place RED positive probe onto fused positive terminal on top battery. (RED)  
Place BLACK probe onto negative terminal of bottom battery.(BLACK )  
The reading on the multimeter should approx be between 24V and 27V D/C

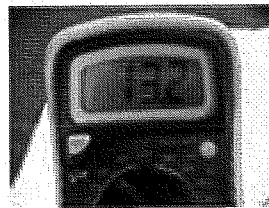
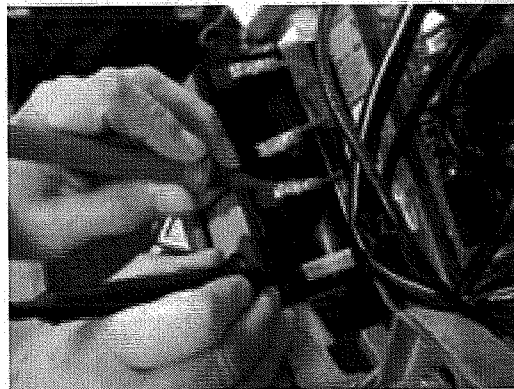
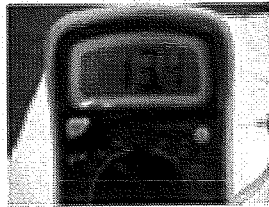


# SERVICING PROCEDURES

## ANNEX II - Test Procedures



6: Take individual readings from each battery. RED probe to positive, BLACK probe to Negative.  
NOTE: If the individual readings are more than 1volt different, Replace batteries.



# SERVICING PROCEDURES

## ANNEX II - Test Procedures

### D) Charging System Test

Used for testing of the charging system.

The correct way to check the charge output from the circuit board is to check the amperage (current), not the voltage. The meter will need to set to D.C amps. Depending on the meter used, one of its leads may need to be located in a different socket on the meter to obtain the correct reading and prevent damage to the meter (refer to meter instructions).

#### *Test Procedure:*

1. With the lift parked on a charge point remove the main cover (refer to the main cover removal procedure in Annex III procedure A)
2. Disconnect the fused positive battery lead (red) from battery terminal
3. Connect one of the Multimeter probes to the positive battery terminal (B+) and the other to the positive battery lead (red). The meter should now be bridging the circuit between the board and the batteries

### E) Motor Condition Test

1. With the lift parked on a charge point remove the main cover (refer to the main cover removal procedure in Annex III procedure A)
2. Disconnect the fused positive battery lead (red) from battery terminal
3. Connect one of the Multimeter probes to the fused positive battery terminal (B+) and the other to the positive battery lead (red). The meter should now be bridging the circuit between the board and the batteries
4. Carry out a current draw test by running the unloaded stairlift up the stairs. Observe the meter reading during travel. The correct reading should lie between 7 and 7.5 Amps
5. Repeat step 3, this time run the unloaded stairlift down the stairs. Check the Multimeter reading during travel. The correct reading should be half or less of the current drawn during the upward cycle (less than or equal to 3.5Amps)

# SERVICING PROCEDURES

## ANNEX III - Test Procedures



### **FACTORY TEST ONLY**

#### **Insulation Resistance Test (Mega Test)**

1. With the lift parked on a charge point remove the main cover (refer to the main cover removal procedure in Annex III procedure A)
2. Leave lift parked on charge point
3. Switch off and disconnect transformer
4. Disconnect the ground lead from the Printed Circuit Boards negative battery terminal (B-)
5. Remove rail end cap to gain access to transformer input leads
6. Disconnect transformer leads from connector block inside rail
7. Using a bridging wire, bridge the blue and brown wires on connecting block together
8. Connect red lead from the insulation tester to bridging wire
9. Connect the black lead from the insulation tester to a metal part of the carriage/rail
10. Press the 500V button on the insulation tester

*The reading must be greater than 1M $\Omega$  to pass insulation test.*

# SERVICING PROCEDURES

## ANNEX III - Servicing Procedures

### **A) Main Cover Removal**

1. Park the stairlift away from the charging points
2. Isolate the main battery by switching the battery isolation switch to the '0' position
3. Unscrew foot rest hinge plate cover and remove
4. Loosen foot rest bolts and tilt
5. Remove the gator between the cover and bezel
6. On outdoor Model, you need to dismantle the split seat post by loosening the through bolt and disconnecting the wiring to the limit switch
7. Loosen the two Phillips screws on the rear lower edge of the cover
8. Remove the two Phillips screws from the front lower edge of the cover
9. Loosen the upper cover safety edge pressing the centre of the cover
10. Slide the cover off the carriage

### **B) Replacing Main Cover**


1. Slide cover over carriage ensuring the two rear screw slots slide over the rear cover screws
2. Replace Gator between cover and bezel
3. On Outdoor model re-assemble split seat post by tightening through bolt and 2 fixing grub screws and re-attaching wiring to limit switch
4. Refit the two Phillips screws into the front lower edge of cover ensuring that they are securely fastened and tighten the two Phillips screws on the rear of the carriage
5. Set footrest level and tighten bolts
6. Refit the foot rest hinge plate cover
7. Refit upper safety cover pressing the centre of the covers
8. Re-connect the battery by switching the battery isolation switch to the '1' position
9. Return the stairlift back to its charging position

# SERVICING PROCEDURES

## ANNEX III - Servicing Procedures

### **C) Main Battery Replacement**

1. Remove the negative battery lead (black) from one side of the Batteries (locking tabs)
2. Remove the positive fused battery lead (red) (locking tabs)
3. Remove link wire (red) (locking tabs)
4. Remove the two screws and nuts from the battery strap
5. Remove the two battery straps from around the batteries and support shaft.

 **Take care not to allow the metal strap to come in contact with the battery terminals**

6. Remove the batteries from the chassis

**Note: Batteries must be disposed of in accordance with local regulations**

7. Replace the batteries in reverse order of steps 1 to 6 taking care to ensure the metal straps are located correctly around the support shaft and batteries before securing. Take care not to allow the metal strap to come in contact with the battery terminals
8. Refit the link wire (red)
9. Refit the positive fused battery lead (red)
10. Refit the negative battery lead (black)

### **D) Replacing Motor Brushes**

1. Remove main cover as listed in Annex III procedure A
2. Remove black retaining clip
3. Remove brush
4. Fit new brush
5. Refit black retaining clip
6. Repeat steps 2 to 5 for 2nd brush
7. Replace main cover as listed in Annex III procedure B



# SERVICING PROCEDURES

## ANNEX III - Servicing Procedures

### **E) Replacing Remote Control Batteries**

1. Slide battery cover off the back of remote control
2. Disconnect and remove old batteries
3. Install new batteries
4. Slide battery cover back on remote control
5. Test remote control functions to ensure correct operation

*Note: Batteries must be disposed of in accordance with local regulations*

### **F) Replacing Printed Circuit Board**

1. Remove main cover as listed in Annex III procedure A
2. Remove all electrical connections to board
3. Unscrew and remove the 4 screws holding the board
4. Install new board and screw into position
5. Re-install all electrical connections as per circuit drawing
6. Replace main cover as listed in Annex III procedure B

### **G) Seat Removal/Installation**

#### **Removal:**

1. Disconnect Hirschmann plug connecting to seat wiring loom
2. On Outdoor Stairlift, remove the retaining ring on the Seat Post  
On Indoor Stairlift, remove the end plug from the Seat Post
3. Press and hold down seat swivel handle
4. Grip and hold both sides of seat
5. Twist and pull gently to remove seat

#### **Installation:**

(Make sure index plate cover and activator ring are in the correct position)

1. Press and hold down seat swivel handle
2. Grip and hold both sides of seat
3. Push down gently until seat is in position
4. On Outdoor Stairlift, replace the retaining ring on the Seat Post  
On Indoor Stairlift, replace the end plug from the Seat Post
5. Reconnect Hirschmann plug connecting to seat wiring loom

# SERVICING PROCEDURES

## ANNEX III - Servicing Procedures

### H) Seat Post Removal/Installation

#### Removal:

1. Move the lift off the charge point and isolate the battery by switching the battery isolation switch to the '0' position
2. Remove seat as per Seat Removal/ Installation procedure listed in Annex III procedure G
3. Remove main cover as per Main Cover Removal procedure listed in Annex III procedure A
4. Remove plastic index plate cover
5. Remove seat swivel switch
6. Remove wiring from seat swivel switch
7. Undo the cable tie securing seat switch cable
8. Remove the 6 locating bolts on seat post (three either side of chassis plates)
9. Lift out and remove seat post
10. Remove seat swivel switch, limit swivel bolt and activator plate from index plate for fitting onto replacement seat post

#### Installation:

1. Fit seat swivel switch, limit swivel bolt and activator ring to new seat post
2. Slide the new seat post into position between the chassis plates and align with the 6 locating bolts. (DO NOT tighten at this point)

**Note:** Always ensure anti-slip clamp and washers are fitted when fitting seat post

3. Place spirit level on the index plate and set the seat post to a level position
4. Tighten all 6 locating bolts using the torque wrench. The torque wrench should be set to 36 Nm
5. Replace the wiring for the seat swivel switch
6. Attach the cable to the seat post using a cable tie
7. Replace seat swivel
8. Replace index plate plastic cover
9. Replace main cover as per Replacing Main Cover procedure listed in Annex III procedure B
10. Replace seat as per Seat Removal/Installation procedure listed in Annex III procedure G

# SERVICING PROCEDURES

## ANNEX III - Servicing Procedures

11. Re-connect the battery by switching the battery isolation switch to the 'I' position
12. Test the stairlift to ensure correct operation

### ■ **I) Limit Switch Replacement**

1. Disconnect wiring from rear of limit switch
2. Unscrew nut from switch barrel and remove switch
3. When replacing, set switch with adjustment to specified gap
4. Refit limit switch back onto mounting plate and tighten nut
5. Reattach switch wiring

### ■ **J) Setting Footrest Level with Top Landing**

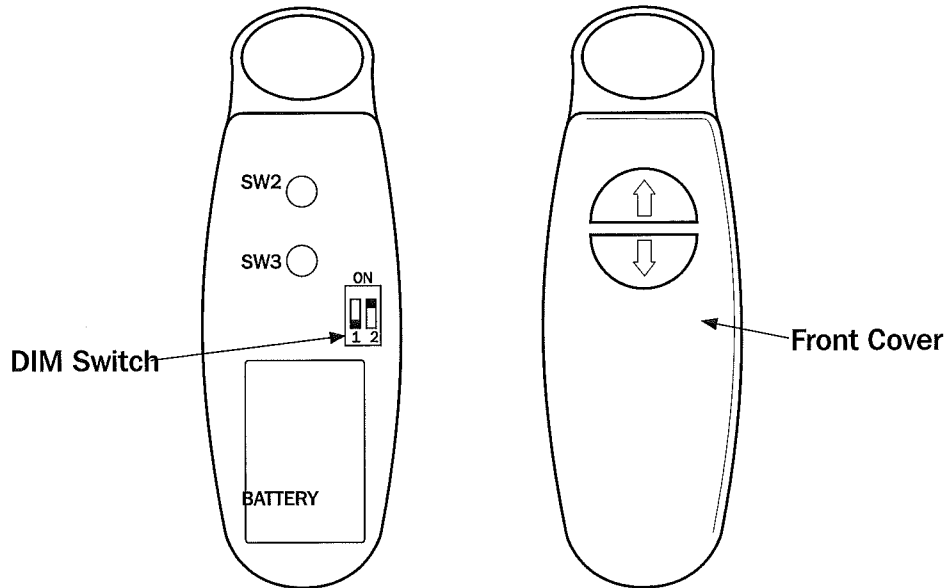
1. Run the stairlift to top of rail until it comes to a stop
2. Check that the footrest is level with the top landing step
3. If not, run the stairlift down the rail away from the upper limit stop
4. Loosen screws on upper limit stop and adjust up or down as required
5. Re-check footrest level by running the stairlift back to top of rail until it comes to a stop
6. Repeat this process until the correct footrest level is achieved

# SERVICING PROCEDURES

## ANNEX III - Servicing Procedures

### **K) Remote Handset Reset**

*(Remote handsets may differ dependant on model)*



#### **To reset the Remote DIM switches:**

1. Remove battery cover and battery
2. On the battery cover inside the remote handset you will find a set of dim switches as shown above, these can be set to a combination of four different stations. Set the two switches as you wish
3. Replace the battery and battery cover
4. Make sure the lift is at the bottom of the rail
5. Turn the seat 45°
6. Hold the toggle switch in the down direction
7. Press one of the buttons on the remote, the lift should beep 3 times
8. Release the toggle switch
9. Turn the seat back to the ride position

***The stairlift should now be re-programmed.***

# SERVICING PROCEDURES

## ANNEX III - Servicing Procedures

### ■ L) Printed Circuit Board Reset

1. Switch off mains supply to transformer
2. Isolate the battery by switching the battery isolation switch to the '0' position
3. Wait 1 minute
4. Re-connect the battery by switching the battery isolation switch to the '1' position
5. Switch on the mains supply to the transformer

*The stairlift should now have reset and indicate a ready to operate status on the LED display.*

# SERVICING PROCEDURES

## ANNEX IV - Complete Strip-Down/Rebuild Procedures

When any of the following components are replaced, the following strip down and rebuild procedures must be followed:

- Rollers
- Motor
- Overspeed Governor (OSG)
- Chassis Plates

### ■ A) Stairlift Strip Down

*Stairlift removal from rail:*



**WARNING! Take care when handling the carriage assembly, as this is a heavy component**

1. Remove rail end cap
2. Remove the upper limit stop and aluminium end stop from racking.
3. Drive stair lift to the top of the rack
4. Isolate the main battery by switching the battery isolation switch to the '0' position
5. Disconnect and remove seat as per Seat Removal procedure list in Annex III (Procedure G)
6. Lift the carriage off the rail (NOTE: Handling Warning)
7. Lay carriage on landing at the top of the stairs

*Strip down procedure:*

1. Remove footrest hinge cover
2. Remove main cover as stated in Annex III Procedure A

# SERVICING PROCEDURES

## ANNEX IV - Complete Strip-Down/Rebuild Procedures

3. Press the centre of lower safety cover, unclip and remove
4. Disconnect the sensor
5. Disconnect the cabling for foot cover from the printed circuit board
6. Loosen the two bolts holding the footplate assembly and remove



**WARNING! Finger trap hazard**

7. Remove the main batteries as follows:  
Index III (Procedure C)
  8. Disconnect the LED display lead, switch lead and key switch plug from the upper safety cover
  9. Press centre of upper safety cover, unclip and remove (key side first)
  10. Remove seat post as follows:  
Index III (Procedure H)
- Note: At this stage of the strip down procedure, the limit switches can be removed if required. Refer to limit switch replacement in Annex III procedure I**
11. Remove all wiring for the printed circuit board
  12. Unscrew and remove the 4 screws holding the board
  13. Remove the printed circuit board
  14. Lay the stairlift carriage on it's side with the Overspeed Governor (OSG) facing up

# SERVICING PROCEDURES

## ANNEX IV - Complete Strip-Down/Rebuild Procedures

15. Disconnect the spring on the OSG
16. Remove the top axle bolts from the OSG side chassis plate and the top support bolt
17. Remove the chassis plate (disconnect the wires connected to the switches)
18. Remove the OSG's top circlip
19. Slide off the OSG assembly (Note: at this point the regulator is removable but comes with motor as a sub-assembly)
20. Remove the 3 middle chassis bolts on the opposite chassis plate
21. Remove the motor and regulator
22. Remove the PCB mounting and ground wire
23. Removes the axles and rollers (check indentation on rollers - if replacing, the flat side is always placed adjacent to the chassis plate)

**Notes:**

1. *When working on stairlift unit while lower safety cover is removed, be careful not to damage the limit switches*
2. *If replacing the OSG limit switch, the OSG chassis plate requires removal first*

### **B) Stairlift Rebuild**

#### **Rebuild procedure:**

1. Replace axles and rollers ensuring the flat edge of the rollers are adjacent to the chassis plate side
2. Refit the PCB mounting plate and ground wire to the side of motor
3. Refit the motor and regulator with the 3 middle chassis bolts to the chassis plate
4. Refit the OSG assembly and fasten in place with circlip
5. Refit the opposite chassis plate (OSG side) and tighten in place with top axle bolts and top support bolt
6. Refit the OSG spring
7. Refit the footrest assembly
8. Replace the PCB and screw into position (4 screws)
9. Reconnect the PCB wiring as per PCB Wiring Diagram



# SERVICING PROCEDURES

## ANNEX IV - Complete Strip-Down/Rebuild Procedures

**10.** Refit the seat post as follows:

- Fit seat swivel switch to seat post
- Slide the new seat post into position between the chassis plates and align with the 6 locating bolts. (DO NOT tighten at this point)

**Note:** *Always ensure anti-slip clamp and washers are fitted when fitting seat post*

- Place spirit level on the index plate and set the seat post to a level position
- Tighten all 6 locating bolts using the torque wrench. The torque wrench should be set to 36 Nm
- Replace the wiring for the seat swivel switch
- Attach the cable to the seat post using a cable tie
- Replace seat swivel activator ring and limit swivel bolt
- Replace index plate plastic cover

**11.** Reconnect LED display lead, switch lead and key switch plug to upper safety cover

**12.** Refit sensor assembly to upper safety cover

**13.** Refit the upper safety cover

**14.** Refit the main batteries as follows:

- Place batteries into position
- Replace metal battery straps into position and tighten nut and bolt
- Refit link wire (red)
- Refit the positive fused battery lead (red)
- Refit negative battery lead (black)

**15.** Reconnect lead from PCB to lower safety cover safety switches

**16.** Refit lower safety cover

**17.** Replace main cover as follows:

- Slide cover over carriage ensuring the two rear screw slots slide over the rear cover screws
- Refit the two Phillips screws into the front lower edge of cover ensuring they are securely fitted
- Refit Gator between seat post and Cover

# SERVICING PROCEDURES

## ANNEX IV - Complete Strip-Down/Rebuild Procedures

*Mounting the Stairlift onto the rail:*



**WARNING! Take care when handling the carriage assembly, as this is a heavy component**

1. Place stairlift carriage onto top of rail and carefully slide down until carriage comes into contact with rack



**WARNING! Take great care not to damage any of the three micro-switches that protrude from the underneath of the carriage body.**

2. At this point the motor drive pinion must be accurately located on the gear rack. Ensure that the carriage is 'square' to the rail, with the 'up-side' raised so that all of the carriage rollers are in line with the rail
3. Re-connect the battery by switching the battery isolation switch to the 'I' position
4. Run the stairlift down the rail 3 or 4 steps
5. Replace upper limit stop and plastic end cap to racking.
6. Run the stairlift to top of rail to ensure the upper limit stop mechanism is working
7. Check that the footplate is level with the top landing as follows: Index III
8. Replace rail end cap
9. Tighten all 6 locating bolts using the torque wrench. The torque wrench should be set to 36 Nm.
10. Refit seat as follows: Index III (Procedure G)
  - Press and hold down seat swivel handle
  - Grip and hold both sides of seat
  - Twist and push down gently until seat is in position
  - Reconnect Hirschmann plug connecting seat swivel safety switch
  - On Outdoor Stairlift, replace the retaining ring on the Seat Post
  - On Indoor Stairlift, replace the end plug from the Seat Post
11. Carry out a full safety test and record results as per the installation/servicing commissioning sheet

# SERVICING PROCEDURES

## ANNEX V - Labels

### US / Canada

**ACORN SUPERGLIDE 130**

MANUFACTURED BY ACORN STAIRLIFTS

INSTALLER

POWER SUPPLY (PSU) INPUT 120 VAC, 60Hz, 29W  
"CLASS 2" OUTPUT 15 VAC, 16Hz, 1.5 A

BATTERIES 24 VDC (2 X 12 VDC, 7Ah)

DRIVE RACK AND PINION

MAX SPEED 27 fpm

SERIAL #

DATE OF MANUF.

**WARNING**  
RATED LOAD "ONE PERSON ONLY"  
AT MAX WEIGHT 300lbs

TESTED TO:  
ASME A 18.1 - 2008 ASME A 17.5 - 2004

**UL**  
LISTED  
SA 13138  
STAIRWAY CHAIRLIFT

**ACORN HD SUPERGLIDE 130**

MANUFACTURED BY ACORN STAIRLIFTS

INSTALLER

POWER SUPPLY (PSU) INPUT 120 VAC, 60Hz, 29W  
"CLASS 2" OUTPUT 15 VAC, 16Hz, 1.5 A

BATTERIES 24 VDC (2 X 12 VDC, 8.5Ah)

DRIVE RACK AND PINION

MAX SPEED 27 fpm

SERIAL #

DATE OF MANUF.

**WARNING**  
RATED LOAD "ONE PERSON ONLY"  
AT MAX WEIGHT 350lbs

TESTED TO:  
ASME A 18.1 - 2008 ASME A 17.5 - 2004

**UL**  
LISTED  
SA 13138  
STAIRWAY CHAIRLIFT

**BROOKS SUPERGLIDE 130**

MANUFACTURED BY BROOKS STAIRLIFTS

INSTALLER

POWER SUPPLY (PSU) INPUT 120 VAC, 60Hz, 29W  
"CLASS 2" OUTPUT 15 VAC, 16Hz, 1.5 A

BATTERIES 24 VDC (2 X 12 VDC, 7Ah)

DRIVE RACK AND PINION

MAX SPEED 27 fpm

SERIAL #

DATE OF MANUF.

**WARNING**  
RATED LOAD "ONE PERSON ONLY"  
AT MAX WEIGHT 300lbs

TESTED TO:  
ASME A 18.1 - 2008 ASME A 17.5 - 2004

**UL**  
LISTED  
SA 13138  
STAIRWAY CHAIRLIFT

**BROOKS HD SUPERGLIDE 130**

MANUFACTURED BY BROOKS STAIRLIFTS

INSTALLER

POWER SUPPLY (PSU) INPUT 120 VAC, 60Hz, 29W  
"CLASS 2" OUTPUT 15 VAC, 16Hz, 1.5 A

BATTERIES 24 VDC (2 X 12 VDC, 8.5Ah)

DRIVE RACK AND PINION

MAX SPEED 27 fpm

SERIAL #

DATE OF MANUF.

**WARNING**  
RATED LOAD "ONE PERSON ONLY"  
AT MAX WEIGHT 350lbs

TESTED TO:  
ASME A 18.1 - 2008 ASME A 17.5 - 2004

**UL**  
LISTED  
SA 13138  
STAIRWAY CHAIRLIFT

### Europe / Rest of world

**ACORN SUPERGLIDE 130**

MANUFACTURED BY ACORN STAIRLIFTS

INSTALLER

POWER SUPPLY (PSU) INPUT 230-240 VAC, 50Hz, OUTPUT  
15 VAC, 1.5 A, 22.5VA

BATTERIES 24 VDC (2 X 12 VDC, 7Ah)

DRIVE RACK AND PINION

MAX SPEED 0.15M/SEC

SERIAL #

DATE OF MANUF.

**WARNING**  
RATED LOAD "ONE PERSON ONLY"  
AT MAX WEIGHT 127kg

**CE**  
STAIRLIFT

**ACORN HD SUPERGLIDE 130**

MANUFACTURED BY ACORN STAIRLIFTS

INSTALLER

POWER SUPPLY (PSU) INPUT 230-240 VAC, 50Hz  
OUTPUT 15 VAC, 1.5 A, 22.5VA

BATTERIES 24 VDC (2 X 12 VDC, 8.5Ah)

DRIVE RACK AND PINION

MAX SPEED 0.15M/SEC

SERIAL #

DATE OF MANUF.

**WARNING**  
RATED LOAD "ONE PERSON ONLY"  
AT MAX WEIGHT 159kg

**CE**  
STAIRLIFT

**BROOKS SUPERGLIDE 130**

MANUFACTURED BY BROOKS STAIRLIFTS

INSTALLER

POWER SUPPLY (PSU) INPUT 230-240 VAC, 50Hz, OUTPUT  
15 VAC, 1.5 A, 22.5VA

BATTERIES 24 VDC (2 X 12 VDC, 7Ah)

DRIVE RACK AND PINION

MAX SPEED 0.15M/SEC

SERIAL #

DATE OF MANUF.

**WARNING**  
RATED LOAD "ONE PERSON ONLY"  
AT MAX WEIGHT 127kg

**CE**  
STAIRLIFT

**BROOKS HD SUPERGLIDE 130**

MANUFACTURED BY BROOKS STAIRLIFTS

INSTALLER

POWER SUPPLY (PSU) INPUT 230-240 VAC, 50Hz, OUTPUT  
15 VAC, 1.5 A, 22.5VA

BATTERIES 24 VDC (2 X 12 VDC, 8.5Ah)

DRIVE RACK AND PINION

MAX SPEED 0.15M/SEC

SERIAL #

DATE OF MANUF.

**WARNING**  
RATED LOAD "ONE PERSON ONLY"  
AT MAX WEIGHT 159kg

**CE**  
STAIRLIFT

**DO NOT REMOVE**

REFER TO USER INSTRUCTIONS

STOP GO

**DOWN** **HAND WINDING**

**UP**

See instructions on wheel

**HAND WINDING WHEEL**

**DO NOT USE UNLESS DIRECTED BY SERVICE ENGINEER!**

INSTRUCTIONS

1. Turn off battery isolation switch
2. Remove cover from access hole
3. Insert this hand winding wheel
4. Wind in desired direction keeping Stairlift under constant surveillance
5. Turn on battery isolation switch and replace cover




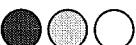










**WARNING! The lift will not work if wound beyond its normal stopping position.**

**NOTE: LABELS ARE AVAILABLE IN OTHER LANGUAGES**



# DISPLAY CODES

UP TO 2003

Display Code	Numeric	Fault	Possible Fault
	<b>OFF</b>	<b>POWER DOWN</b>	Check red plug. Batteries Totally flat.
	<b>1</b>	<b>NORMAL</b>	If toggle fault, try remotes. Possibly limit switch stuck in.
	<b>2</b> <small>(WILL NOT SHOW NUMBER)</small>	<b>NO CHARGE</b> <small>(WILL BEEP ALL THE TIME ONLY ON LATEST MODELS)</small>	Lift not on charge point. Transformer unplugged.
	<b>3</b>	<b>OSG</b>	Handwind lift up to rest (turn clockwise).
	<b>4</b>	<b>SEAT TURNED</b>	Turn seat back to travel position. Safety arm not down if fitted.
	<b>5</b>	<b>KEY OFF</b>	Check key in and turn clockwise.
	<b>6</b>	<b>FINAL LIMIT</b>	Overrun. Wind stairlift up or down.
	<b>7</b>	<b>FOOTPLATE (DOWN)</b>	Downside safety edge activated. (PSE or base plate)
	<b>8</b>	<b>FOOTPLATE (UP)</b>	Upside safety edge activated. (PSE or base plate)
	<b>9</b>	<b>CARRIAGE (UP)</b>	Safety cover up pad activated.
	<b>A</b>	<b>CARRIAGE (DOWN)</b>	Safety cover down pad activated.
	<b>C</b>	<b>BATTERIES FLAT</b>	Leave stairlift at charge point for approx 1 hour.
	<b>E</b>	<b>BRAKE FAULT</b>	Try Reset. Possible low battery. Leave on charge.
	<b>F</b>	<b>MOTOR</b>	Try a reset, if no, will require an engineer to visit.


















Denotes L.E.D's flashing

# DISPLAY CODES

UL Model














2003-2006

DISPLAY	FAULT		POSSIBLE SOLUTION
	POWER DOWN (no display)		Check that the power ON / OFF is in the ON position.
	NORMAL		If there is a toggle fault, try the remote control handset. A limit switch may be stuck in.
	NO CHARGE		The mains supply has been turned off or the lift is not at the charging point. There will also be an audible warning sound.
	O.S.G. (see hand winding)		Hand wind the lift up to RESET the O.S.G.
	SEAT TURNED		Turn the seat back to the TRAVEL position. The safety arm (if fitted) is not down.
	KEY OFF		Check that the key is in and turned clockwise.
	FINAL LIMIT		Overrun. Wind the lift up or down.
	FOOTPLATE DOWN		The downside safety edge is activated. Check downside safety edge. Check footrest base switch.

# DISPLAY CODES

2003-2006

UL Model

DISPLAY	FAULT	POSSIBLE SOLUTION
	FOOTPLATE UP	 Upside safety edge activated.
	CARRIAGE UP	Safety cover up pad activated.
	CARRIAGE DOWN	Safety cover down pad activated.
	BATTERIES	 The batteries are flat. Leave at the charge point for approximately 1 hour.
	BRAKE	 Brake fault. Try a reset. Possible low batteries; try leaving on charge first.
	MOTOR	 Try a reset. If this doesn't work, you will require an engineer to visit. To reset, turn the power switch off (located on the stairlift) for 30 seconds (see page 16).
	BATTERIES	 Batteries low (17 volts or less) re-charge batteries.
	RELAY FAULT	Try a reset. If this does not clear the display and the lift fails to operate, call your ACORN representative for further instructions.




# DISPLAY CODES

ISO Model

2006 ONWARDS





## CHARGING CODES 1

LIFT WILL OPERATE AS NORMAL

	<p><b>NORMAL - Battery is charging</b> Charger connected and operating properly</p>	<ul style="list-style-type: none"> <li>• Lift is operating normally</li> </ul>
	<p><b>NORMAL - Battery is fully charged</b> Charger connected but not charging - battery is at maximum charge capacity</p>	<ul style="list-style-type: none"> <li>• Lift is operating normally</li> </ul>
	<p><b>FAULT - Battery fault</b> Charger connected but not charging - battery is not found, or is faulty</p>	<ul style="list-style-type: none"> <li>• Contact your authorized Acorn dealer for assistance</li> </ul>

## STANDARD OPERATING CODES 2

LIFT WILL OPERATE AS NORMAL

	<p><b>NORMAL - Power down / Sleep mode</b> No display shown. Lift is either receiving no power; or is in sleep mode.</p>	<ul style="list-style-type: none"> <li>• Check that the power switch is in the ON position</li> <li>• Activate the directional paddle to wake the stairlift from 'SLEEP' mode</li> </ul>
	<p><b>NORMAL - No charge</b> LIFT WILL BEEP Lift has been parked off a charge point, and is receiving no charge.</p>	<ul style="list-style-type: none"> <li>• Activate the directional paddle and drive the stairlift to a charge point</li> <li>• Check that the mains supply has not been turned off</li> </ul>
	<p><b>NORMAL - Lift moving up</b> Lift is in operation, and moving upward. Armrest toggle has been activated.</p>	<ul style="list-style-type: none"> <li>• Lift is operating normally</li> </ul>
	<p><b>NORMAL - Lift moving down</b> Lift is in operation, and moving downward. Armrest toggle has been activated.</p>	<ul style="list-style-type: none"> <li>• Lift is operating normally</li> </ul>



# DISPLAY CODES

2006 ONWARDS

ISO Model

2

## STANDARD OPERATING CODES

LIFT WILL OPERATE AS NORMAL

**F4**

### NORMAL - Lift moving up (remote)

Lift is in operation, and moving upward.  
Remote control has been activated.

- Lift is operating normally

**F5**

### NORMAL - Lift moving down (remote)

Lift is in operation, and moving downward.  
Remote control has been activated.

- Lift is operating normally

3

## OPERATING ERROR CODES

LIFT WILL NOT OPERATE

**E1**

### NORMAL - Safety edge activated

Footrest UP safety edge has been activated

- Check the footrest UP safety edge for obstruction

**E2**

### NORMAL - Safety edge activated

Footrest DOWN safety edge has been activated

- Check the footrest DOWN safety edge for obstruction

**E3**

### NORMAL - Safety edge activated

Carriage UP safety edge has been activated

- Check the carriage UP safety edge for obstruction

**E4**

### NORMAL - Safety edge activated

Carriage DOWN safety edge has been activated

- Check the carriage DOWN safety edge for obstruction

**E5**

### NORMAL - Seat not in place

The stairlift seat is not in the riding position

- Turn the seat back to the riding position

**E8**

### NORMAL - Battery low

Battery requires charging

- Activate the directional toggle switch and drive the stairlift to a charge point

**E9**

### NORMAL - Key switch off

Key switch is in the OFF position

- Check that the key is in and turned to the ON position

# DISPLAY CODES

ISO Model

2006 ONWARDS



**NOTE: IF MORE THAN ONE OF THE PREVIOUS OPERATING 'ERRORS' ARE OPERATING TOGETHER (e.g. the seat is not in place, AND the key switch is in the off position) THEN ONE OF THE FOLLOWING HARDWARE FAULT CODES MAY BE DISPLAYED**

## HARDWARE FAULT CODES LIFT WILL NOT OPERATE

4

	<b>NORMAL - Multiple operating error</b> More than one error has occurred	<ul style="list-style-type: none"><li>• Check that more than one of the faults in section 3 are not present, rectify if possible</li></ul>
	<b>NORMAL - Multiple operating error</b> More than one error has occurred	<ul style="list-style-type: none"><li>• Refer to section 3 if a different code is displayed after checking and rectifying</li></ul>
	<b>NORMAL - Multiple operating error</b> More than one error has occurred	<ul style="list-style-type: none"><li>• If not resolved, please contact your authorized Acorn dealer for assistance</li></ul>
	<b>FAULT - Safety device fault</b> More than one error has occurred, resulting in a safety device fault	<ul style="list-style-type: none"><li>• Contact your authorized Acorn dealer for assistance</li></ul>

## FATAL ERROR CODES LIFT WILL NOT OPERATE

5

	<b>FAULT - Relay fault</b>	<ul style="list-style-type: none"><li>• Reset the stairlift (power off for 30 seconds)</li><li>• If not resolved, contact your authorized Acorn dealer for assistance</li></ul>
--	----------------------------	---

FATAL ERROR CODES continued on next page

# DISPLAY CODES

2006 ONWARDS

ISO Model

5

## FATAL ERROR CODES LIFT WILL NOT OPERATE

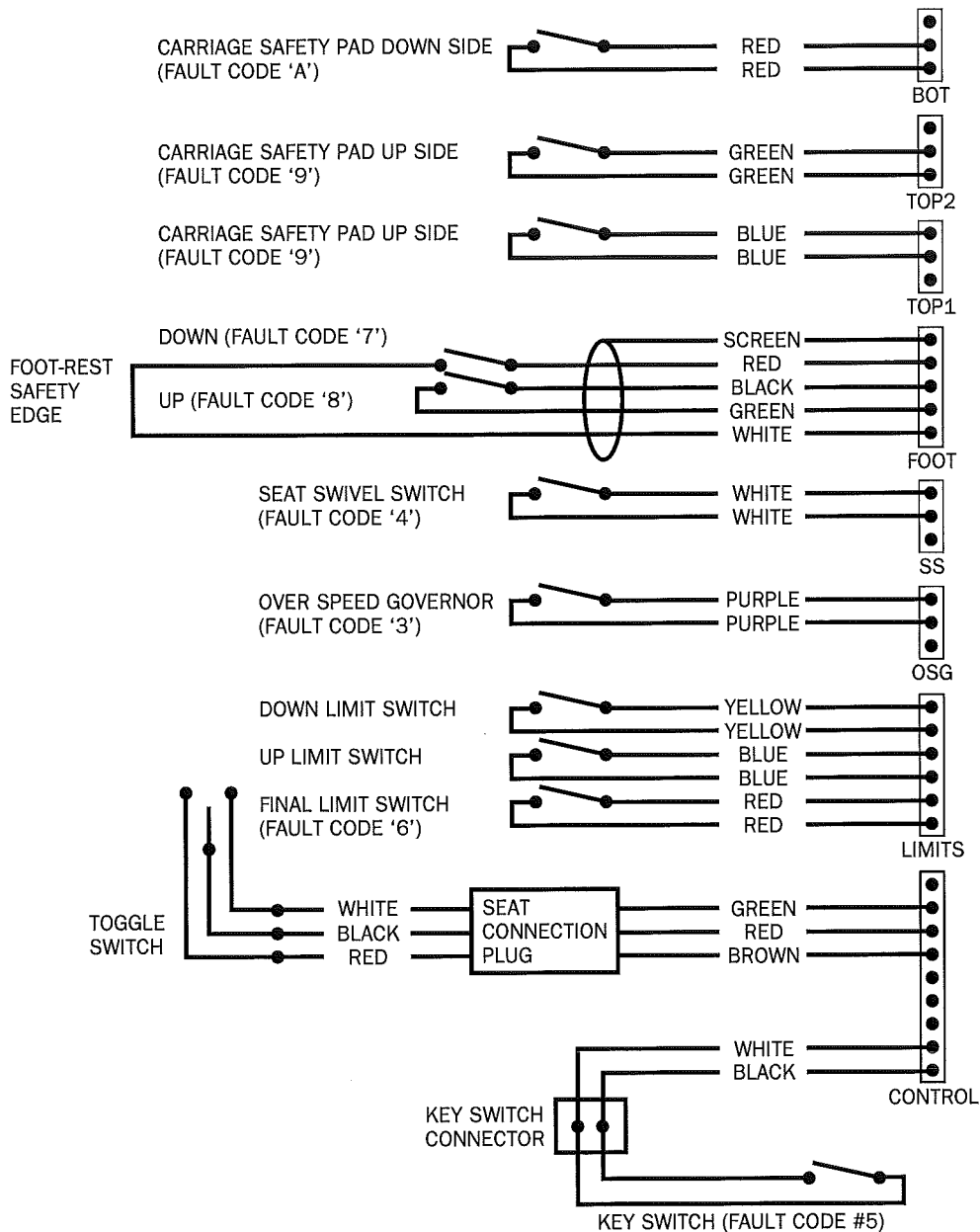
<b>F2</b>	<b>FAULT - Brake fault</b>	<ul style="list-style-type: none"> <li>• Reset the stairlift (power off for 30 seconds)</li> <li>• Drive the stairlift to a charge point, and leave to charge for one hour</li> <li>• If not resolved, contact your authorized Acorn dealer for assistance</li> </ul>
<b>F3</b>	<b>FAULT - Motor fault</b>	<ul style="list-style-type: none"> <li>• Reset the stairlift (power off for 30 seconds)</li> <li>• If not resolved, contact your authorized Acorn dealer for assistance</li> </ul>
<b>F4</b>	<b>FAULT - Motor over-current</b>	<ul style="list-style-type: none"> <li>• Reset the stairlift (power off for 30 seconds)</li> <li>• If not resolved, contact your authorized Acorn dealer for assistance</li> </ul>
<b>F5</b>	<b>FAULT - Battery fault</b>	<ul style="list-style-type: none"> <li>• Drive the stairlift DOWN to a charge point, and leave to charge</li> </ul>
<b>F6</b>	<b>FAULT - Final limit overrun</b>	<ul style="list-style-type: none"> <li>• Hand wind the stairlift up OR down (see <i>hand-winding</i>)</li> <li>• If not resolved, contact your authorized Acorn dealer for assistance</li> </ul>
<b>F7</b>	<b>FAULT - OSG switch</b>	<ul style="list-style-type: none"> <li>• Hand wind the lift UP to reset the OSG (see <i>hand-winding</i>)</li> </ul>
<b>F8</b>	<b>FAULT - System lock-out</b>	<ul style="list-style-type: none"> <li>• Reset the stairlift (power off for 30 seconds)</li> <li>• If not resolved, contact your authorized Acorn dealer for assistance</li> </ul>

# WIRING DIAGRAMS

## LOW VOLTAGE WIRING CONTROL BOARD T498

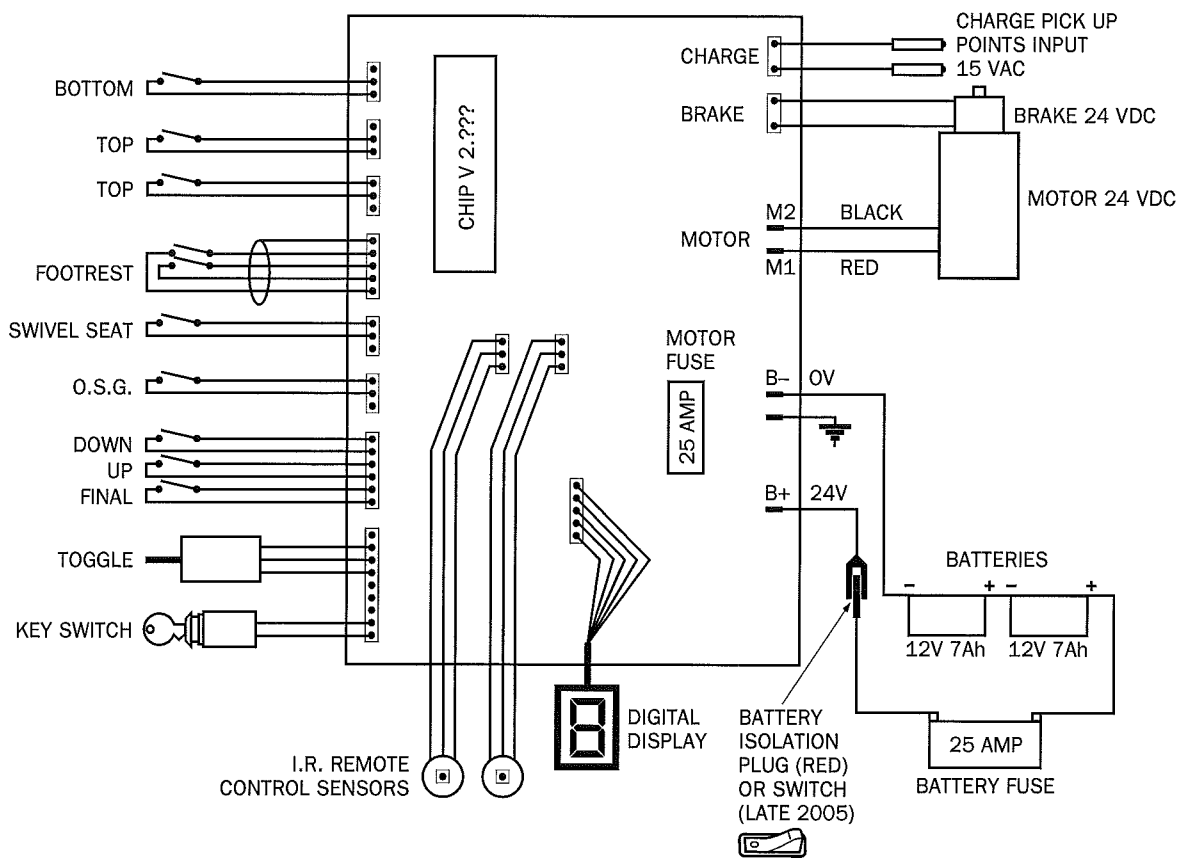
### CIRCUIT BOARD LOW VOLTAGE SIDE

LIMIT / SAFETY / TOGGLE SWITCHES (5 V.D.C.)



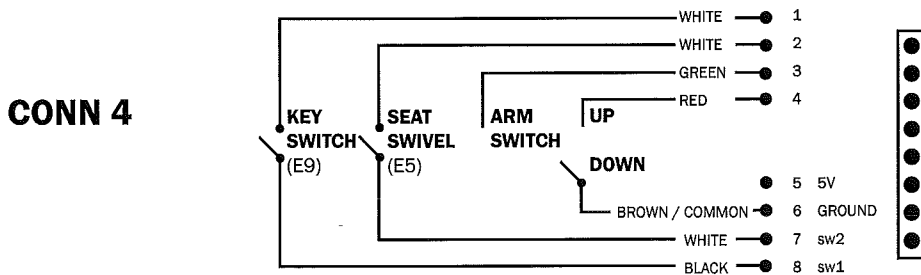
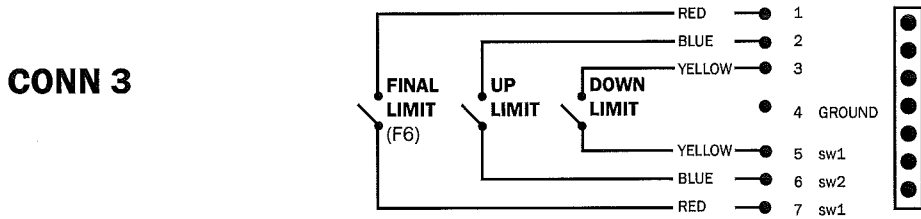
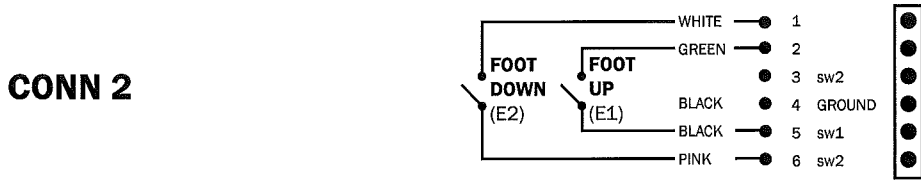
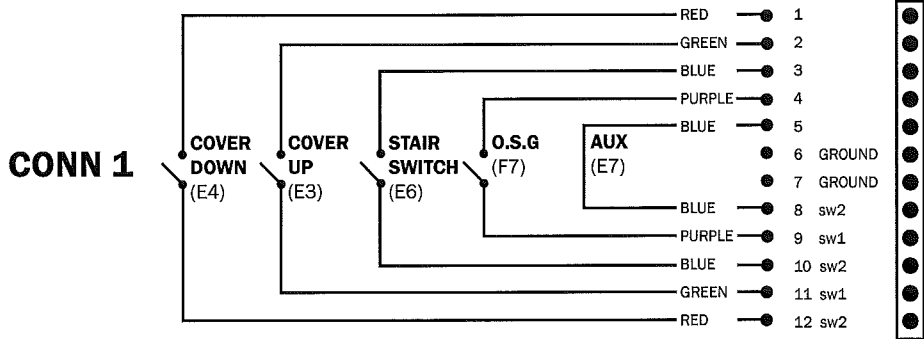
# WIRING DIAGRAMS

## LOW VOLTAGE WIRING CONTROL BOARD T498



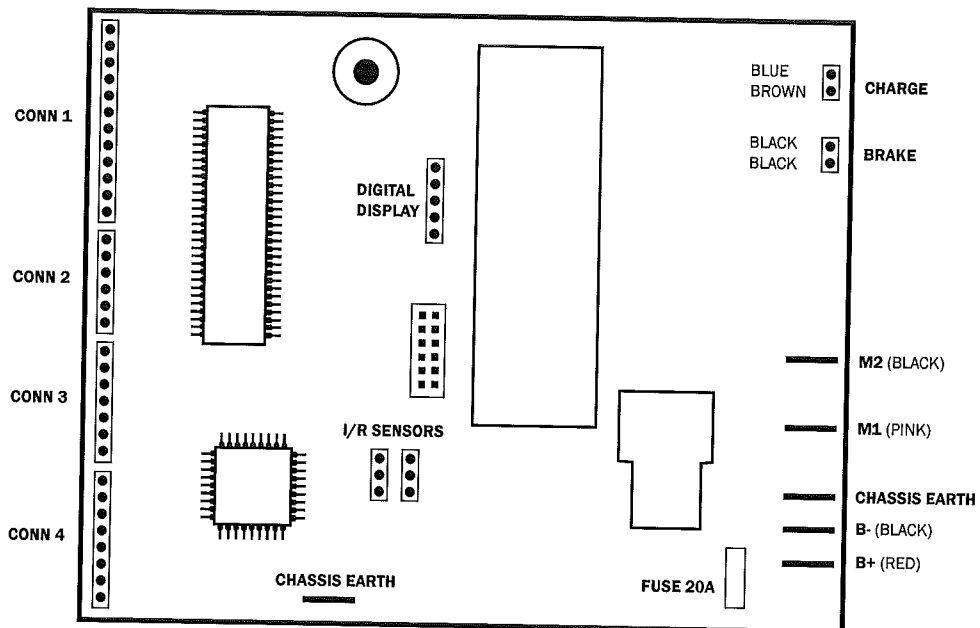
# WIRING DIAGRAMS

## LOW VOLTAGE WIRING CONTROL BOARD T502



# WIRING DIAGRAMS

## LOW VOLTAGE WIRING CONTROL BOARD T502



# VOLTAGES

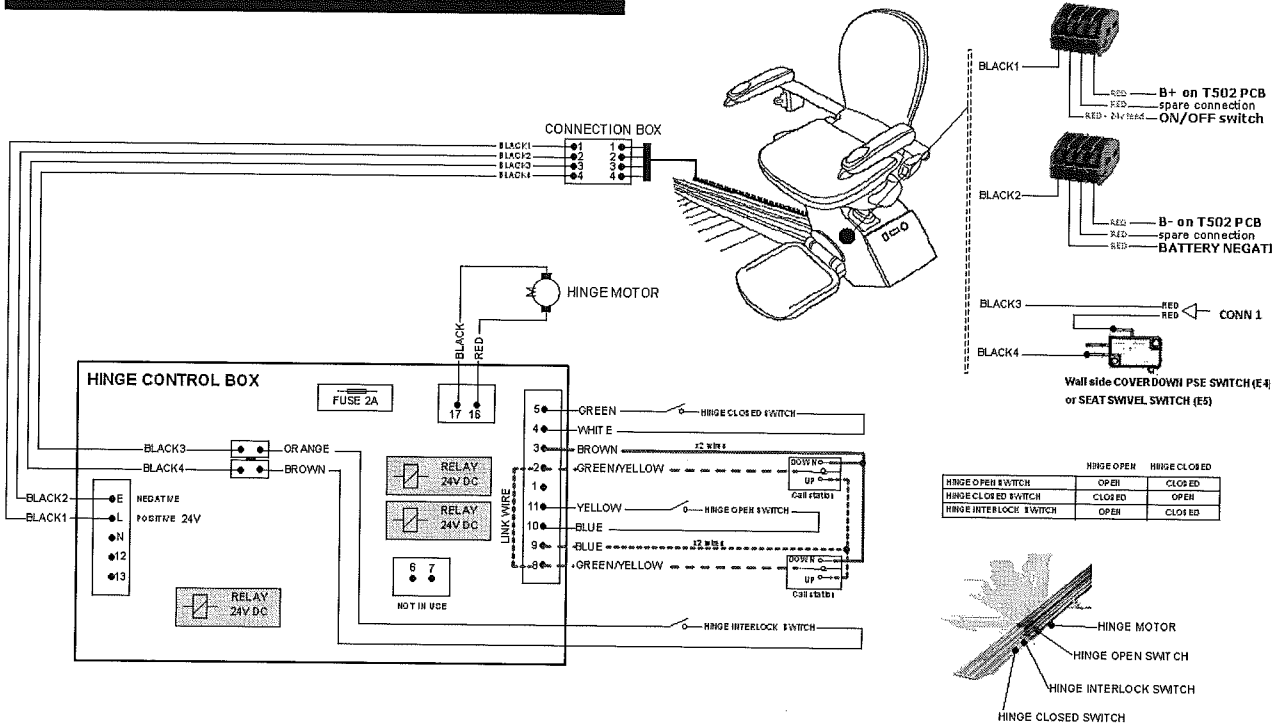
## ACORN 130 SUPERGLIDE VOLTAGES

- STAIRLIFT: 24<>28V D/C
- BATTERIES: STD 12V 7.2 AH D/C or (12v8.5AH) Heavy Duty
- CONTROL BOARD: (L.E.D.) 6V D/C
- LOW VOLTAGE SIDE: (Control board) 5V D/C
- MOTOR BRAKE: 18V D/C
- CHARGER PICK UP STRIPS: 15<>18V A/C
- CHARGING VOLTAGE: 0.25Ah

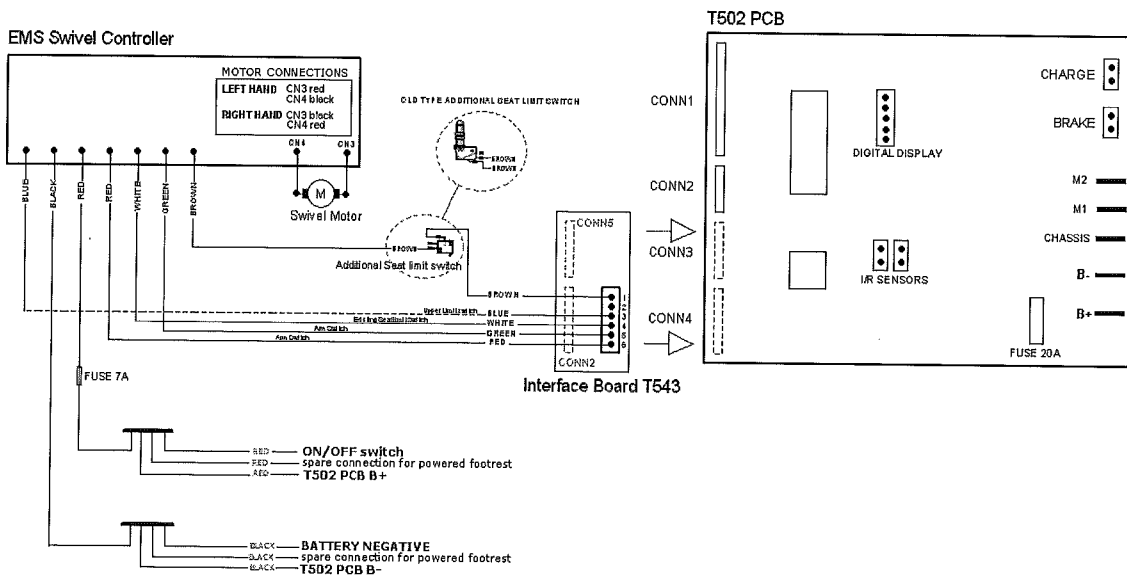


# WIRING DIAGRAMS

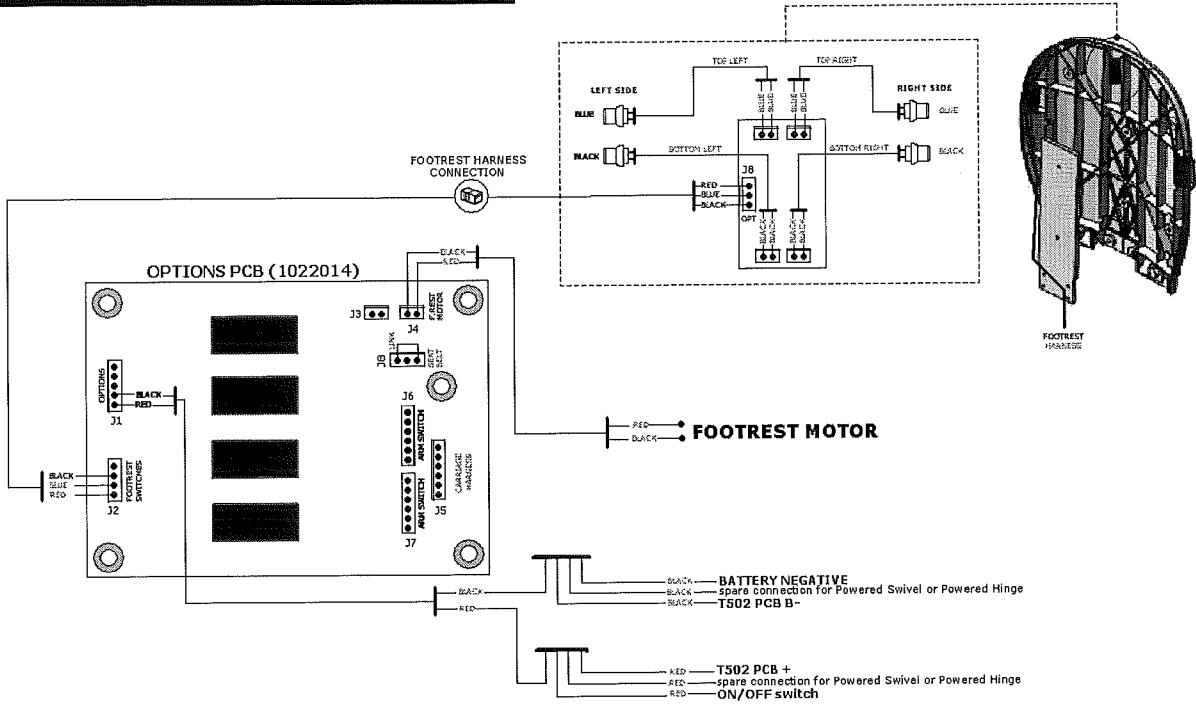
## Acorn - Brooks 130 + Powered Hinge



## Acorn-Brooks 130 Powered Swivel



**Acorn-Brooks 130 Powered Footrest**

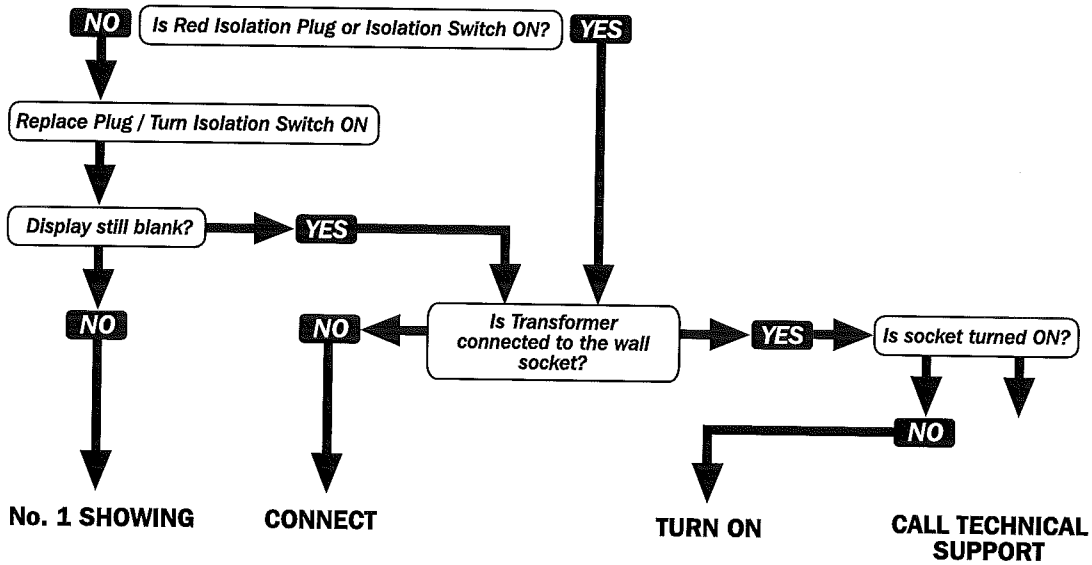


# ORGANOGRAMS

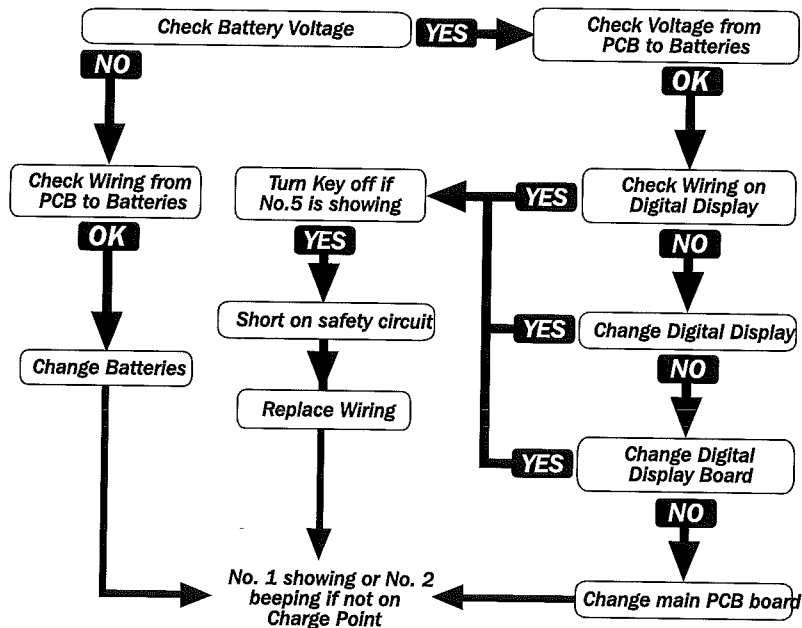
## T498 Control Board

**NO DISPLAY**

**CUSTOMER**



**ENGINEER**

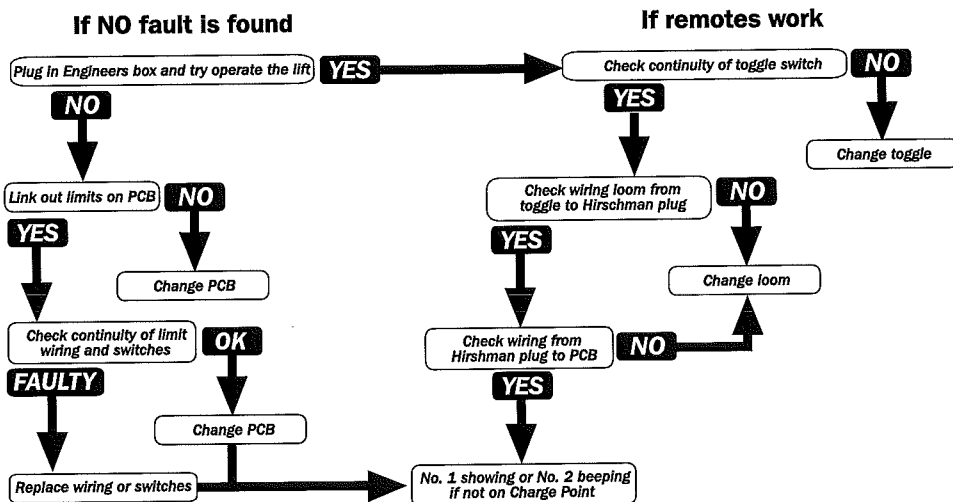
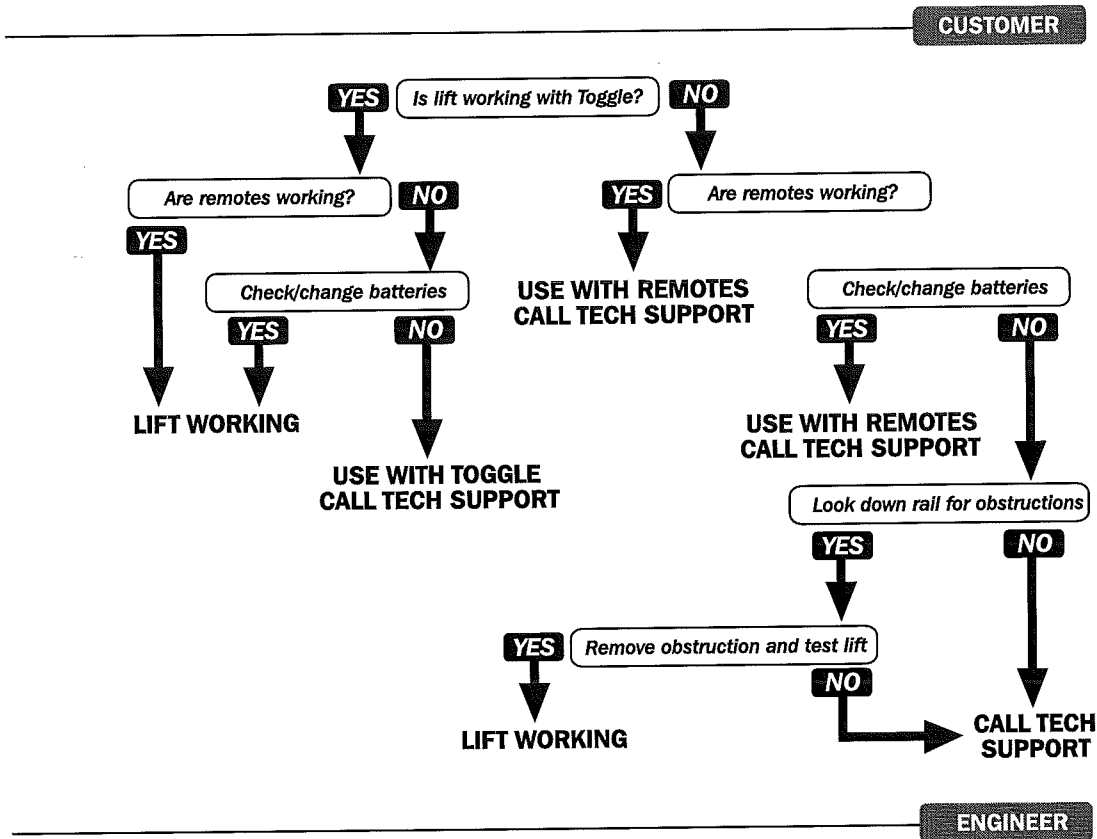


# ORGANOGRAMS

## T498 Control Board

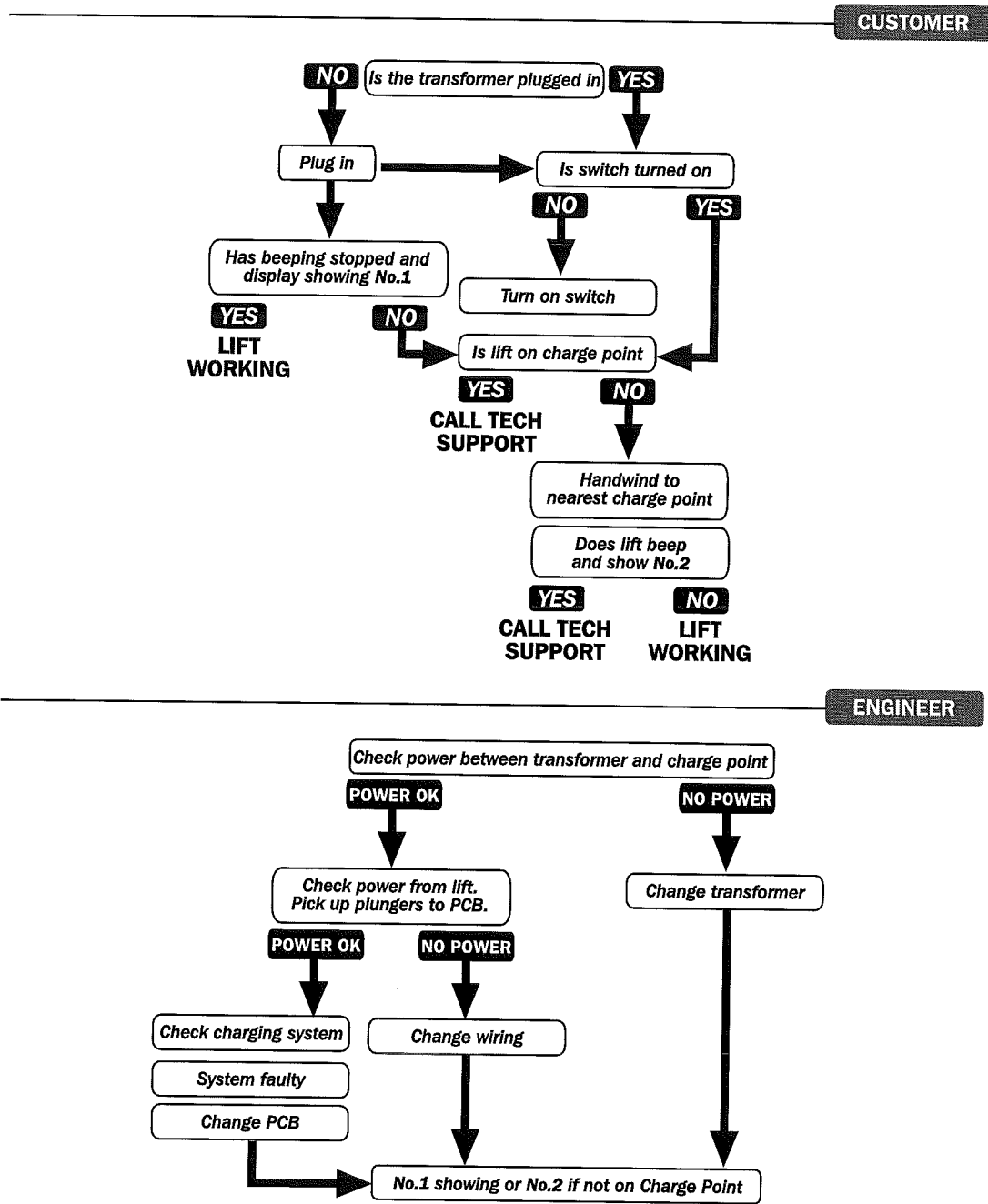


### NORMAL OPERATION



# ORGANOGRAMS

## T498 Control Board

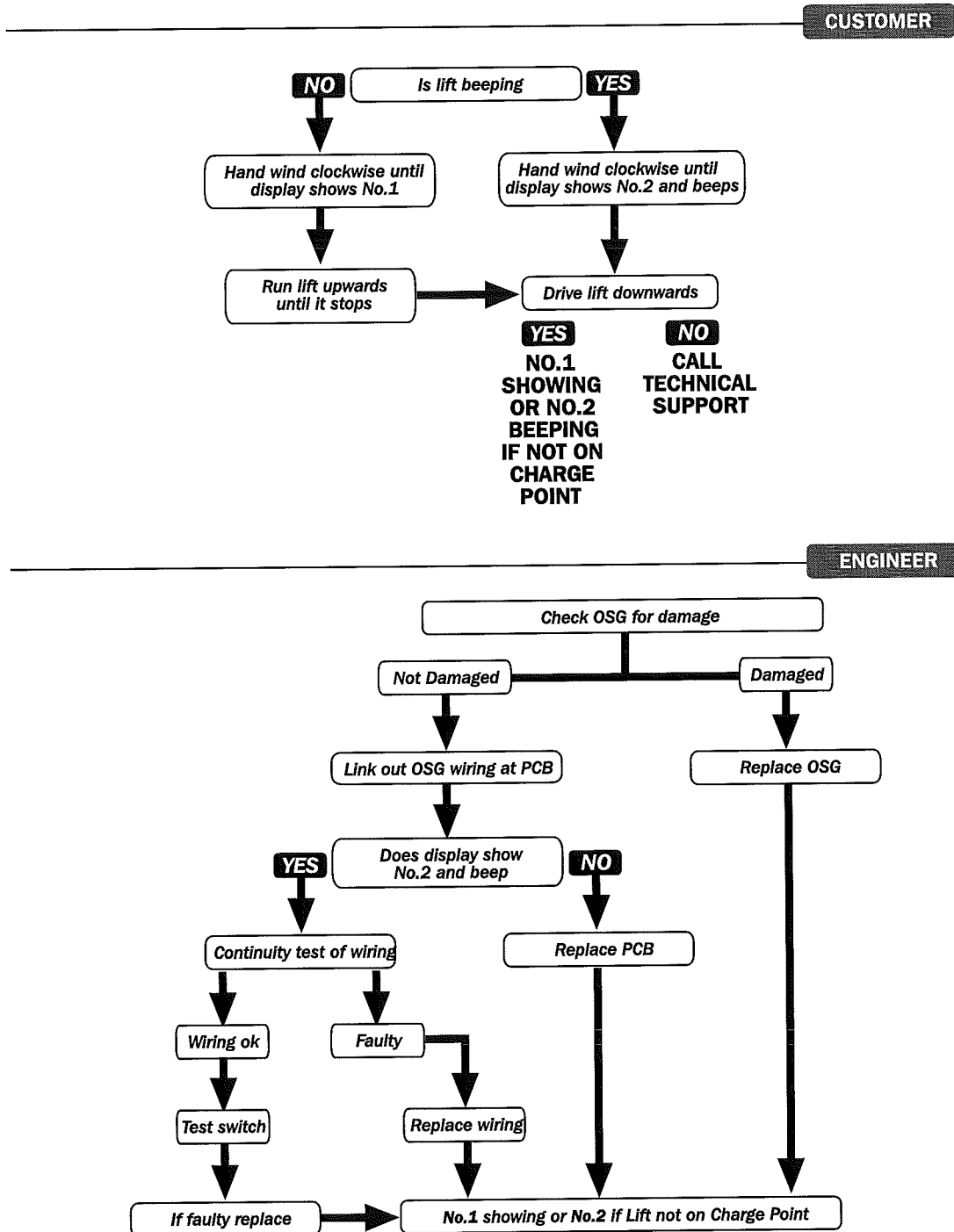


# ORGANOGRAMS

## T498 Control Board



### OSG (OVERSPEED GOVERNOR)

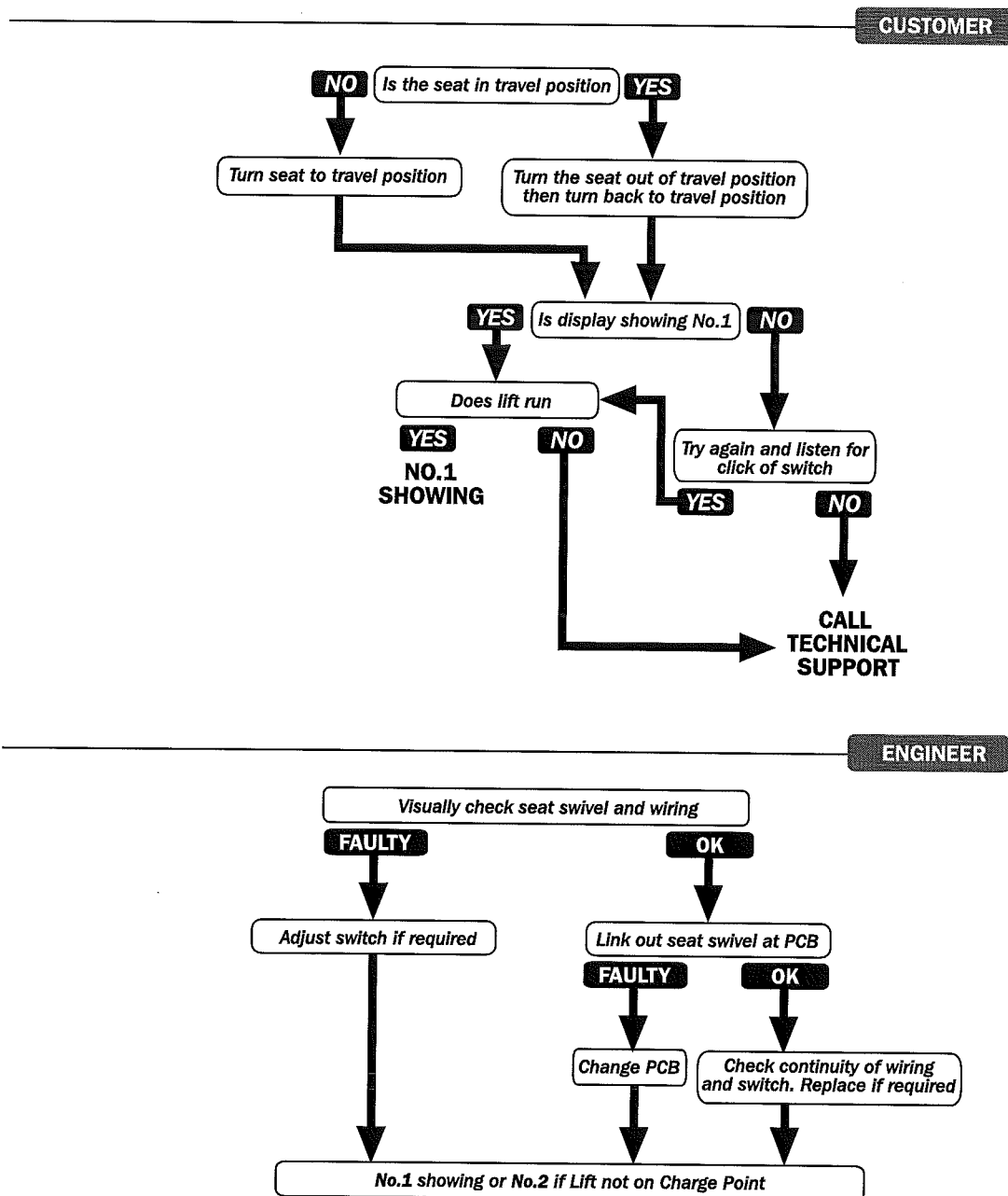


# ORGANOGRAMS

## T498 Control Board



### SEAT TURNED

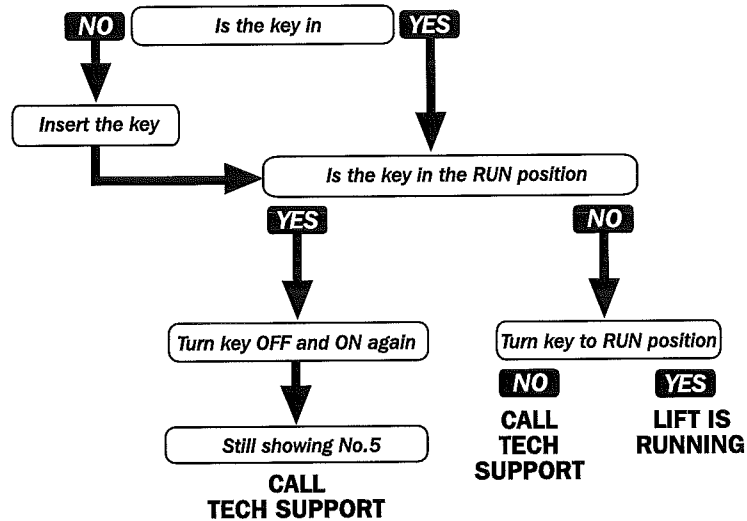


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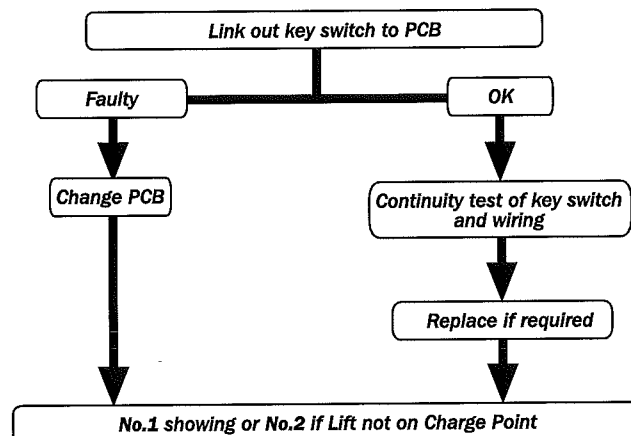
## T498 Control Board



**CUSTOMER**



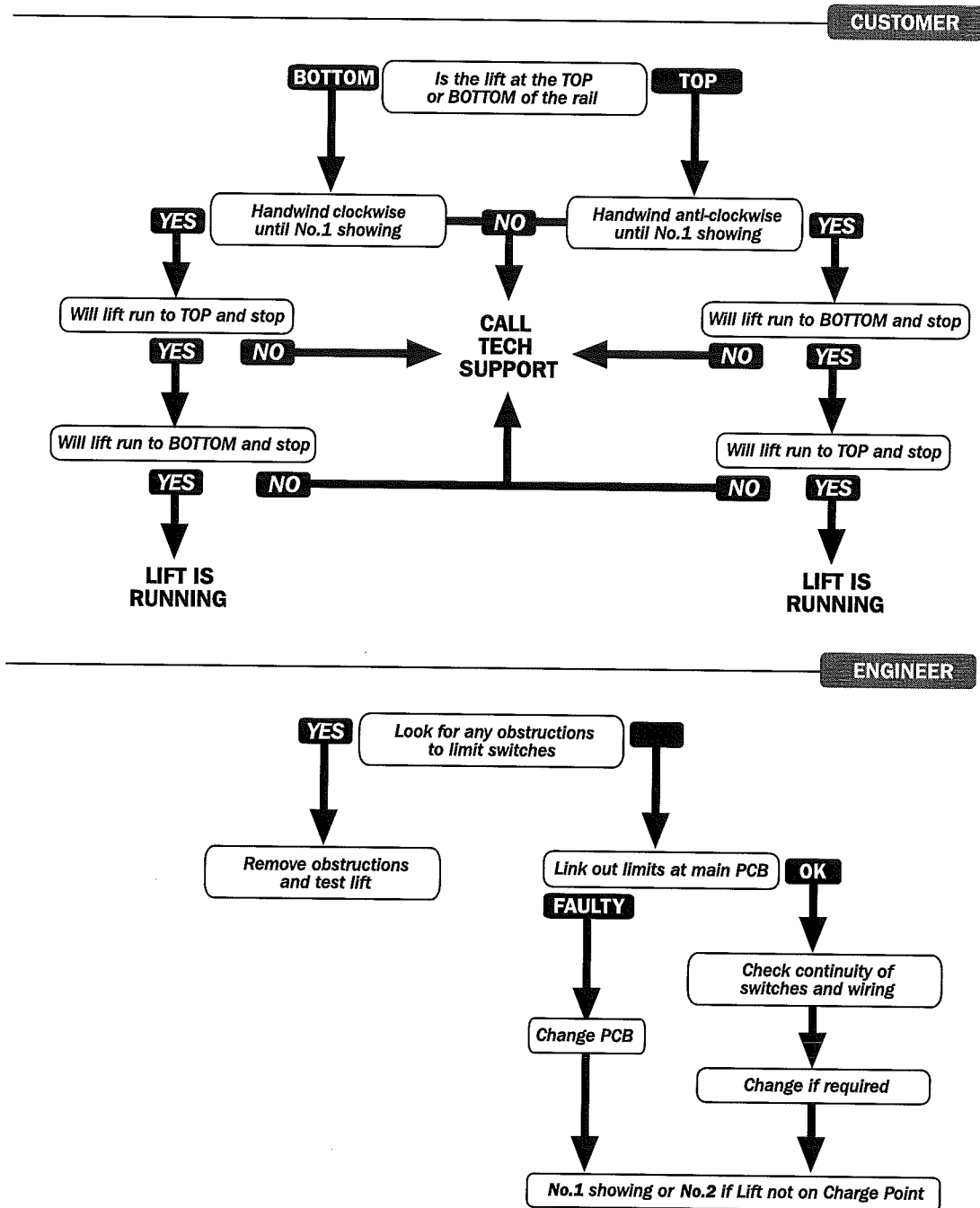
**ENGINEER**





# ORGANOGRAMS

T498 Control Board

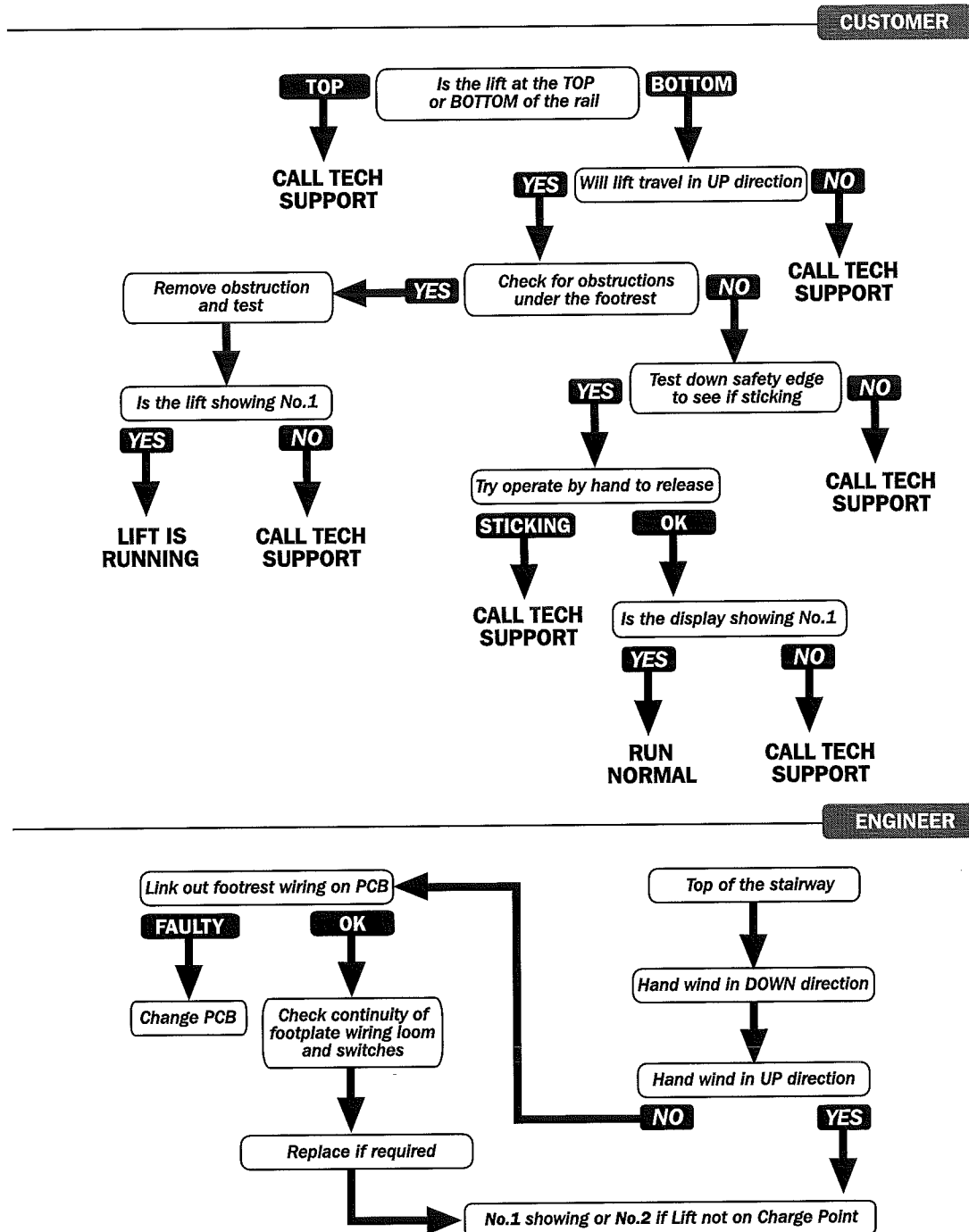


# ORGANOGRAMS

## T498 Control Board



### FOOTREST DOWN

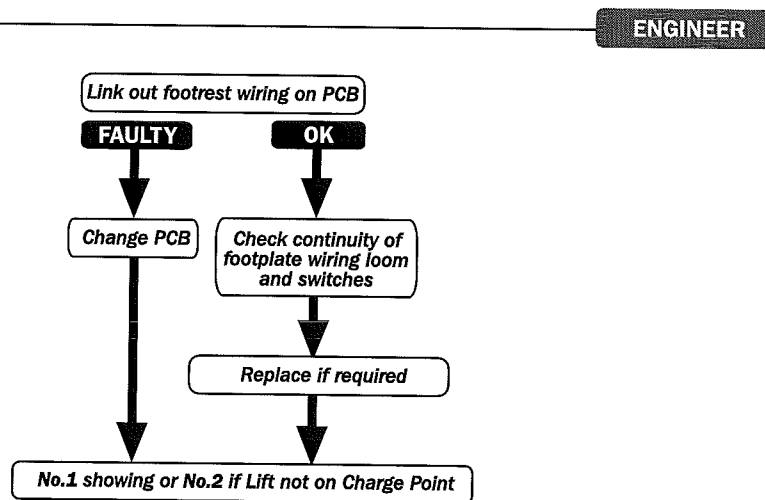
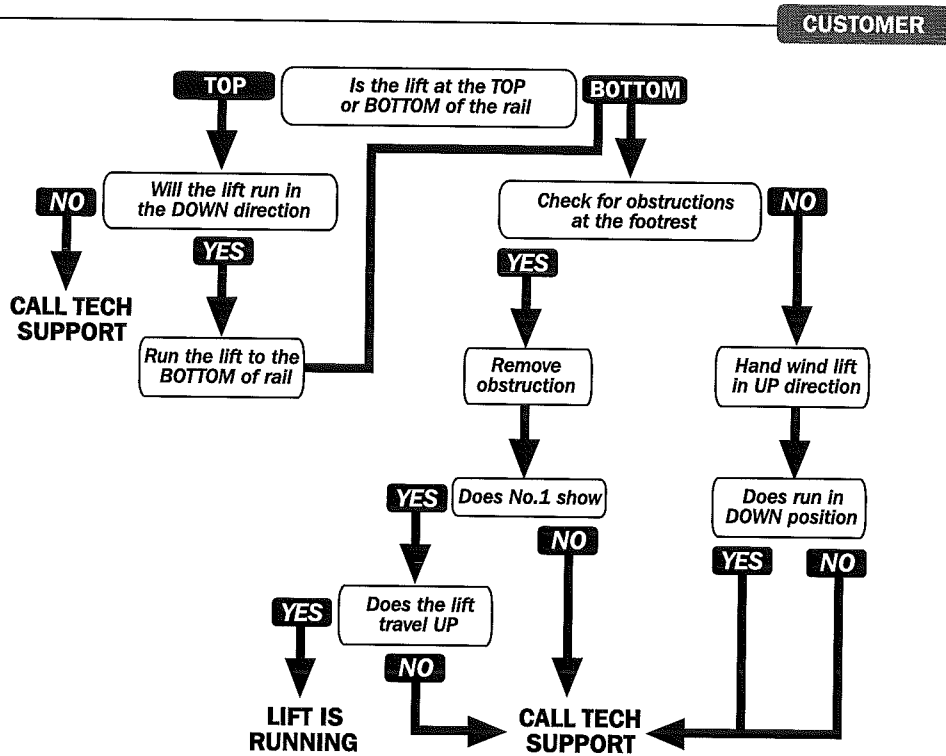


# ORGANOGRAMS

## T498 Control Board



**FOOTREST UP**

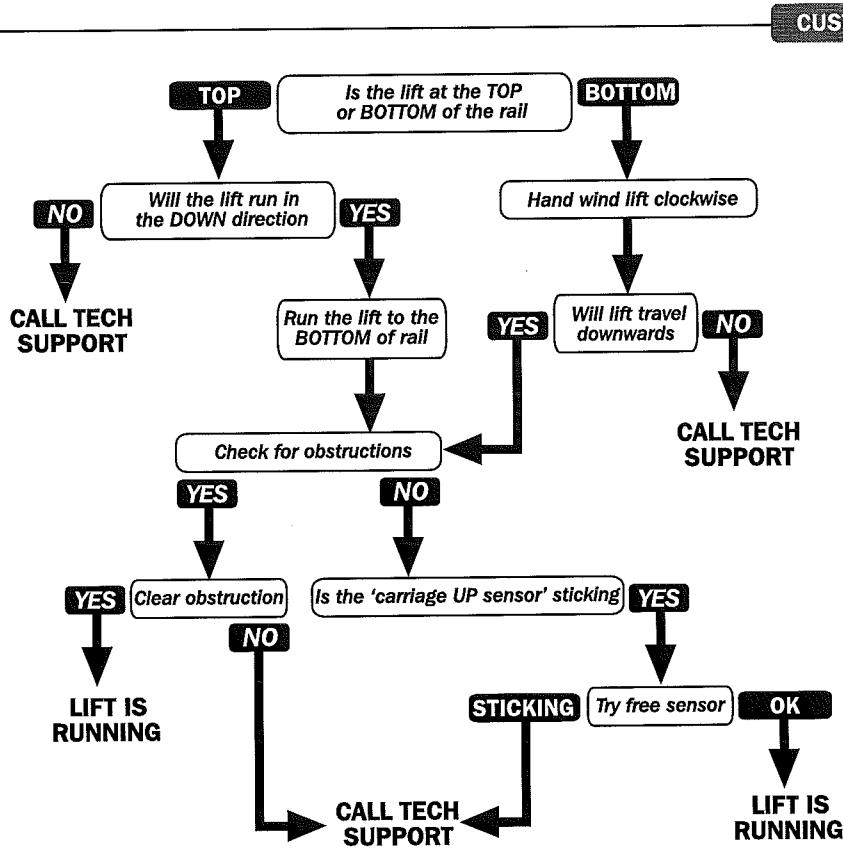


# ORGANOGRAMS

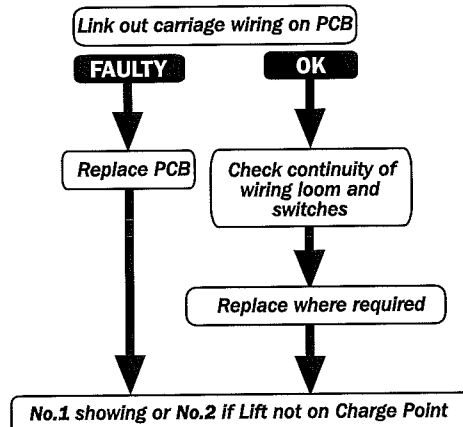
## T498 Control Board



### CARRIAGE UP



**ENGINEER**

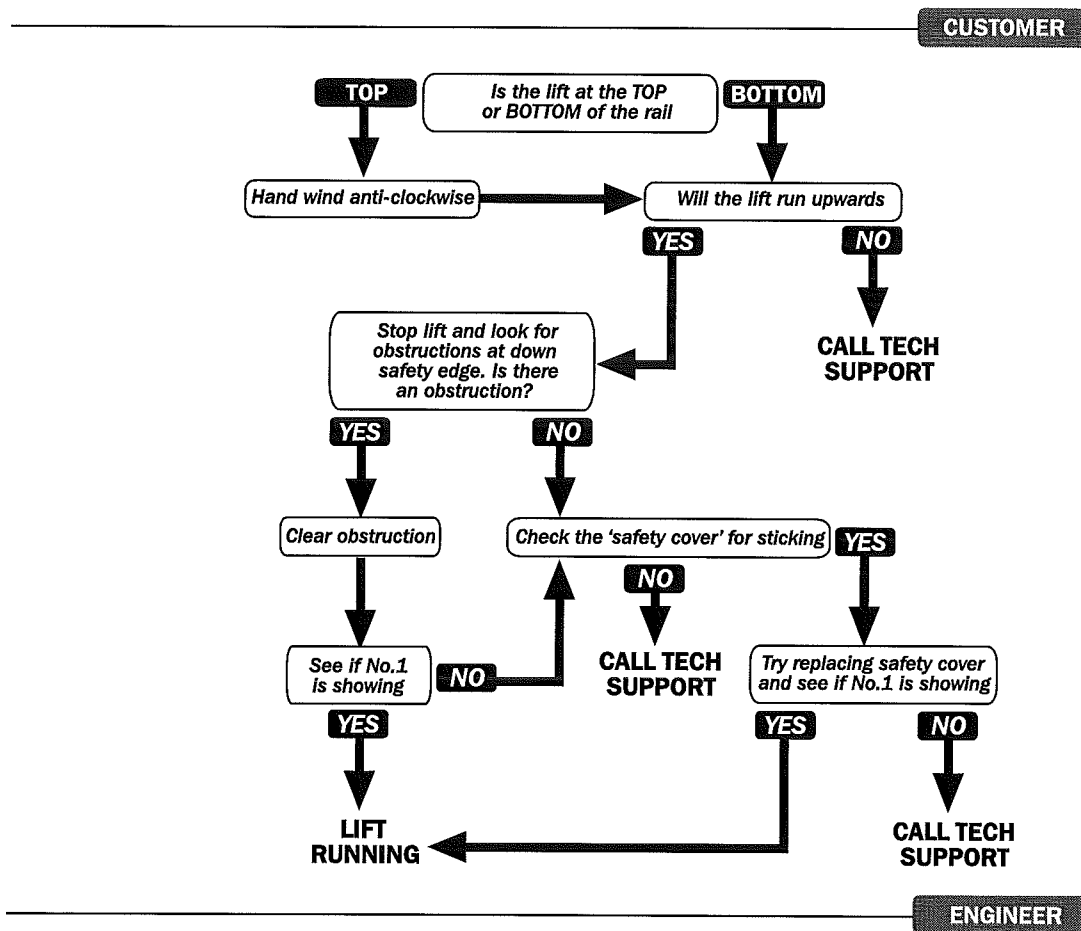


# ORGANOGRAMS

## T498 Control Board

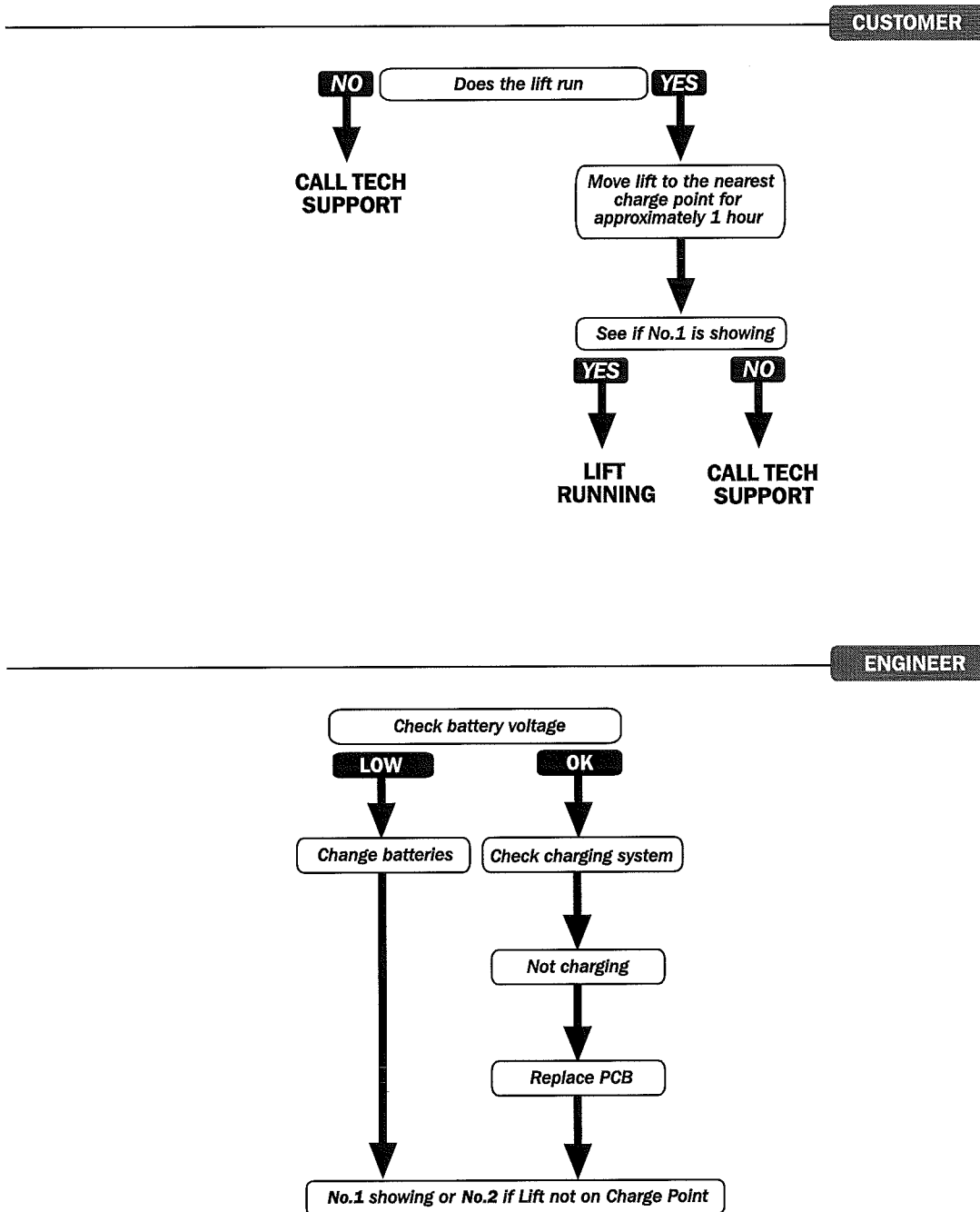


### CARRIAGE DOWN



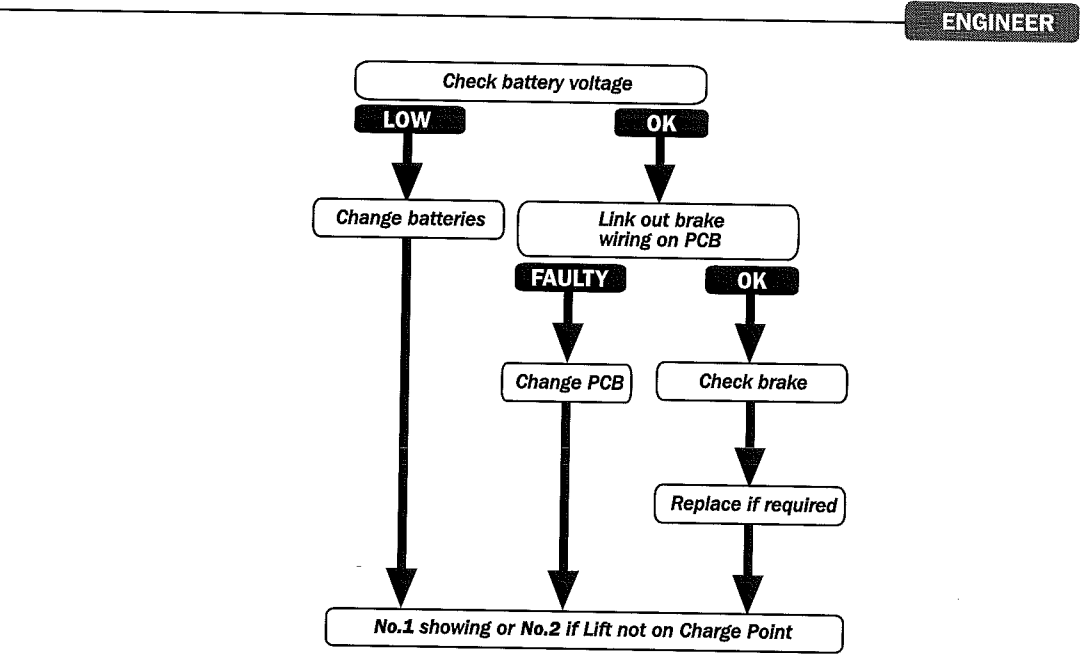
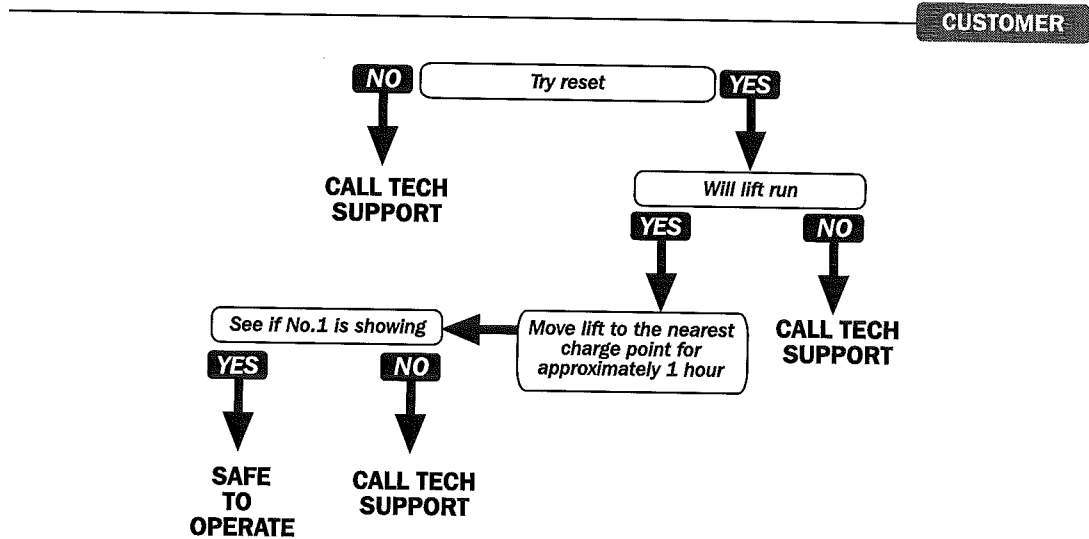
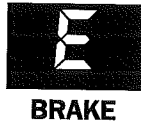
# ORGANOGRAMS

## T498 Control Board



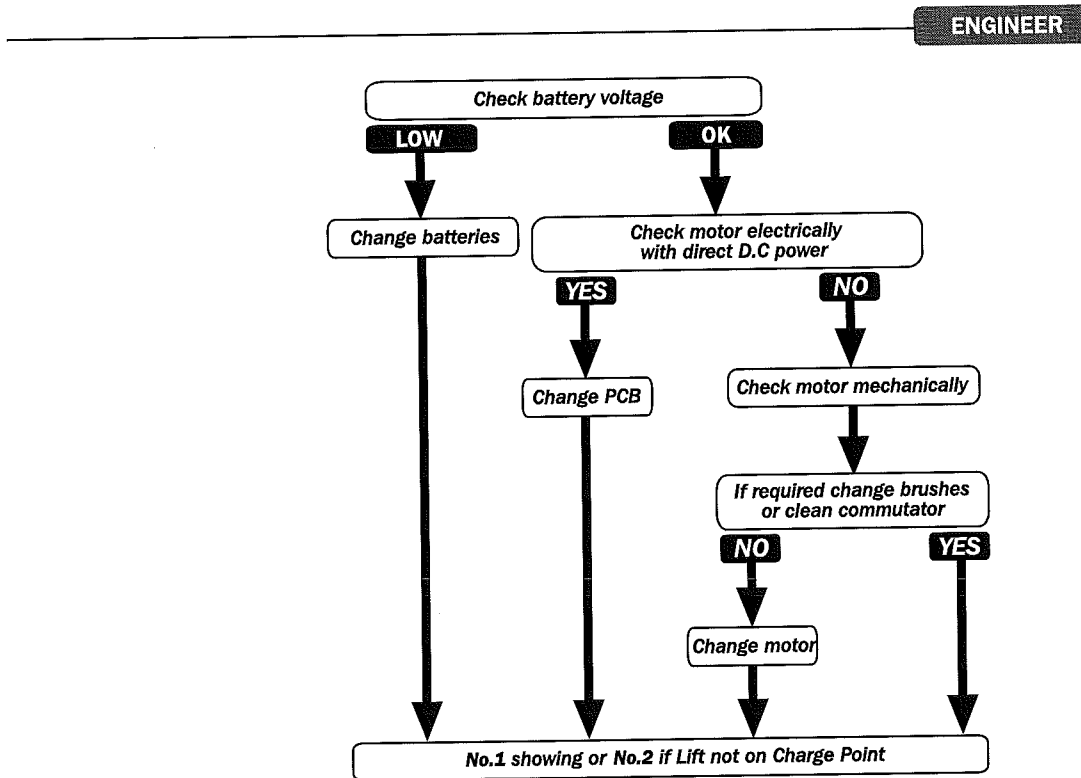
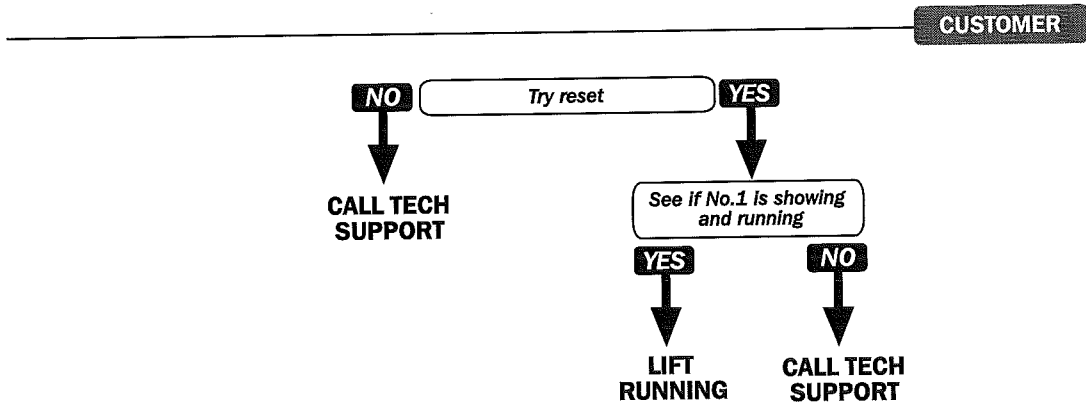
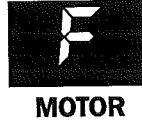
# ORGANOGRAMS

T498 Control Board



# ORGANOGRAMS

## T498 Control Board



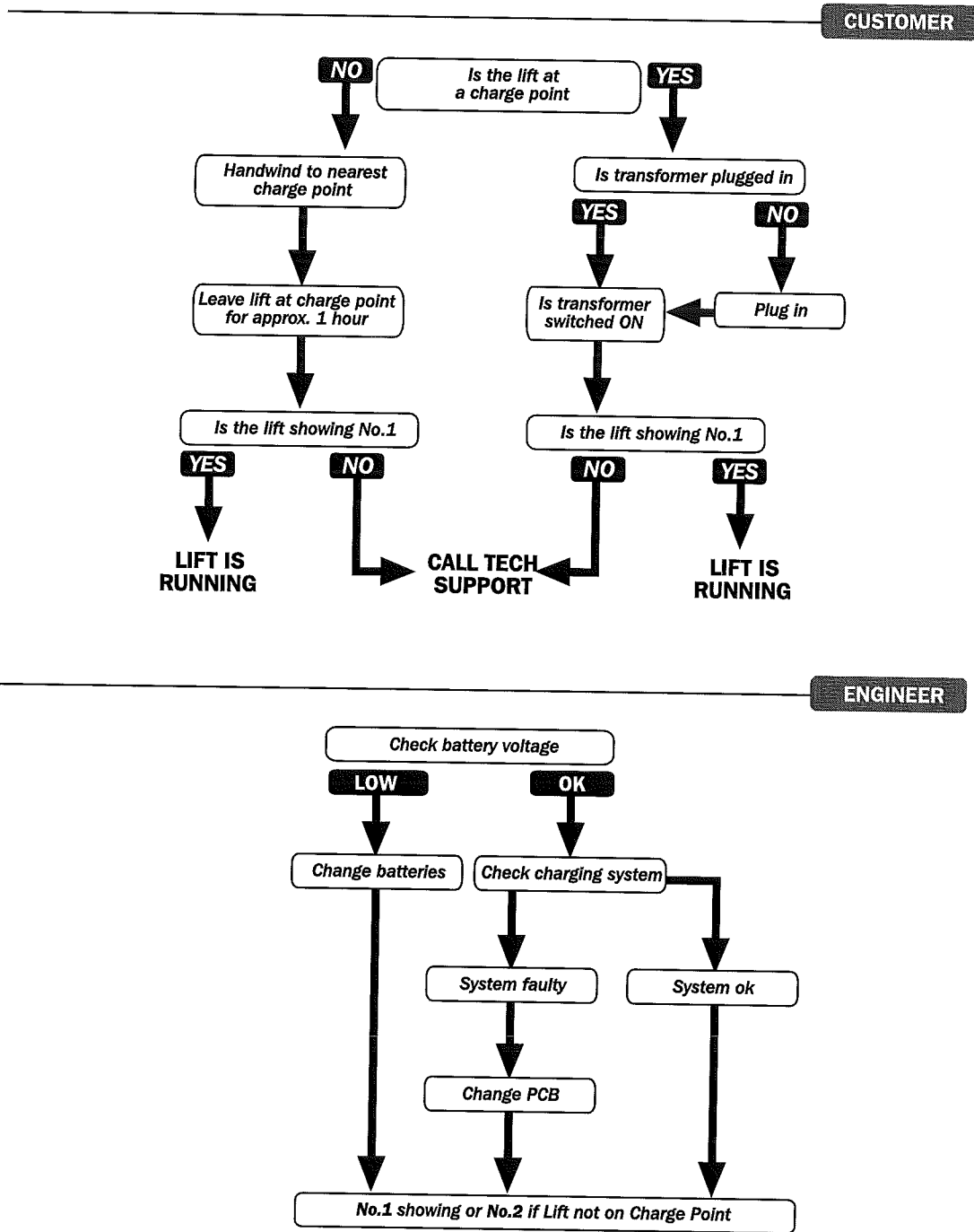


# ORGANOGRAMS

## T498 Control Board

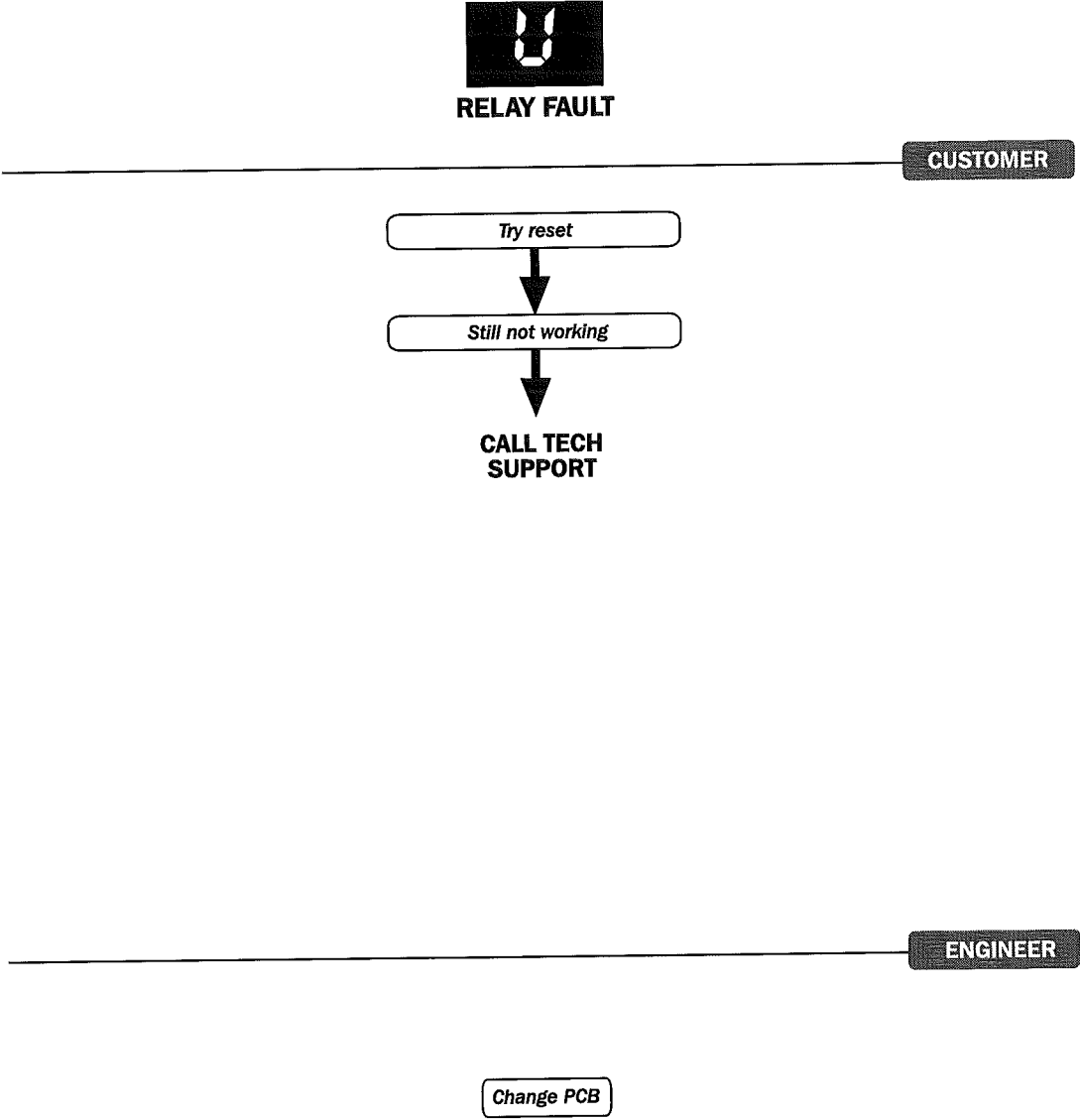


### BATTERIES



# ORGANOGRAMS

## T498 Control Board



# ORGANOGRAMS

T502 Control Board

## NORMAL OPERATION

CUSTOMER

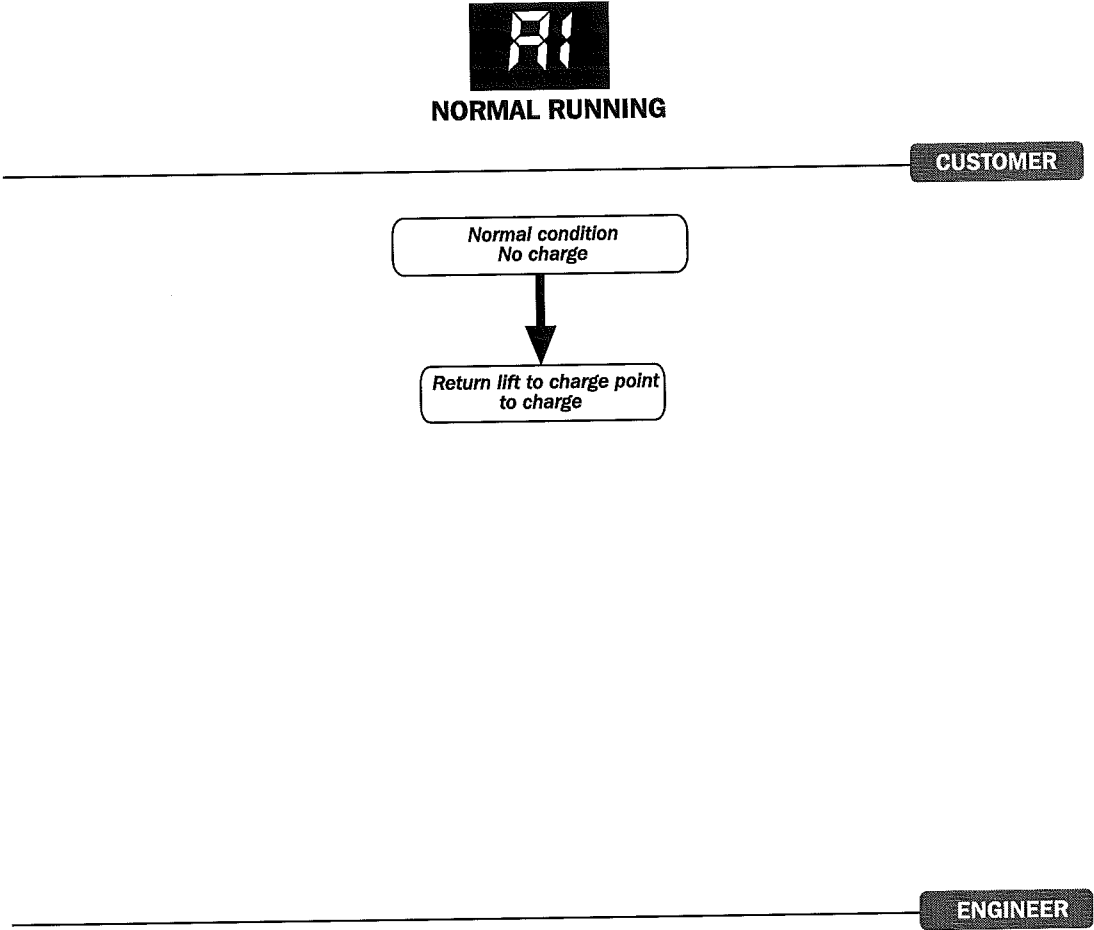
*Power down  
Carriage in sleep mode*

*Use toggle or remote  
to wake up*

ENGINEER

# ORGANOGRAMS

## T502 Control Board



# ORGANOGRAMS

## T502 Control Board



**NORMAL RUNNING**

**CUSTOMER**

*Normal moving up  
by toggle control*

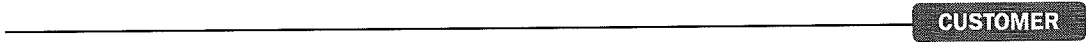
**ENGINEER**

# ORGANOGRAMS

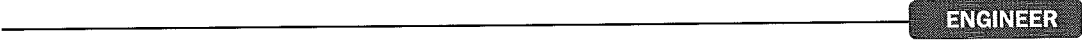
## T502 Control Board



**NORMAL RUNNING**



*Normal moving down  
by toggle control*



# ORGANOGRAMS

T502 Control Board



**NORMAL RUNNING**

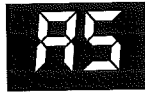
**CUSTOMER**

*Normal moving up  
by remote control*

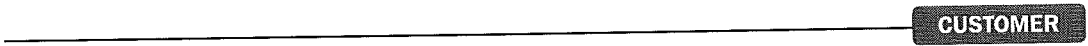
**ENGINEER**

# ORGANOGRAMS

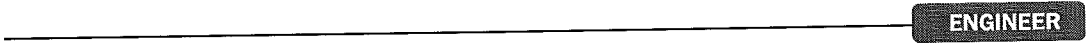
## T502 Control Board



**NORMAL RUNNING**



*Normal moving down  
by remote control*





# ORGANOGRAMS

T502 Control Board



## CHARGING SYSTEM

CUSTOMER

*Battery is charging*

*Charger is connected and the lift is operating properly*

ENGINEER

# ORGANOGRAMS

## T502 Control Board



**CHARGING SYSTEM**

**CUSTOMER**

*Battery is on charge  
point and is fully charged*

**ENGINEER**

# ORGANOGRAMS

T502 Control Board



CHARGING SYSTEM

CUSTOMER

Battery Fault

CALL TECH  
SUPPORT

ENGINEER

Check the transformer  
voltage. Is it ok?

NO

REPLACE  
CHARGER

YES

Is the PCB  
charge circuit ok?

NO

Change PCB

RUNNING  
OK

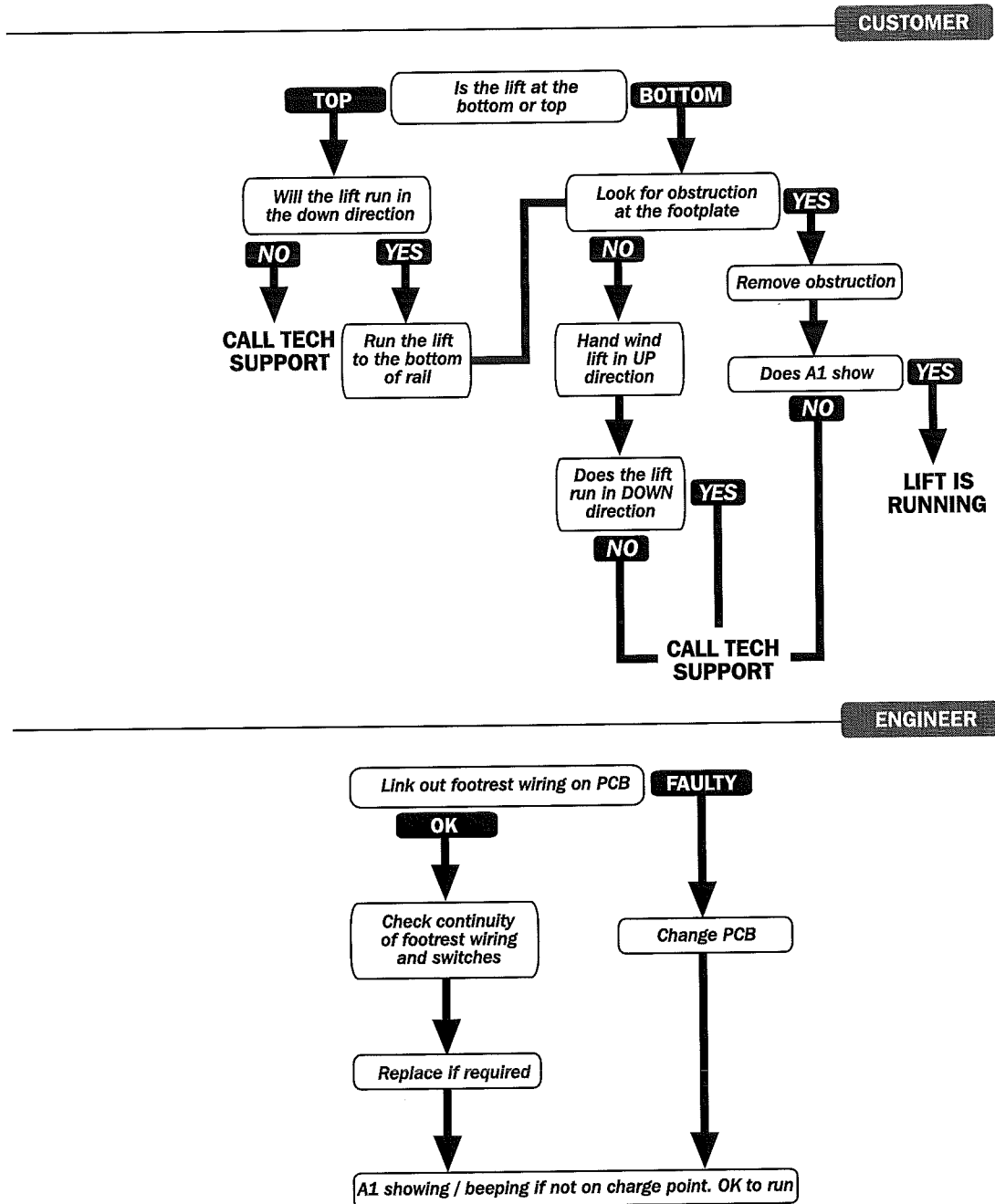
YES

# ORGANOGRAMS

## T502 Control Board

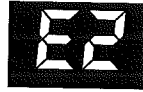


### FOOTREST UP

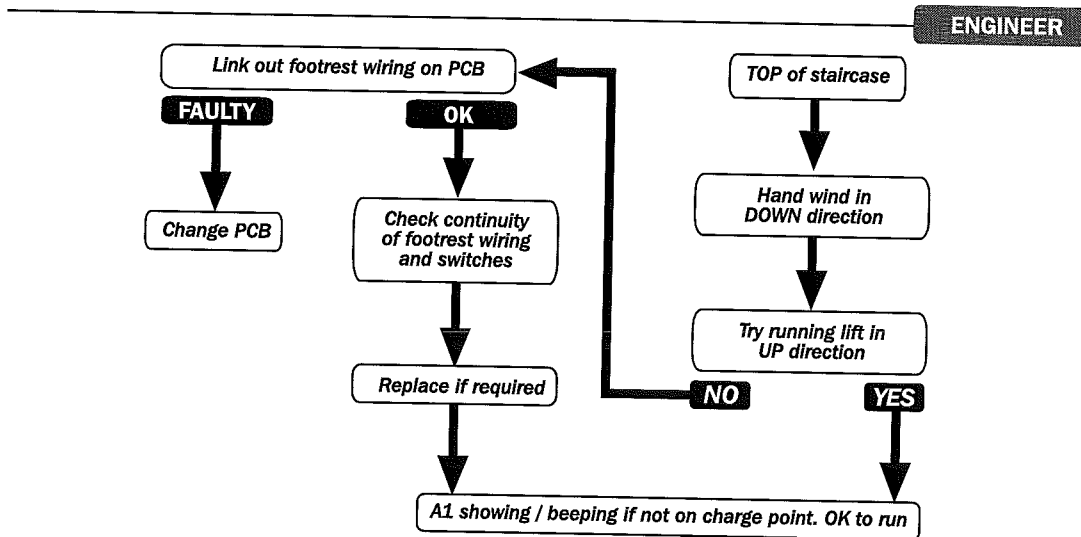
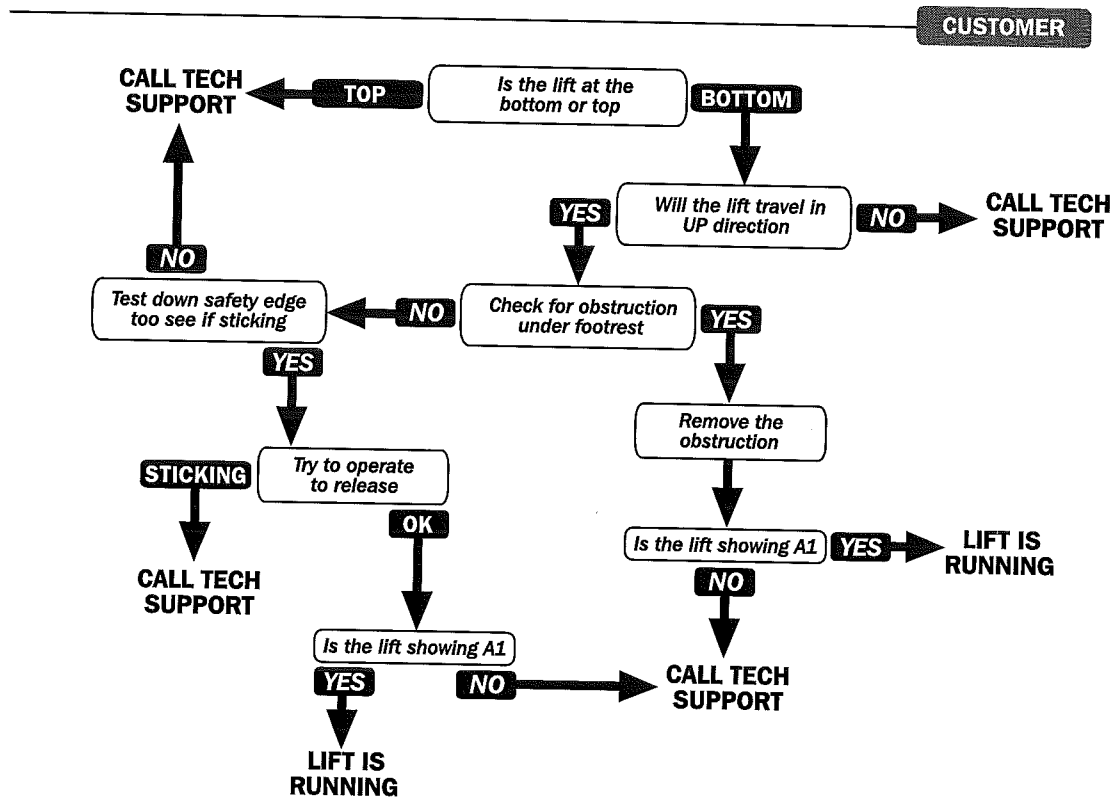


# ORGANOGRAMS

T502 Control Board



FOOTREST DOWN

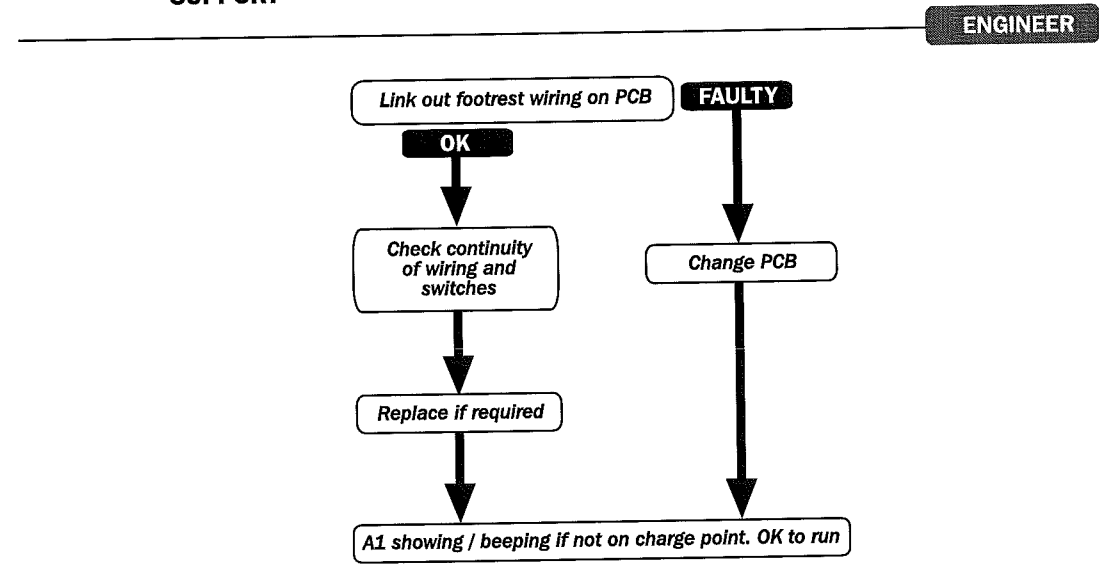
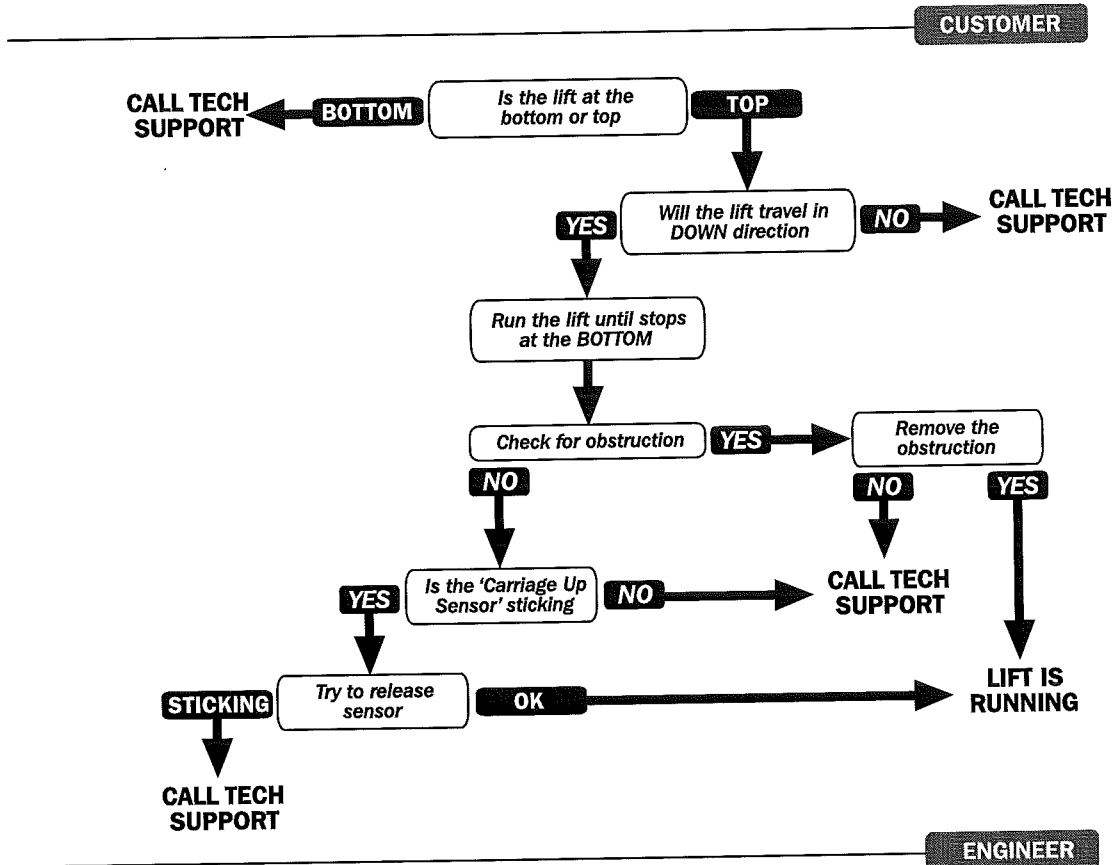


# ORGANOGRAMS

## T502 Control Board



**CARRIAGE UP**

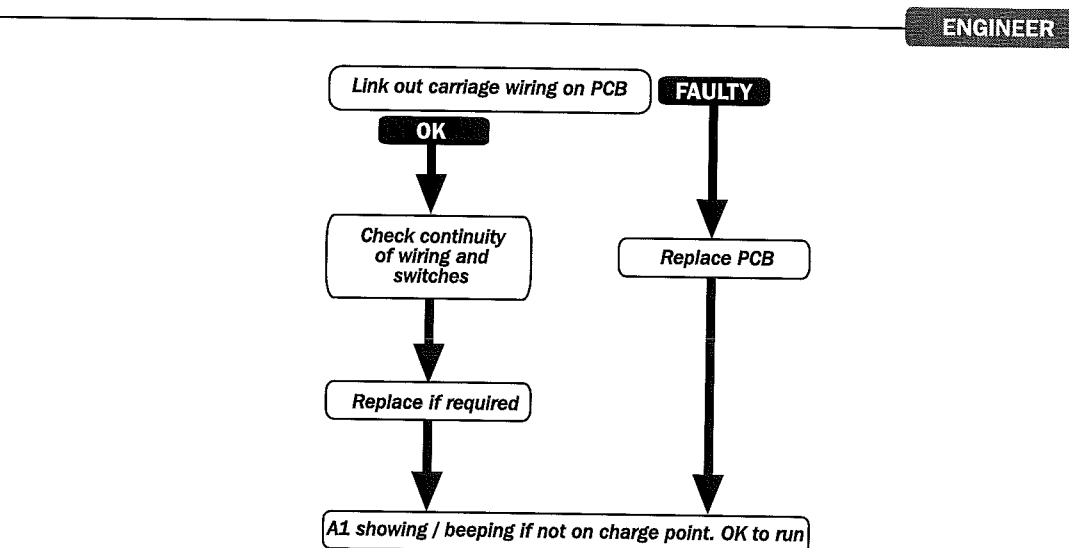
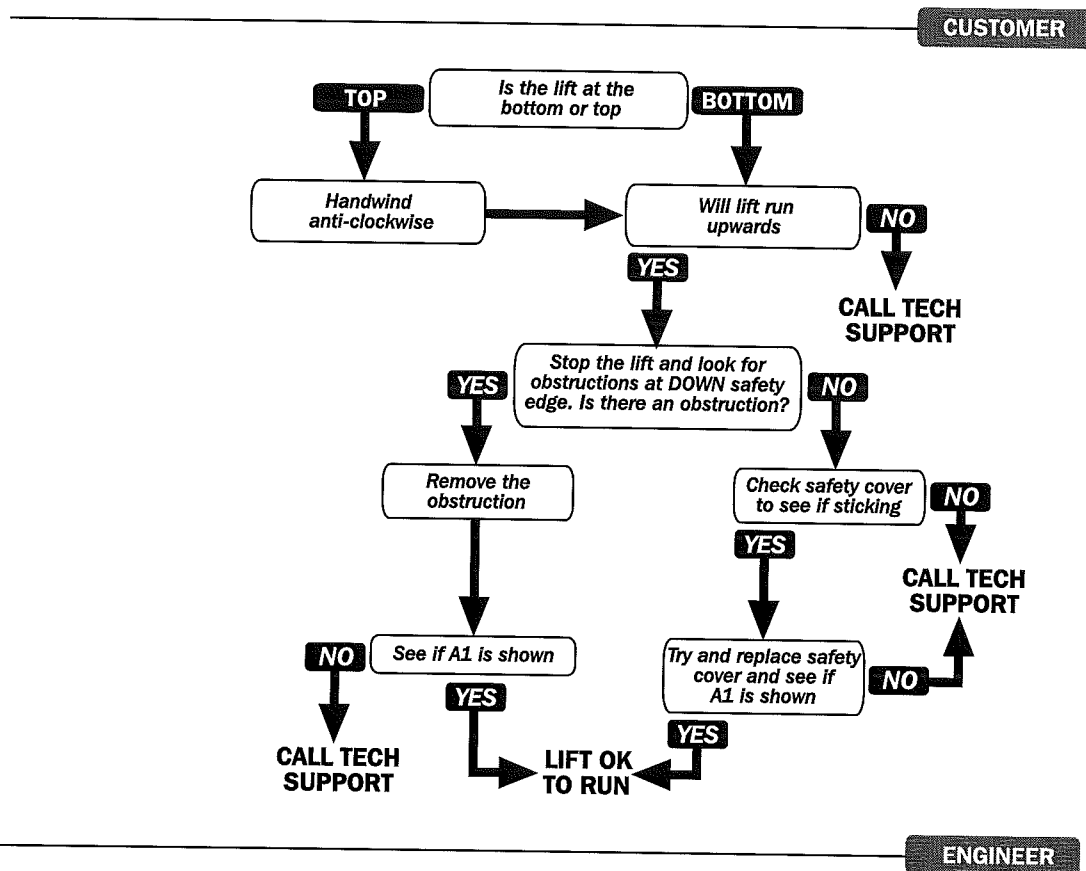


# ORGANOGRAMS

## T502 Control Board



### CARRIAGE DOWN

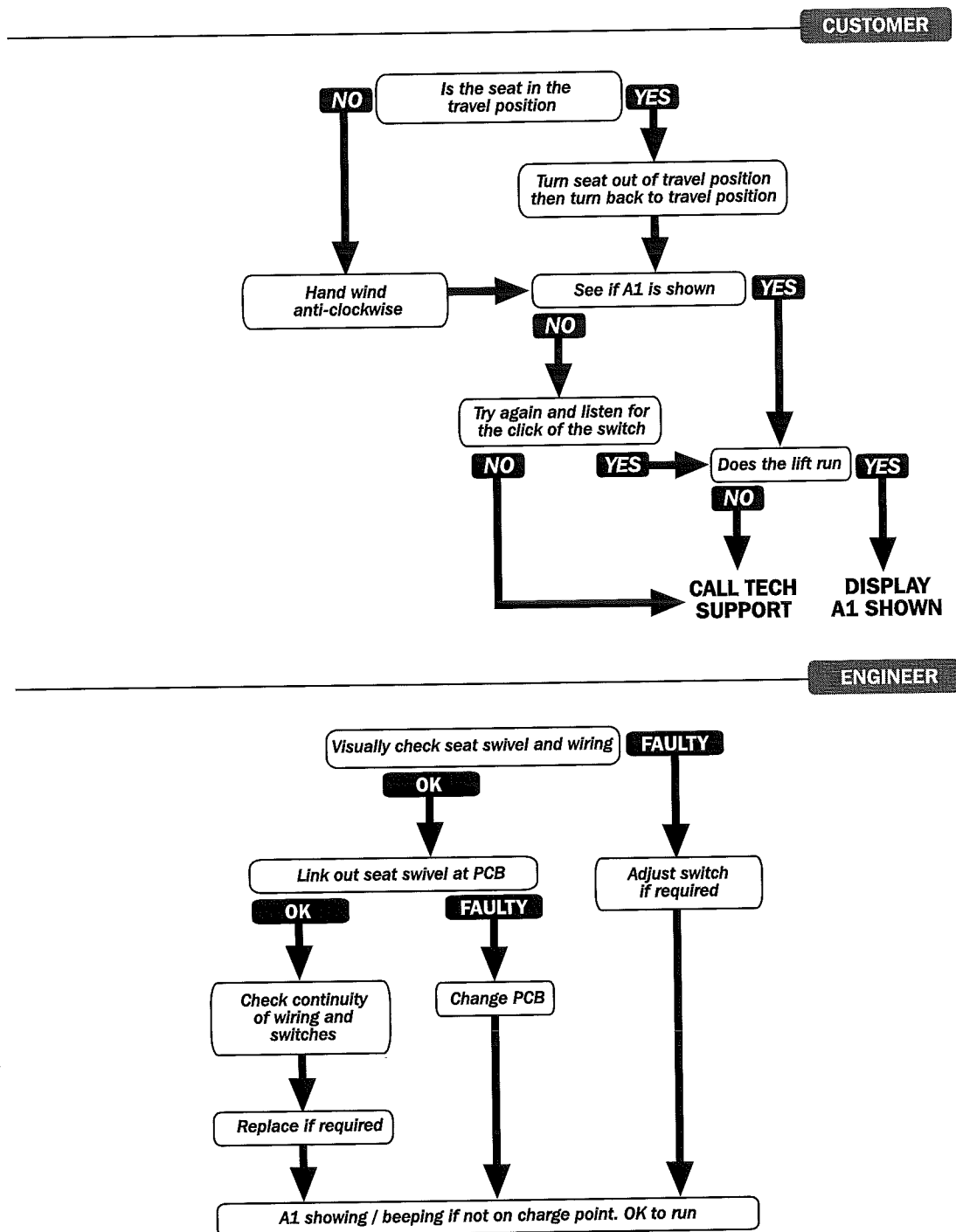


# ORGANOGRAMS

## T502 Control Board



### SEAT NOT IN PLACE





# ORGANOGRAMS

## T502 Control Board



**NORMAL OPERATION**

**CUSTOMER**

*Battery  
low*



**CALL TECH  
SUPPORT**

**ENGINEER**

*Replace  
battery*



**OK TO  
RUN**

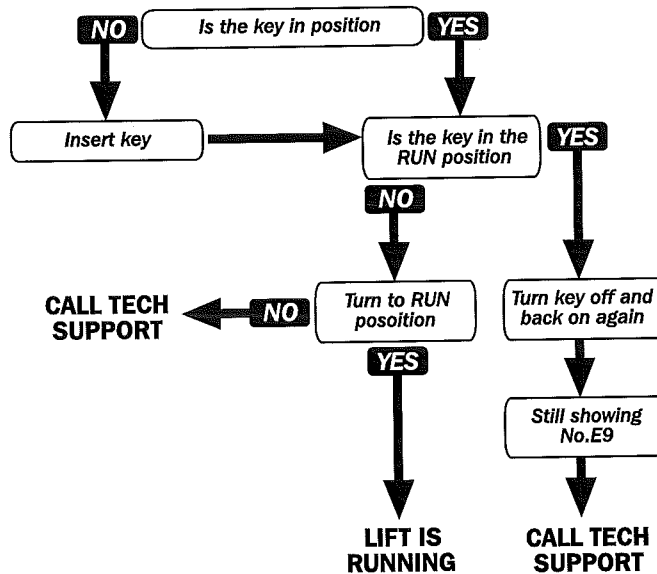
# ORGANOGRAMS

## T502 Control Board

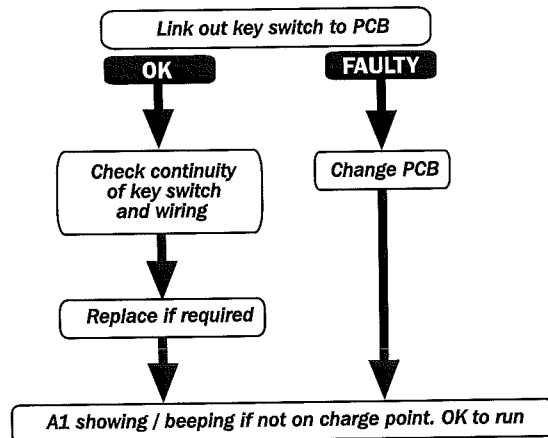


KEY SWITCH

CUSTOMER



ENGINEER



# ORGANOGRAMS

## T502 Control Board



**RELAY FAULT**

**CUSTOMER**

*Try  
reset*



*Still not  
working*



**CALL TECH  
SUPPORT**

**ENGINEER**

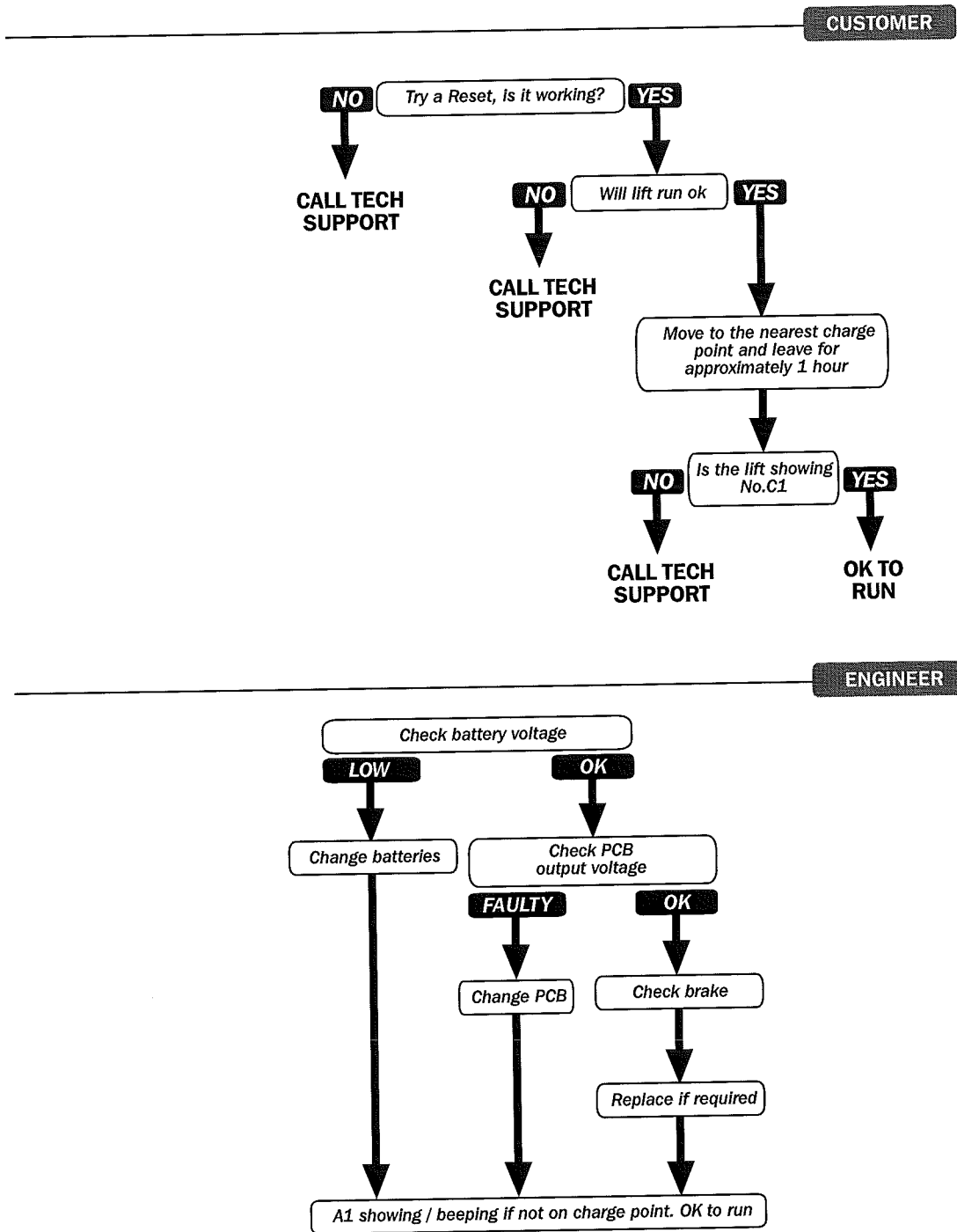
*Change PCB*

# ORGANOGRAMS

## T502 Control Board



**BRAKE FAULT**



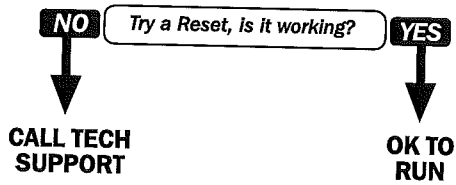
# ORGANOGRAMS

## T502 Control Board

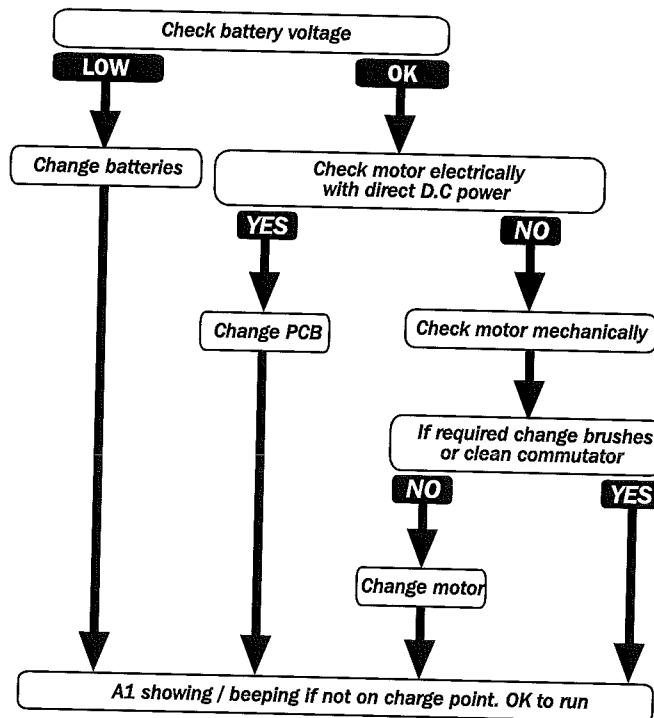


### MOTOR FAULT

CUSTOMER



ENGINEER



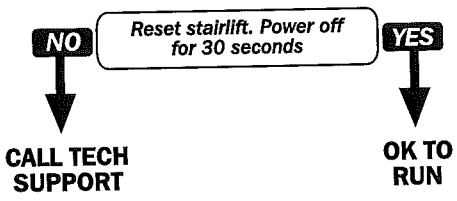
# ORGANOGRAMS

## T502 Control Board

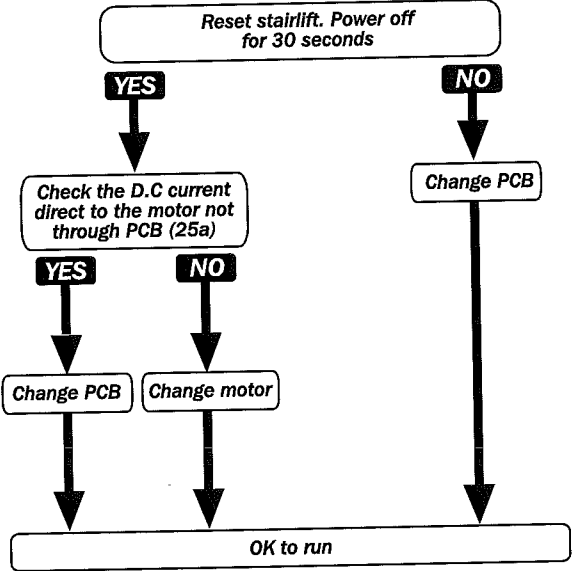


### MOTOR OVER CURRENT

CUSTOMER

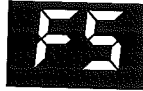


ENGINEER

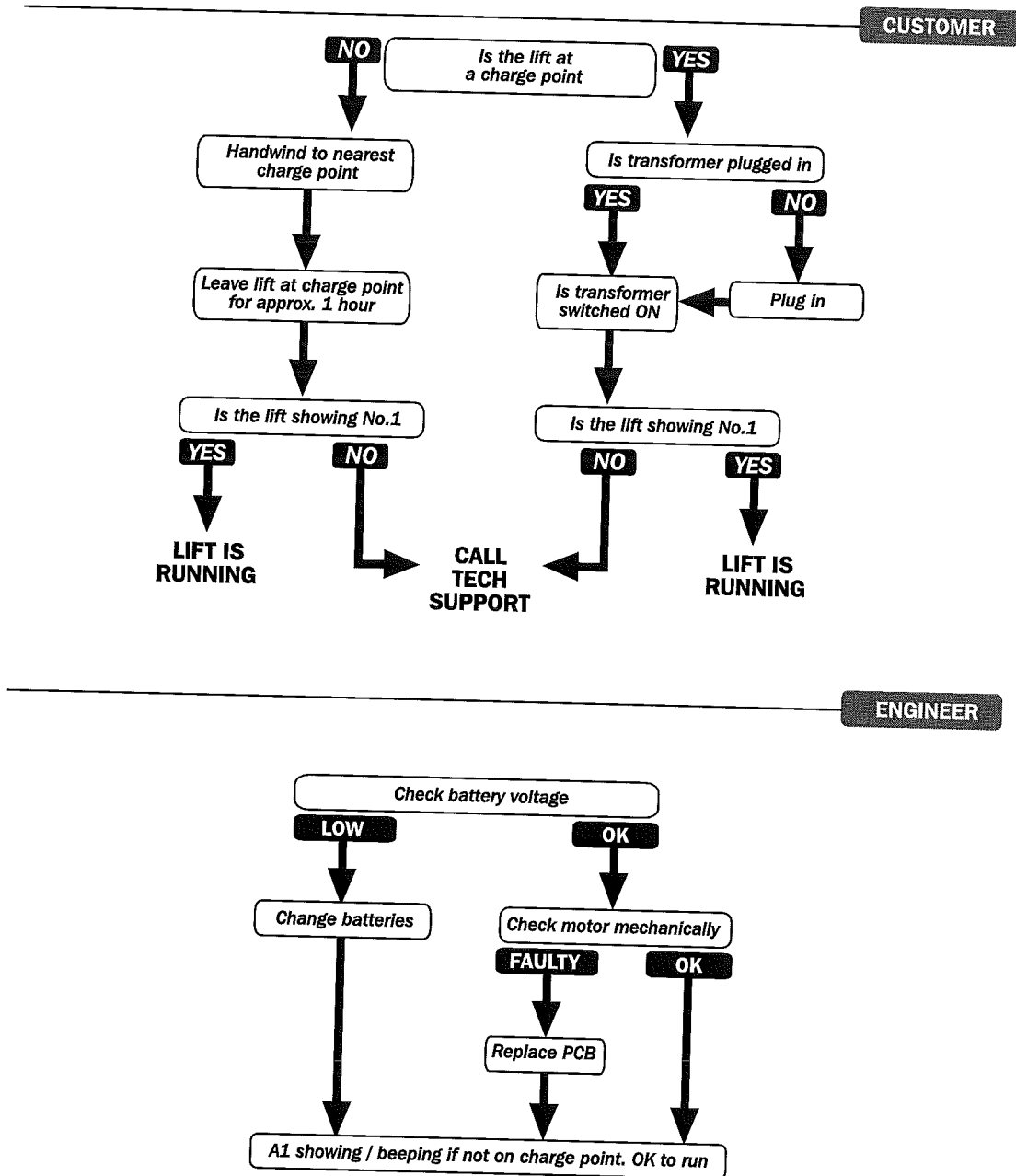


# ORGANOGRAMS

T502 Control Board

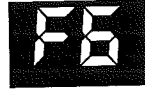


## BATTERY FAULT

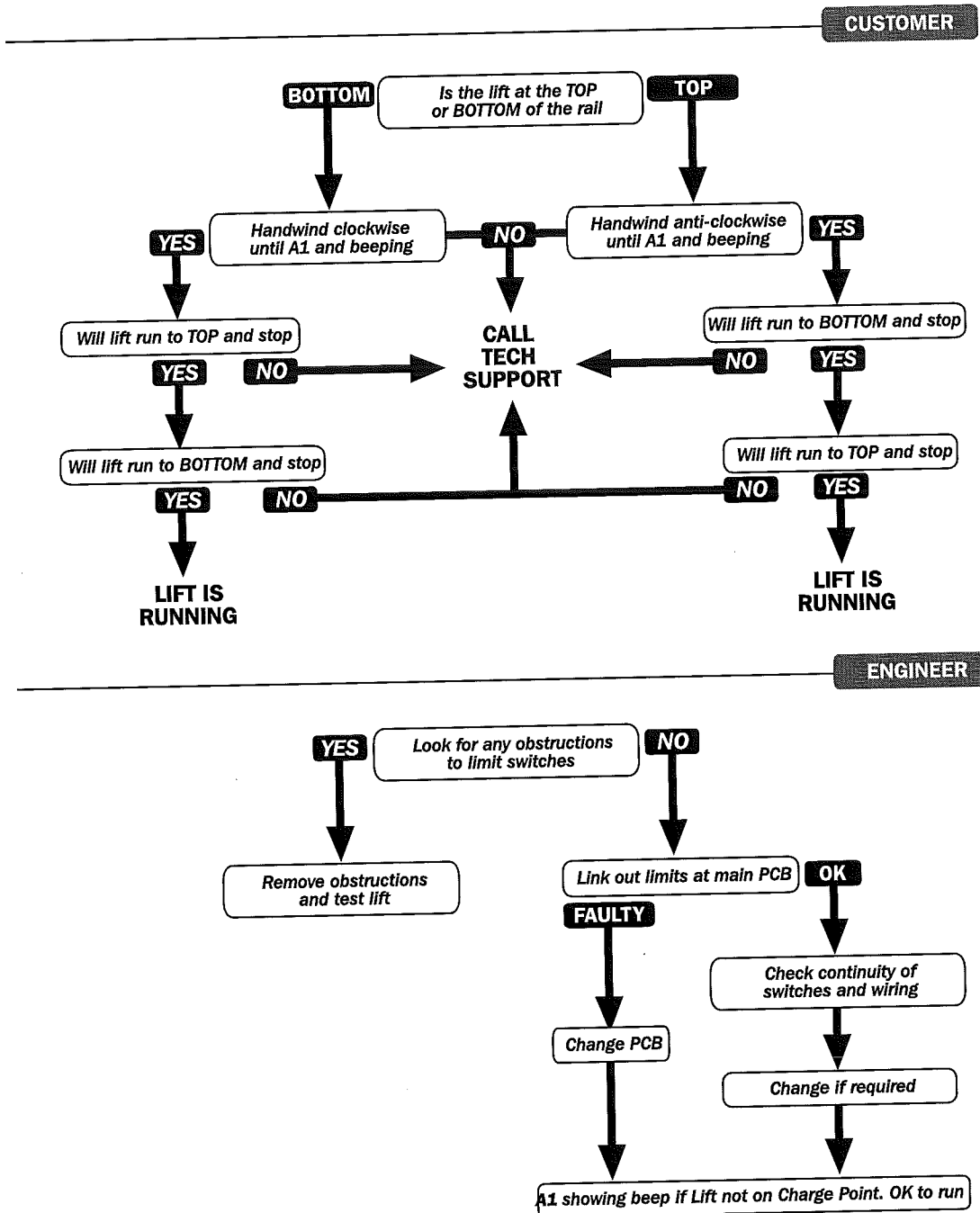


# ORGANOGRAMS

## T502 Control Board



### FINAL LIMIT OVERRUN





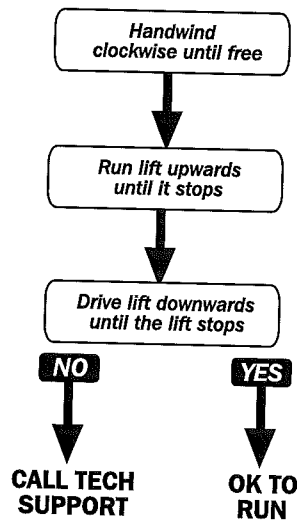
# ORGANOGRAMS

## T502 Control Board

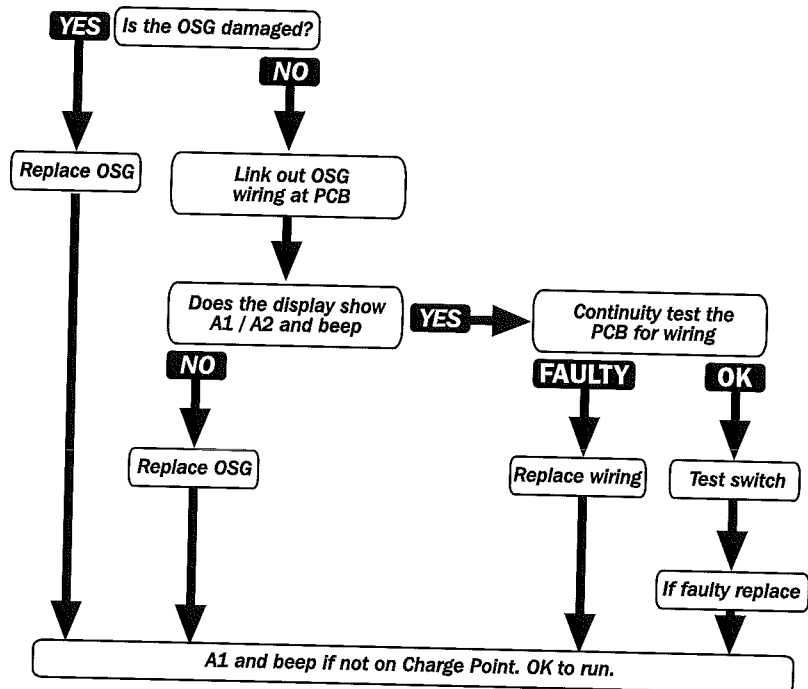


OSG

CUSTOMER

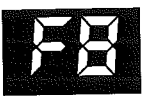


ENGINEER



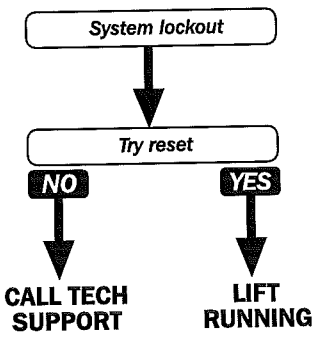
# ORGANOGRAMS

## T502 Control Board

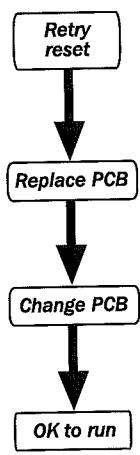


### SYSTEM LOCKOUT

CUSTOMER



ENGINEER



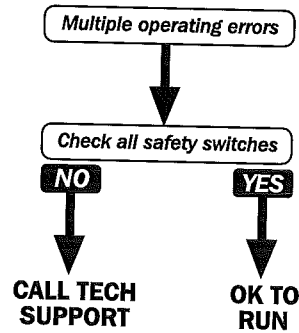
# ORGANOGRAMS

T502 Control Board

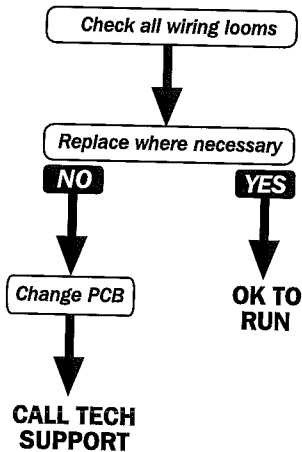


HARDWARE FAULT CODES

CUSTOMER

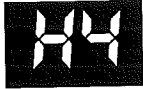


ENGINEER



# ORGANOGRAMS

## T502 Control Board



### HARDWARE FAULT CODES

CUSTOMER

Safety device fault



CALL TECH  
SUPPORT

ENGINEER

Change PCB



OK TO  
RUN



