

MIDLIFT PICCOLO MAINTENANCE GUIDE



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1 INTRODUCTION

The Midilift Piccolo Platform Lift has been manufactured and installed to comply with the Essential Safety Requirements of the Machinery Directive.

This guide has been designed for use by approved engineers/technicians who have responsibility for the lift maintenance. Recommendations for the safe working on lifting platforms are contained within BS9102:2014.

This guide should be read in conjunction with the Piccolo wiring manual supplied with the lift.

2 SAFETY

Work must always be carried out on a lift in a safe manner and the lift left in a safe condition for users and any one who subsequently works on the lift. It is essential that energy sources be made safe and electrically isolated during maintenance.

Lift servicing is to be carried out by a qualified and competent lift engineer (i.e NVQ2 EOR/206).

The lift should never be left in an unsafe condition.

NOTE: The Piccolo cabin doors are fitted with a cabin door lock which prevent opening of the doors from inside the cabin when the lift is outside the unlocking zone. Ensure that the necessary procedures are implemented to prevent entrapment within the cabin during maintenance.

3 CLEANING

Cleaning instructions can be found in the product user manual supplied with the lift.

4 SERVICING

It is recommended that the lift is to be serviced 4 times a year. This can be reviewed depending on the lift usage.

A recommended schedule can be found in section 5.

5 RECOMMENDED MAINTENANCE SCHEDULE

The following schedule outlines the minimum requirements for lift servicing.

Regular servicing checks (every 3 months)

| | |
|--|--|
| Liaise with customer on arrival and departure, ask them about lift performance | |
| Review risk assessment | |
| Visual check of all areas: controllers, hydraulic drives | |
| Ride in lift cabin checking for: Smoothness of ride and unusual noises | |
| Check indicators operating | |
| Check cabin lighting | |
| Check floor covering has no tripping hazards | |
| Check for security of handrails/ mirrors/seats | |
| Check for integrity of walls | |
| Check floor levels for accuracy and adjust if necessary | |
| <i>With supply off check:</i> | |
| Communication devices/intercom systems/Alarm | |
| Emergency light | |
| Floor level warning indication/audible | |
| <i>Check door operation for:</i> | |
| Safety edge | |

| | |
|--|--|
| Door/ gate operation | |
| Call acceptance both cabin and landing/position indicators. | |
| Check that a cabin ceiling safety stop is fitted to the top of the cabin operating panel (cop) | |
| Check for gaps around doors as per EN81/BS5655 | |
| Complete Log Card where applicable | |
| Ensure lift is returned to service and all keys returned | |
| Leave site clean and in a safe condition | |

Servicing checks (every 6 months)

Doors:

| | |
|---|--|
| Check that landing doors run freely are plumb and can close and lock without assistance from 50mm of slam | |
| Check for fresh horizontal scratches on any door panel, caused by rubbing | |
| Clean all cabin entrance equipment including the backs of doors | |
| Check top track, hanger rollers for wear and adjustment, lubricate if appropriate | |
| Check all kicking rollers for wear and adjustment | |
| Check all air cords, belts or chains for wear and correct tension | |
| Check cabin gate contact for operation and adjustment. | |
| Check cabin gate locks | |
| Check door operator for correct operation, lubricate all linkages as necessary | |
| Check adjustment and operation of the skate | |
| Check safety edge/detector/light ray for operation and adjust as necessary | |
| Check all moving cables for damage | |
| Check bottom track/sill and clean | |
| Check door shoes and fittings designed to stop `cat flapping` | |
| Check for depth of spigots in bottom track | |
| Check all locks for adjustment and operation to ensure optimum setting is achieved | |
| Check all lock rollers for wear, check running clearance | |
| Check correct operation of emergency release (including battery backed door opening at lowest landing) | |
| Check door closer device (weights, springs, dictators etc) | |

Cabin Equipment:

| | |
|--|--|
| Clean cabin equipment | |
| Check all cabin switches/limits, proximity switches and stop switches | |
| Check cabin guide shoes | |
| Check travelling flexes | |
| Check re-level operation | |
| Check for integrity of cabin enclosure | |
| Lubricate bore of nylon diverter pulleys on encoder positioning assembly (Super Lube Plus aerosol spray) | |

Pit

| | |
|--|--|
| Beware of water in pit, especially when working on electrical equipment. For more information refer to Safe Working Procedures and care to personal hygiene when working in dirty conditions | |
| Clean all pit equipment | |
| Check pit stop switch | |
| Check that pit prop activation rod and associated instruction label are present | |
| Check that pit prop and switch is functional | |
| Check for water ingress in pit | |
| Check for excess oil/grease at bottom of guides | |

Cabin Guides

| | |
|---|--|
| Re-lubricate cabin guide rail blades if necessary (Fuchs Super Lube grease) | |
|---|--|

Hydraulic tank and valve:

| | |
|---|--|
| Check oil level and top up as necessary | |
| Check tank, valve, for leaks | |
| Check electrical connections | |
| Check operation of the L10/DLV safety valve (see Annex A) | |

Ram /Pipe-work:

| | |
|---|--|
| Check all joints and seals for leaks | |
| Check all pipe work and ram is secure | |
| Check ram support guide shoes for correct clearance | |
| Check piston for damage and corrosion | |

Control equipment:

| | |
|---|--|
| Check for carbon deposits | |
| Check for security all electrical connections | |
| Check all fuses are correctly rated | |
| Check correct wiring diagram is available and legible | |
| Check for noise and smell from relays and contactors | |
| Check all contacts and braids | |
| Visually check all other controller components for overheating and wear | |
| Check isolator and other switches are clearly marked | |
| All electrical terminals are to be tight | |
| Wiring must have no signs of overheating such as discolour or brittleness | |
| Ensure that any temporary shorting wires have not been left in place | |

Suspension Ropes & Pulley (2:1 roped models only)

| | |
|---|--|
| Check condition of suspension ropes | |
| Check condition of grooves in pulley | |
| Check pulley guide shoes for correct clearance | |
| Re-lubricate ram guide rail blades if necessary (Fuchs Super Lube grease) | |
| Examine all rope terminations for signs of movement, fracturing, deterioration or wear and broken wires | |

Safety Gear (2:1 roped models only)

| | |
|---|--|
| Check that all linkages and moving parts are free from defects, deterioration or wear that may prevent their free and effective operation | |
| Check that the safety gear mechanism moves freely and engages the guide rail satisfactorily | |
| Check that the 'return spring' is present (so that the safety gear will reset itself when lift is raised) | |

Annual Servicing checks:

| | |
|---|--|
| Test Electrical Safety Devices | |
| Test Landing Door Interlocks | |
| Test Cabin Overload Detection Operation | |
| Test Emergency systems Fire mans switch, evacuation controls. | |

6 ACCESS TO MAINTENANCE WORK AREAS

6.1 Cabin operating panel (COP) removal

- Use 'COP ACCESS' key to unlock control panel.
- Pull top of panel towards user.
- Lift panel off bottom pivot bar to remove COP, being careful not to damage controller or cables.
- Follow instruction in reverse order to return control panel to normal state.
- Ensure lock is secure and cables are not trapped when replacing panel.

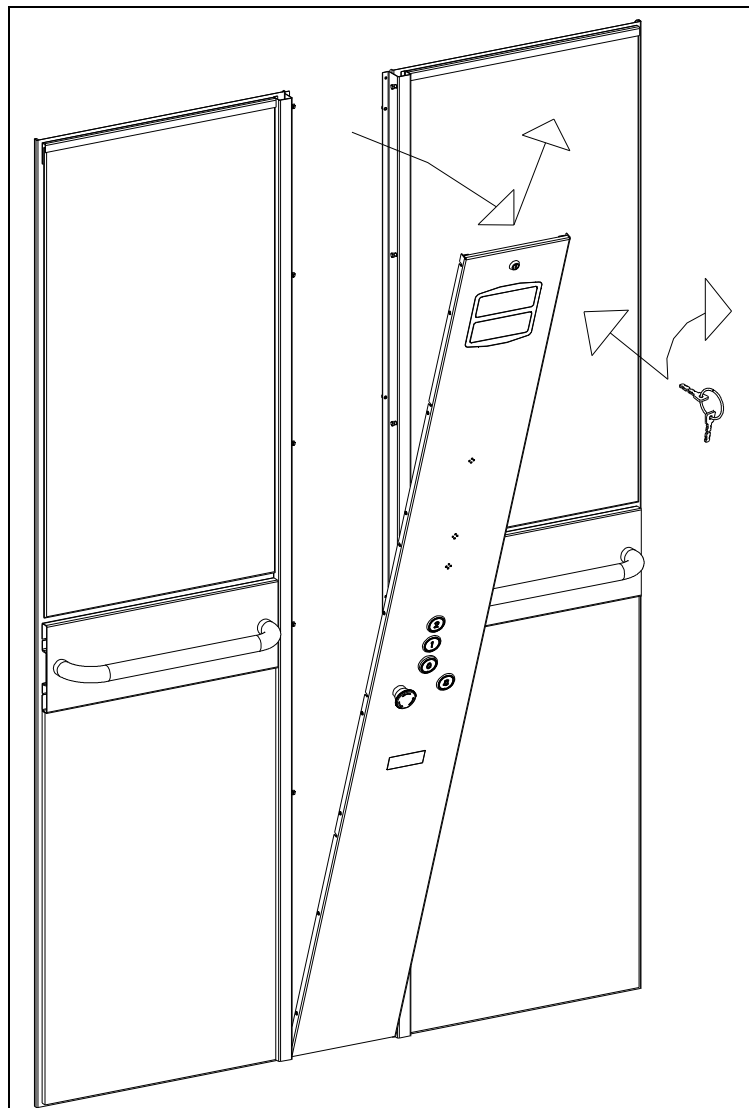
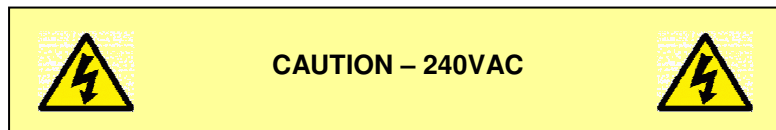


Figure 1 - COP access

6.2 Ceiling removal

Important note: persons are not permitted to stand on cabin roof

- Remove the COP. Use 'CEILING ACCESS' key to unlock ceiling panel.
- Pull ceiling downwards (suction cups maybe be required).
- Swing ceiling downwards until hanging vertically.
- Follow instruction in reverse order to return ceiling to normal state.
- Ensure lock is secure and ball clips in corners are engaged.
- If access is required above the lift cabin, simply remove centre board and top sling brace. There are no fixings in the centre board, it just hangs on the sling roof beams.
- ENSURE CEILING DOES NOT TWIST WHEN LOWERING!

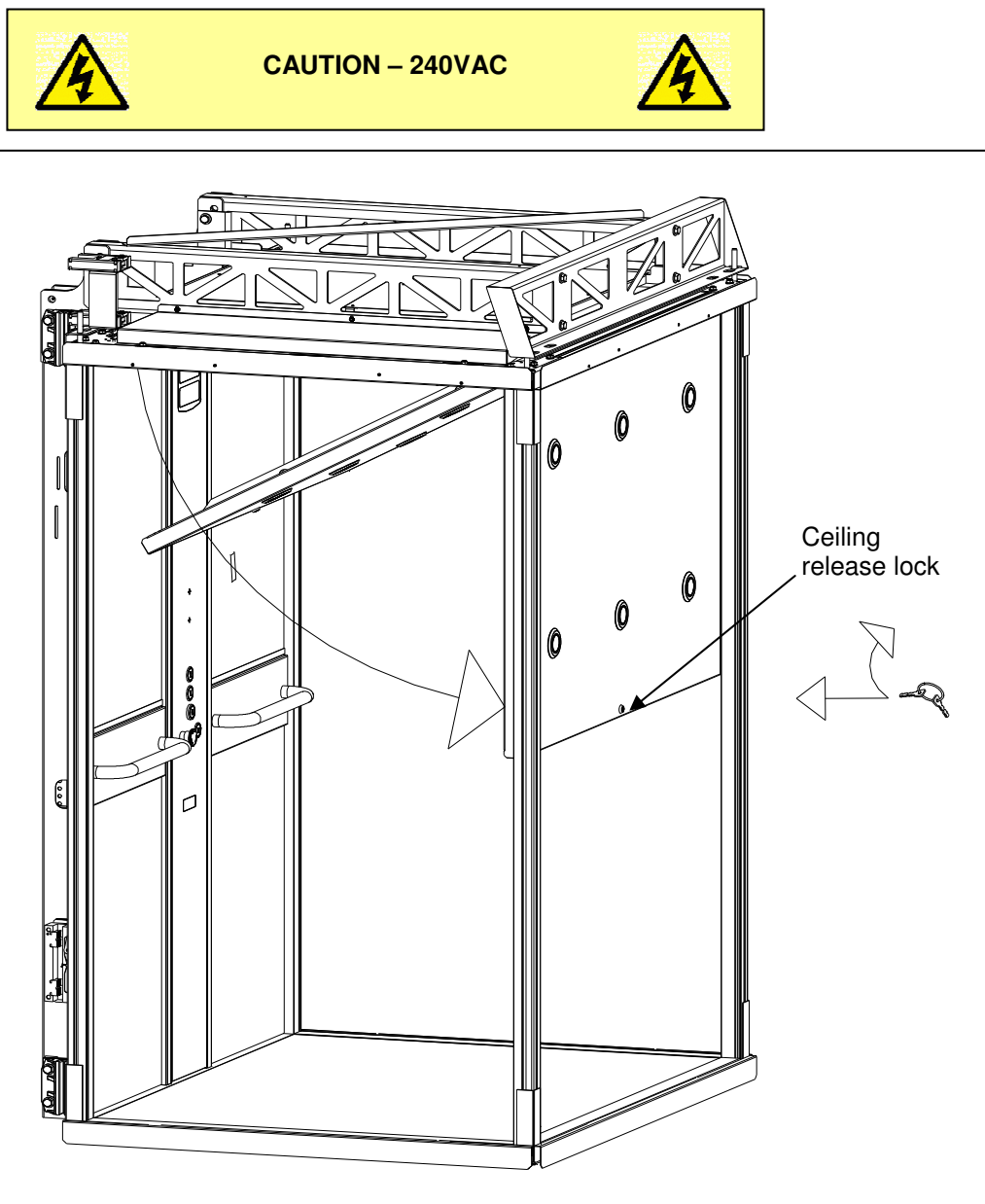


Figure 2 - Ceiling removed

6.3 Cabin wall removal

- To access behind the COP side wall, firstly the COP must be removed.
- Once removed, the COP trim can be taken out. Fixings on the trim's can easily be accessed.
- If mirrors are fitted, use a suitable rated set of suction cups, lift the mirror upwards and remove. Then remove upper mirror channel.
- If upper wallboards are fitted, these can be removed by sliding them sideways (towards the COP opening) to disengage the retaining clips
- In the last stage, the whole wall can be taken out in one assembly. Shown below is a wall from a custom cabin (wallboard, dado rail and handrail).
- Lift the wall upward and out of the aluminium extrusion.
- Pull wall assembly towards user and drop down out of top aluminium extrusion.
- To reassemble wall and COP reverse instruction.

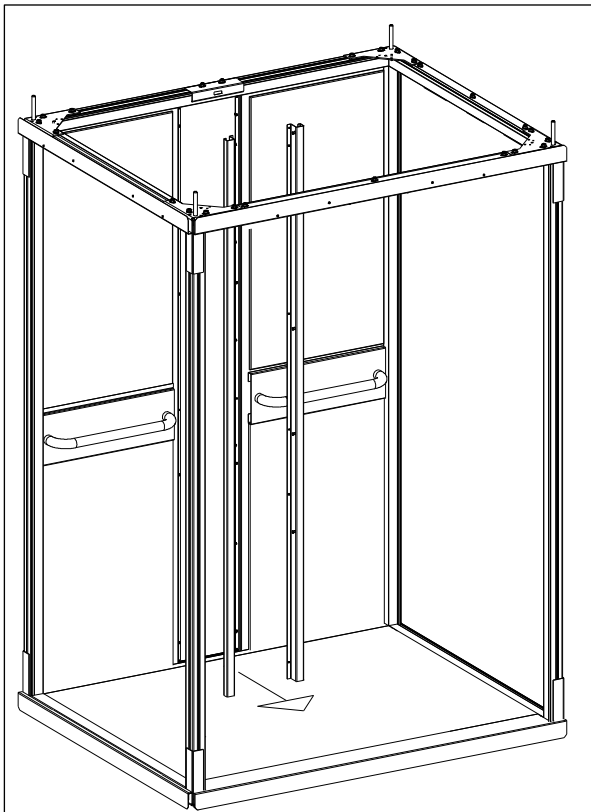


Figure 3 - COP trim being removed

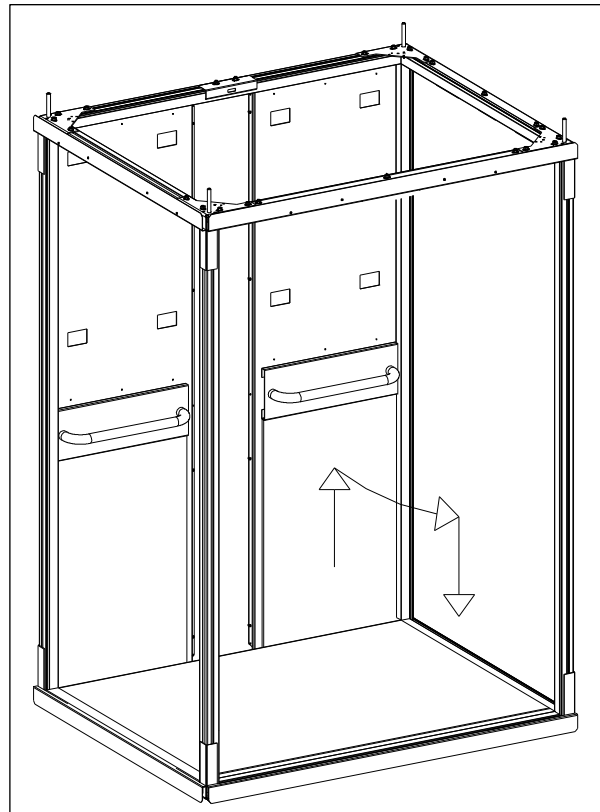


Figure 4 - COP side wall being removed

7 SAFETY CHAIN SWITCH LOCATIONS

| Ref. | Description | Location |
|------|---|---|
| G1 | Shutdown keyswitch | Main entrance landing station |
| G2 | Pit stop and pit prop switches | Mounted on the base plate assembly (pit) |
| G2A | Safety gear monitoring switch (2:1 models only) | Mounted inside sling upright, next to master paddle (2:1 models only) |
| G3 | Ultimate limit switch | Mounted on the outside of one sling upright |
| G4 | Carriage stop switch | Mounted on top of sling control panel (behind COP) |
| G5 | Cabin door lock contacts | Cabin door operator |
| G6 | Landing door lock contacts | Landing door mechanism |
| G7A | Anti-creep relay | Located in the trailer connection box |
| G7B | Ceiling beak contacts | Mounted on the lock side of the cabin ceiling (guide side) |
| G8 | Roof stop switch | Mounted on the cabin roof (guide side) |

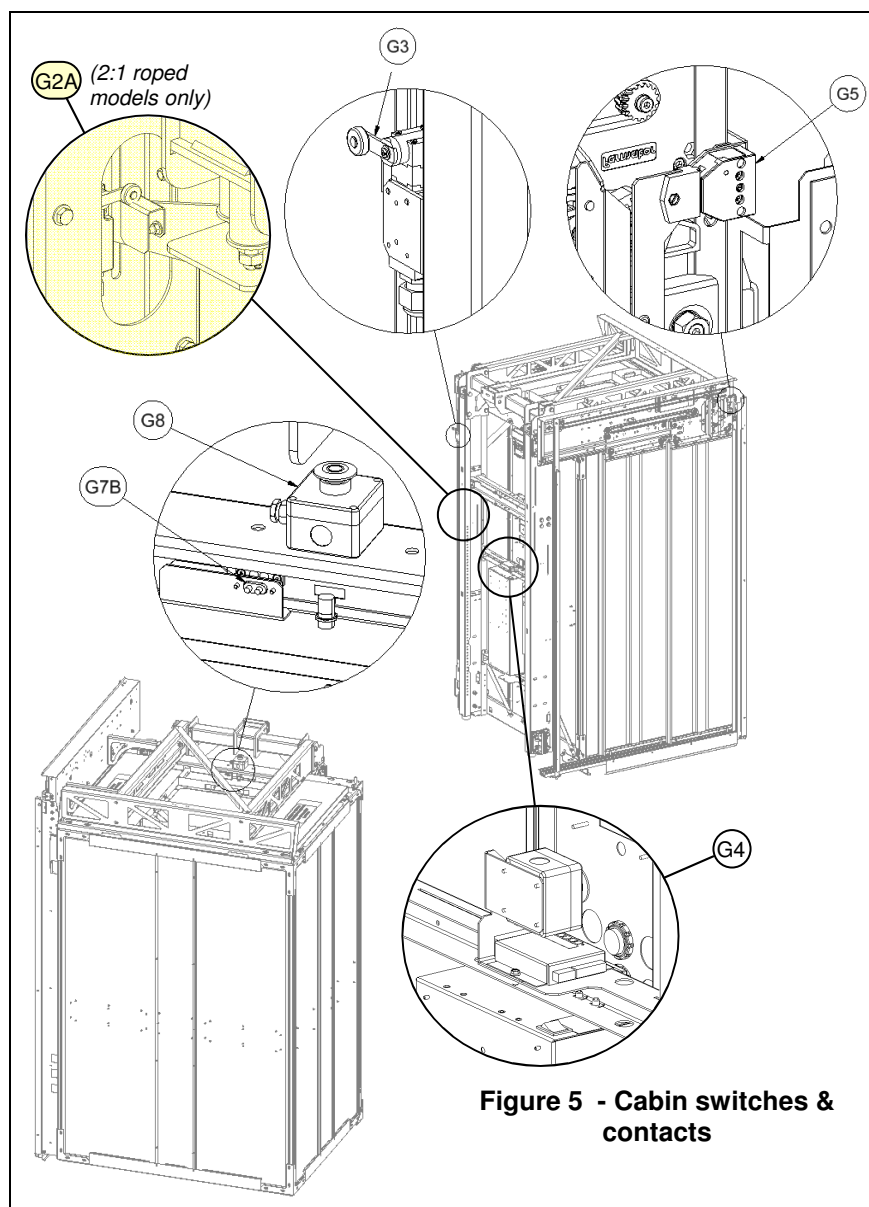


Figure 5 - Cabin switches & contacts

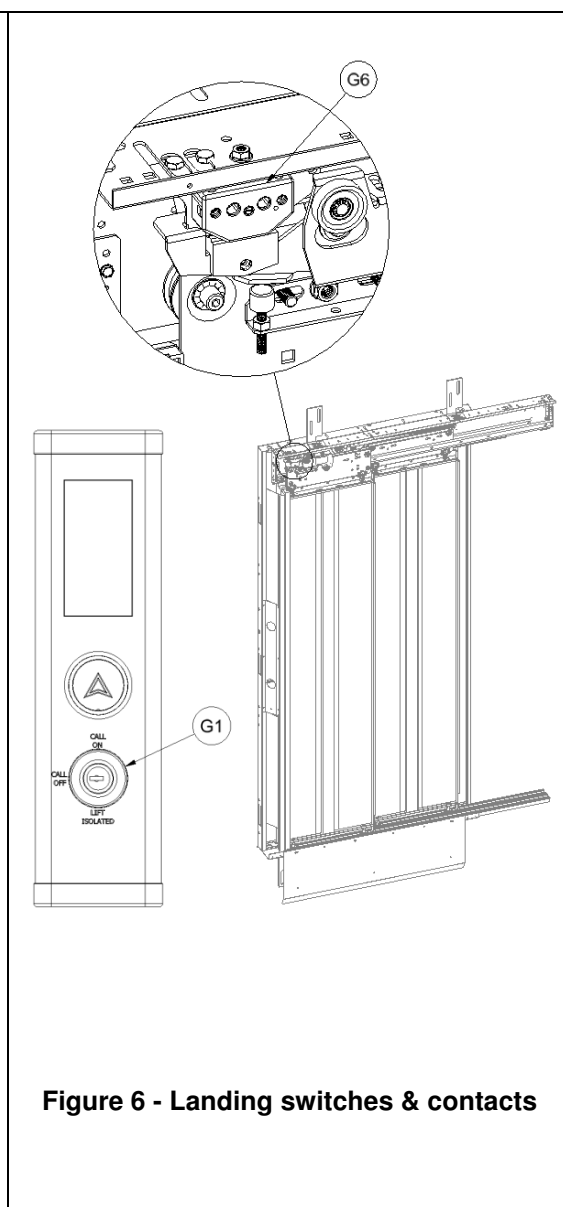


Figure 6 - Landing switches & contacts

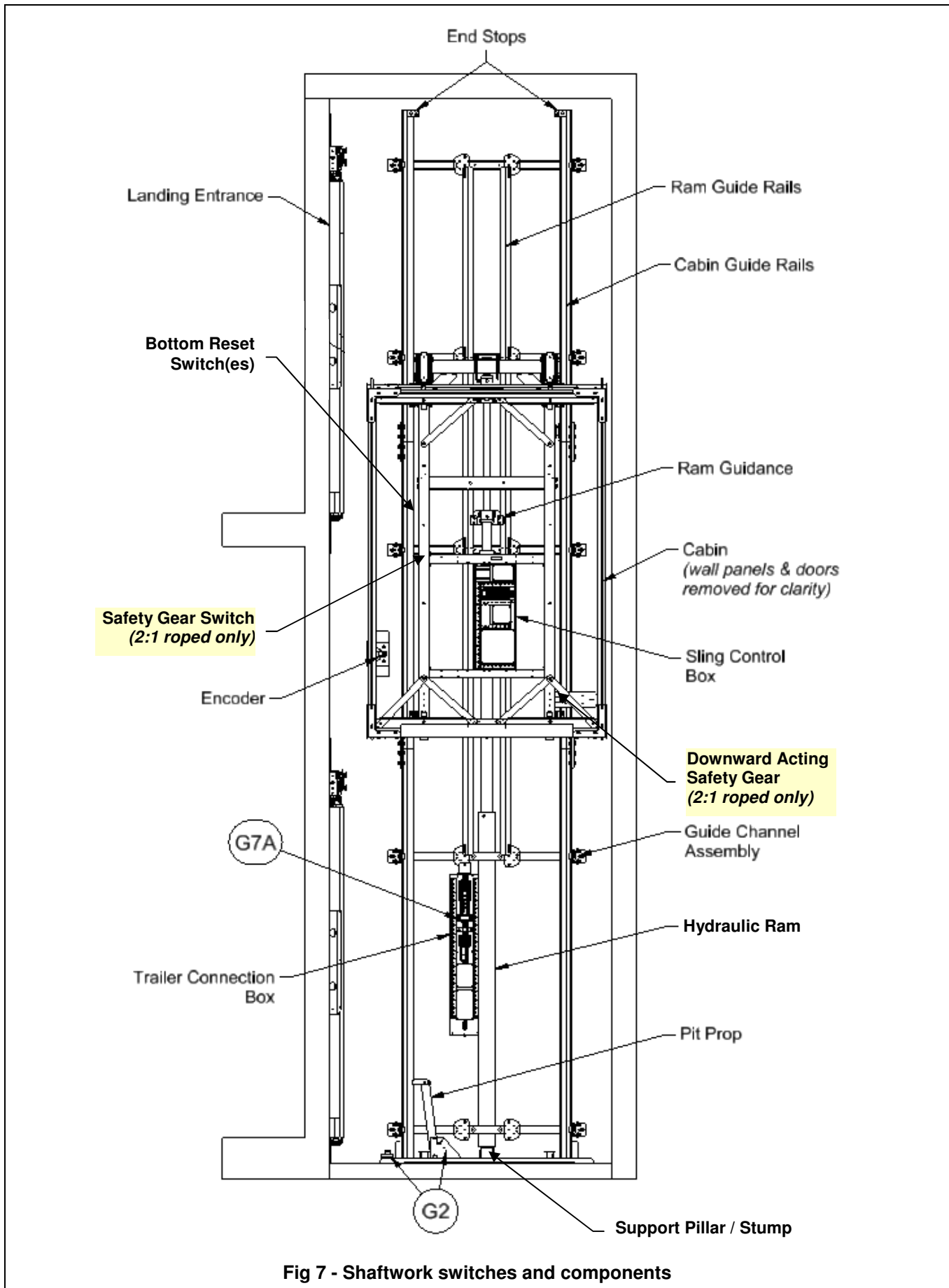


Fig 7 - Shaftwork switches and components

8 SPARES

The following table includes the spare parts that affect the safety of the lift.

| Component | Detail | Part No. |
|---|---|----------|
| 5A Fuse | 20mm anti surge, 5A | 901079 |
| Ultimate Limit Switch | IMO FR631-W3 | 910390 |
| Pit Prop Switch | BVM FYR1-ULS 43132 | 908011 |
| Bottom Reset Switch (optical type) | Stannah 24V OPS unit | 9332137 |
| Bottom Reset Switch (mechanical type) | IMO FR531 | 908001 |
| Cabin Guide Shoe Inserts | Type FSUGG (200 306.06) | 510747 |
| Landing Door Lock Contacts | Fermator 60mm contact assembly | 556015 |
| Cabin Door Lock Contacts | Fermator 40mm contact assembly | 556014 |
| Lock Release Key | Fermator triangular key & warning label | 556045 |
| Hydraulic pump access key (1:1) | Hydrax square key | 555800 |
| Hydraulic pump access key (2:1) | Stannah enclosure key | 555100 |
| Functional Keys | Various - contact spares dept. | - |
| Doors Light Curtain | Memco E10-32 – supplied as a pair | 510719 |
| Rupture Valve Kit (1:1) | 3/8" BSP valve, adapters & seals | 666667 |
| Rupture Valve Kit (2:1) | GMV VC3006/B 3/4"rupture valve | 510761 |
| Ram Guide Shoe Inserts (1:1 only) | Stannah slider block | 6102915 |
| Tackle Pulley Guide Shoe & Insert (2:1 only) | PFB T733-5 (5mm) | 510657 |
| Progressive Safety Gear (2:1 only) | Dynatech PR-2500 (943kg) – supplied as a pair | 510738 |

Ensure that original OEM components are used.

ANNEX A

Hydraulic System Information – 1:1 direct acting models

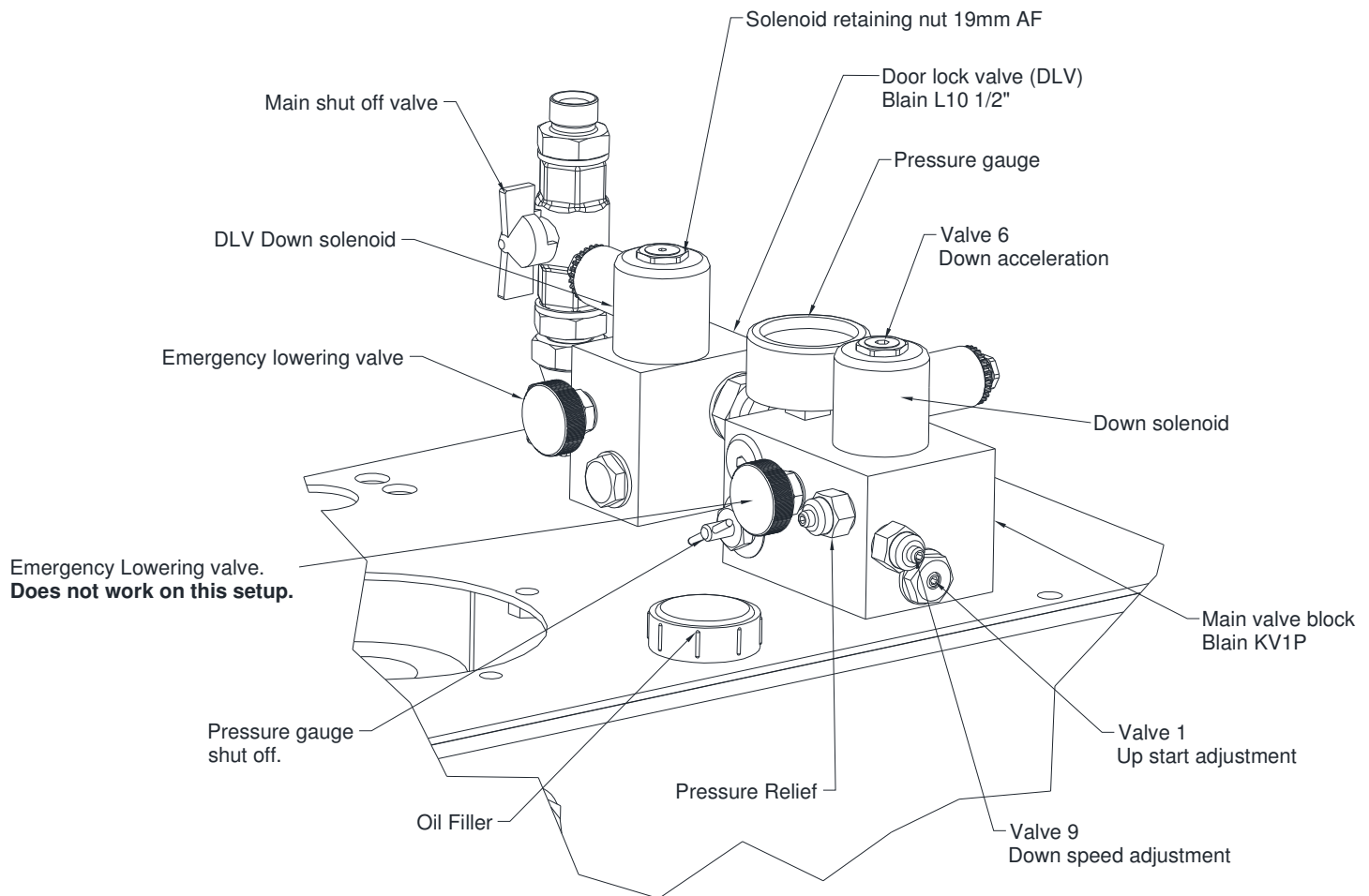


Figure 7 - Valve block

1. Oil level. With the lift at ground floor level, the oil level should be so that it appears in the site glass.
2. The unit lid should require a key to open and close without one.
3. Emergency lowering. Ensure that this functions correctly and that the down speed does not exceed 0.15m/s.
4. Down speed. Ensure that the lift does not exceed 0.15m/s with rated load.
5. Pressure relief valve. Check that the setting is correct by slowly turning the main shut off valve with the lift going up. Reopen within 4 seconds to avoid the encoder movement fault FA. If it occurs, lift will need to be reset.
6. Soft start. Check operation of the soft start and stop.

Notes

- If oil level is low, top up with HVI 32 oil.
- The lift down speed can be adjusted with a 3mm hexagon key by turning Valve 9 after releasing the locking screw. Very little movement will be required. Clockwise reduces the speed, anti-clockwise increases the speed. Retighten the locking screw. Adjustments should be made with rated load.
- The up start can be adjusted by turning Valve 1. Clockwise shortens the delay, anticlockwise lengthens it.
- The down soft start can be adjusted by turning valve 6 with a 3mm hexagon key. Clockwise provides a softer start and anti-clockwise a harder start. **Note: Setting a very soft start can result in the lift failing to lower with colder oil!**
- If remedial work cannot be completed, inform the customer and supervisor on future work required and that the lift should be taken out of service.



ANNEX B

Hydraulic System Information – 2:1 roped models

1) **General**

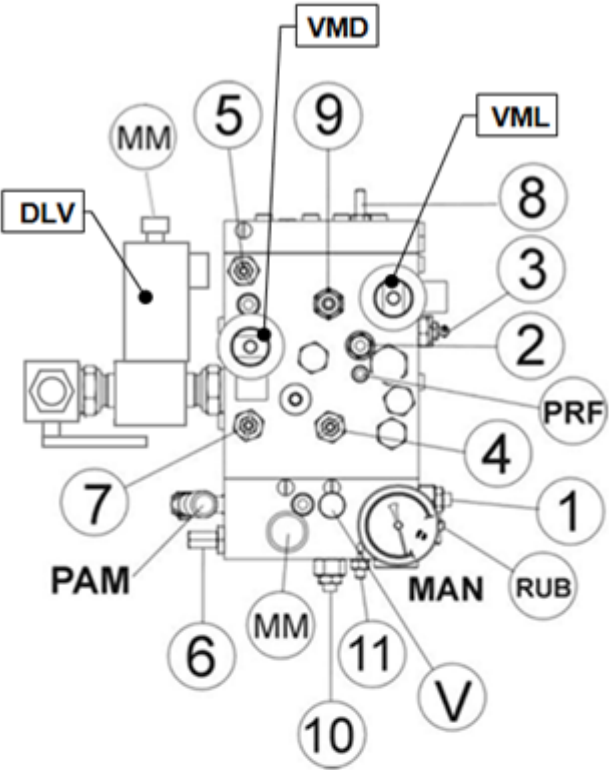
- The guidance given below should be read in conjunction with the GMV document '3010 ¾" Valve Manual – Installation, Use & Maintenance'.
- It is recommended that the valve adjustments are undertaken in Installation Mode using the pendant controller.
- Screw no. 8 & screw no.11** are factory set and should not require any on site adjustment.

2) **Settings with 400kg payload in cabin**


- Place 400kg in cabin & record max static pressure (with lift at upper floor)
- Set pressure relief valve = 1.4 x max static pressure using **screw no. 1** 
- Set down speed = 0.15m/s (max) using **screw no. 9**. This is equivalent to 6.67secs over a 1m distance.
Note: If the rupture valve operates during this process it will be necessary to adjust it – see section 11.8.
- Check correct operation of rupture valve. **Screw no.5** must be wound fully in to permit the lift to over-speed. *Return screw to fully wound out 'Normal' position after completing test.* 

3) **Settings with 200kg payload in cabin**

- Reduce payload to 200kg in cabin
- Set down levelling speed = 30 to 35mm/sec using **screw no.2**. This is equivalent to 33 to 29 secs over a 1m distance.
Notes:
 - ¼ turn approx = 5mm/sec
 - this screw also adjusts the up levelling speed
 - VMD coil can be removed to make access to the screw easier – replace coil before running lift down
 - running the lift down at levelling speed can sometimes result in 'bouncing' – this can be ignored at this stage




| | |
|-----|--|
| 1 | Pressure relief valve adjustment (max pressure) |
| 2 | Slow speed / levelling adjustment (up & down) |
| 3 | Deceleration adjustment (up & down) |
| 4 | Upward acceleration adjustment |
| 5 | Screw for rupture valve test |
| 6 | Minimum ram pressure adjustment |
| 7 | Downward acceleration adjustment |
| 8 | Upward high speed adjustment (factory set) |
| 9 | Downward high speed adjustment |
| 10 | Hand pump max pressure adjustment |
| 11 | Minimum upward pressure adjustment (factory set) |
| RUB | Shut-off valve for pressure gauge |
| MAN | Pressure gauge (manometer) |
| MM | Manual lowering button (x2) |
| PAM | Hand pump |
| V | Bleed screw for hand pump |
| VMD | Downward solenoid valve |
| VML | Speed change valve (up & down) |
| DLV | Door lock valve (prevents unintended movement) |
| PRF | Blocking screw (DO NOT REMOVE!) |



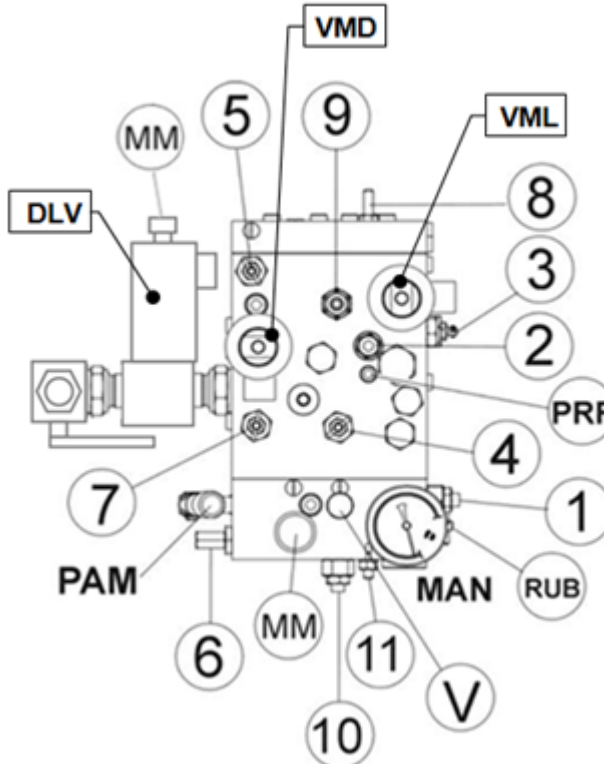
Screw No.

clockwise = increases value (+)
anti-clockwise = reduces value (-)



Screw No.

clockwise = decreases value (-)
anti-clockwise = increases value (+)

| | |
|--|---|
| <p>c) Check that the up levelling speed = 42 to 55mm/sec. This is equivalent to 24 to 18 secs over a 1m distance.</p> <p>d) Set the deceleration using screw no. 3 until the optimum ride quality is reached in both directions of travel (i.e. no 'bouncing' and running at levelling speed for approx 2 secs before stopping at floor). <i>This screw adjusts both upwards and downwards deceleration.</i></p> <p>e) Set the upwards acceleration using screw no. 4 for optimum ride quality</p> <p>f) Set the downwards acceleration using screw no. 7 for optimum ride quality</p> <p>4) <u>Settings with 0kg payload in cabin</u></p> <p>a) Check that the upward rated speed does not exceed 0.15m/s. This is equivalent to 6.67secs over a 1m distance</p> <p>b) Check correct operation of the rupture valve [as per 2)d) but with the cabin empty]</p> <p>c) Set the minimum ram pressure to 6 bar using screw no. 6 in accordance with GMV instruction manual. This adjustment prevents the hydraulic ram from continuing to close should the suspension ropes go slack for any reason (e.g. lift sat on buffers)</p> <p>d) Set handpump maximum pressure = 2.3 x max static pressure, using screw no. 10 as per the GMV instruction manual</p> |  <p>1 Pressure relief valve adjustment (max pressure) 2 Slow speed / levelling adjustment (up & down) 3 Deceleration adjustment (up & down) 4 Upward acceleration adjustment 5 Screw for rupture valve test 6 Minimum ram pressure adjustment 7 Downward acceleration adjustment 8 Upward high speed adjustment (factory set) 9 Downward high speed adjustment 10 Hand pump max pressure adjustment 11 Minimum upward pressure adjustment (factory set) RUB Shut-off valve for pressure gauge MAN Pressure gauge (manometer) MM Manual lowering button (x2) PAM Hand pump V Bleed screw for hand pump VMD Downward solenoid valve VML Speed change valve (up & down) DLV Door lock valve (prevents unintended movement) PRF Blocking screw (DO NOT REMOVE!)</p> |
|--|---|

ANNEX C

Uncontrolled Movement

The correct operation of the safety valve (DLV) must be verified as part of the commissioning process. To check the operation:

- a) Remove the two retaining circlips or lock nuts from the solenoid stems
- b) Call the lift downwards.
- c) While the lift is descending, briefly lift the coil off of the main down valve (D or VMD) - the lift should stop immediately.
- d) Quickly replace the coil so that the lift descends again.
- e) Repeat steps (a) to (d) with the coil from the safety valve (DLV) - again the lift should stop immediately.

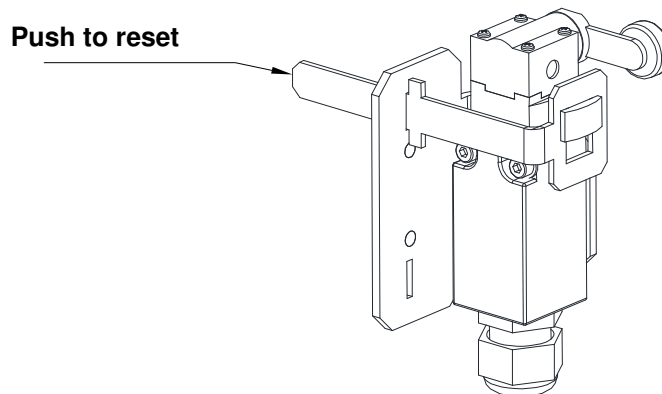
IF THE LIFT FAILS TO STOP IMMEDIATELY WHEN EITHER OF THE COILS ARE LIFTED, THE VALVE IS FAULTY AND CORRECTIVE ACTION MUST BE TAKEN BEFORE THE LIFT CAN BE RETURNED TO NORMAL SERVICE.

Note: If the lift is stationary for more than 4 seconds during a down journey an encoder fault 'A' will occur. Do not leave the coils off the valve stems for more than a few seconds as they can overheat and become damaged.

ANNEX D

Ultimate limit switch

The ultimate limit switch is located on the outside of one of the lift sling uprights. The switch is fitted with a mechanical reset lever which is accessible from inside the cabin (when the COP and wall panel are removed). Push the lever to reset the switch.



Ultimate limit switch

ANNEX E

Door Maintenance

The following instructions are supplied by the original door manufacturer. A copy of the 'Assembling and regulation manual' is to be retained with the lift. Only original manufacture parts should be used.

- Check that the doors are fully closed and can be open using the emergency key
- Check to ensure that the spring closer fully closes the door.
- Check that the electrical contacts are correctly fitted and operate correctly.
- Check that the male contact at the electric bridge enters the electrical contact correctly.

ANNEX F

Troubleshooting

| Problem | | Possible fault | Possible solution |
|--|---|--|--|
| <ul style="list-style-type: none"> Specific fault code displayed on DDU's | | <ul style="list-style-type: none"> Codes A, B, C.....etc | <ul style="list-style-type: none"> Refer to 'Fault Code List' in Piccolo wiring manual |
| <ul style="list-style-type: none"> No Power | | <ul style="list-style-type: none"> Loss of power to the building Circuit breaker (MCB) tripped Isolation keyswitch turned off | <ul style="list-style-type: none"> Contact electricity supplier Reset MCB Turn isolation keyswitch (3 position) to 'ON' position |
| <ul style="list-style-type: none"> No Movement | <ul style="list-style-type: none"> Both Directions | <ul style="list-style-type: none"> Safety chain broken | <ul style="list-style-type: none"> Identify point at which safety chain is broken, identify problem, reset safety switch and re-test. |
| | | <ul style="list-style-type: none"> Door not closed | <ul style="list-style-type: none"> Close all doors & ensure all locks are fully engaged |
| | | <ul style="list-style-type: none"> Main shut off valve closed | <ul style="list-style-type: none"> Re-open main shut off valve |
| | | <ul style="list-style-type: none"> Ultimate limit switch activated | <ul style="list-style-type: none"> Lower lift with manual lowering valve, adjust ramp position & reset switch |
| | | <ul style="list-style-type: none"> Safety gear switch activated (2:1 roped models only) | <ul style="list-style-type: none"> Check safety gear & switch |
| | | <ul style="list-style-type: none"> Lift overloaded | <ul style="list-style-type: none"> Remove excess load Reset overload limit on "load sensor control box" (located on the sling, behind the COP) |
| | | <ul style="list-style-type: none"> Isolation keyswitch turned off | <ul style="list-style-type: none"> Turn keyswitch on |
| | <ul style="list-style-type: none"> Up only | <ul style="list-style-type: none"> Pump not running: motor thermal overload tripped | <ul style="list-style-type: none"> Reset thermal overload (located on terminal box inside pump unit) |
| | | <ul style="list-style-type: none"> Pump running but will not raise cabin | <ul style="list-style-type: none"> Check for excess payload Adjust relief valve if necessary Adjust up acceleration setting Main down valves D [or VMD] & DLV energised - check feeds to D [or VMD] & DLV Main down valves both stuck open - check for contamination or replace D [VMD] & DLV |
| | <ul style="list-style-type: none"> Down only | <ul style="list-style-type: none"> No signal voltage applied to down solenoids | <ul style="list-style-type: none"> Check 24V is being applied to DLV and/or D [or VMD] (see timing sequences) |
| | | <ul style="list-style-type: none"> Rupture valve operated | <ul style="list-style-type: none"> Check system is working correctly. Raise lift to release rupture valve. Adjust setting if necessary. |
| | | <ul style="list-style-type: none"> Safety gear operated | <ul style="list-style-type: none"> Check safety gear system. Raise lift to release safety gear. Adjust mechanism / switch if necessary. |
| | | <ul style="list-style-type: none"> Incorrect setting of down acceleration | <ul style="list-style-type: none"> Refer to 'Down Acceleration' in Annex A or Annex B |
| | | <ul style="list-style-type: none"> Minimum ram pressure screw (if present) | <ul style="list-style-type: none"> Refer to Annex A or Annex B |

| | | |
|--|---|---|
| <ul style="list-style-type: none"> Lift runs in slow speed only <i>(2:1 roped models only)</i> | <ul style="list-style-type: none"> VML not activated | <ul style="list-style-type: none"> Check feed to VML (should be 24V for high speed, 0V for slow speed) If feed to VML is correct, check for contamination or replace VML |
| <ul style="list-style-type: none"> Lift runs in high speed only <i>(2:1 roped models only)</i> | <ul style="list-style-type: none"> VML permanently activated | <ul style="list-style-type: none"> Check feed to VML (should be 24V for high speed, 0V for slow speed) If feed to VML is correct, check for contamination or replace VML |
| <ul style="list-style-type: none"> Poor ride quality | <ul style="list-style-type: none"> Damaged guides | <ul style="list-style-type: none"> Identify damaged area of guides and file flat. |
| | <ul style="list-style-type: none"> Rough guide joints | <ul style="list-style-type: none"> Identify rough guide joint and file flat. |
| | <ul style="list-style-type: none"> Poor start, acceleration or stopping | <ul style="list-style-type: none"> Refer to valve adjustments in Annex A or Annex B |
| <ul style="list-style-type: none"> Lift stops outside floor level tolerance ($\pm 10\text{mm}$) / Ultimate limit activated | <ul style="list-style-type: none"> Lift not running at correct speed | <ul style="list-style-type: none"> 1:1 direct acting - adjust valve as per Annex A then perform motor calibration as per wiring manual. 2:1 roped - adjust valve as per Annex B |
| | <ul style="list-style-type: none"> Floor levels incorrectly set up | <ul style="list-style-type: none"> Re-teach floor levels |
| | <ul style="list-style-type: none"> Journey timer tripped | <ul style="list-style-type: none"> Check setting of bit switch 2 (on pcb on cabin mounted control panel) <i>1:1 - Off=30secs, ON=60secs</i> <i>2:1 - Off=70secs, ON=120secs</i> |
| | <ul style="list-style-type: none"> Timing belt pulley not connected to encoder shaft | <ul style="list-style-type: none"> Tighten the grub screw locking the timing belt to the encoder shaft (located on the encoder assembly – rear of the cabin) |
| | <ul style="list-style-type: none"> Encoder shaft not connected to the encoder | <ul style="list-style-type: none"> Tighten the grub screw locking the encoder to the encoder shaft (located on the encoder assembly – rear of the cabin) |
| <ul style="list-style-type: none"> Lift sinks below floor level over time | <ul style="list-style-type: none"> Anti-creep not operating correctly | <ul style="list-style-type: none"> Refer to wiring manual |
| | <ul style="list-style-type: none"> Leak in ram or hose | <ul style="list-style-type: none"> Check for signs of leaks Confirmed if lift still sinks when the shut-off valve is closed |
| | <ul style="list-style-type: none"> Leak in valve block | <ul style="list-style-type: none"> If lift doesn't sink when shut-off valve is closed, there is a leak in the valve block. Check pilot valves, check valves & spools for signs of poor sealing and/or contamination. Clean / replace as necessary. |

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| <ul style="list-style-type: none"> Doors not opening or closing | <ul style="list-style-type: none"> No power | <ul style="list-style-type: none"> Check power switch on door operator |
| | | <ul style="list-style-type: none"> Check status of mains supply to door operator |
| | | <ul style="list-style-type: none"> Check door operator battery back system (if fitted) |
| <ul style="list-style-type: none"> Doors not opening | <ul style="list-style-type: none"> Inputs not present | <ul style="list-style-type: none"> Check 'open' command received by door operator |
| | <ul style="list-style-type: none"> Mechanical | <ul style="list-style-type: none"> Check roller adjustment |
| | | <ul style="list-style-type: none"> Check sills for obstructions |
| <ul style="list-style-type: none"> Doors not closing | <ul style="list-style-type: none"> Inputs not present | <ul style="list-style-type: none"> Check 'close' command received by door operator |
| | | <ul style="list-style-type: none"> Check light ray for obstructions and correct functioning |
| | | <ul style="list-style-type: none"> Check lift not in 'Fire Shutdown' mode |
| | <ul style="list-style-type: none"> Check for stuck button | |
| <ul style="list-style-type: none"> Doors cycling | <ul style="list-style-type: none"> Mechanical | <ul style="list-style-type: none"> Refer to mechanical faults under 'Doors not opening' |
| | <ul style="list-style-type: none"> Lock contact adjustment | <ul style="list-style-type: none"> Check/adjust cabin and landing lock contacts |
| <ul style="list-style-type: none"> Doors cycling | <ul style="list-style-type: none"> Light ray function | <ul style="list-style-type: none"> Check for obstructions and correct alignment of light rays |
| | <ul style="list-style-type: none"> Inconsistent speed of doors closing | <ul style="list-style-type: none"> Door operator obstruction detection feature (<i>this is not a fault...just a characteristic of the door operator - see description on right</i>) |

Document History

| Issue | Name | Changes | Date |
|--------------|---------------|--|-------------|
| Issue 1 | R Christopher | First issue | 27/10/14 |
| Issue 2 | P Jeffery | Note re. cabin door lock added to Section 2 | 01/04/15 |
| Issue 3 | R Christopher | Updated to include 2:1 roped models and upper wallboard option. Annex F (Troubleshooting) added. | 31/01/2018 |
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