Wessex Lift Company Limited

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Technical Bulletin

From: Julian Benn
To: Wessex Agents, Installations, Service, Manufacturing
Cc: PH, HP ,DJ, PW, MS, SF
Date: 23rd March 2021
Subject: Molex Connector Obsolescence (ECO 1675 & ECO 1730)
Bulletin Reference: Molex 23032021.docx
Affected Lift Models: VM, VE & LS

Unfortunately Molex our supplier of PCB Contacts has discontinued some of their connector range.

- Molex part no's 02091134 and 02092134. Molex Connectors fitted to the below VM PCB's:
  - The Main Control PCB
  - Power Supply Unit PCB (PSU PCB)

Some connectors have changed to Molex Headers. They are from the same Molex range of 0.093" connectors.

This is documented on ECO 1730.

Other changes detailed in this Bulletin are:

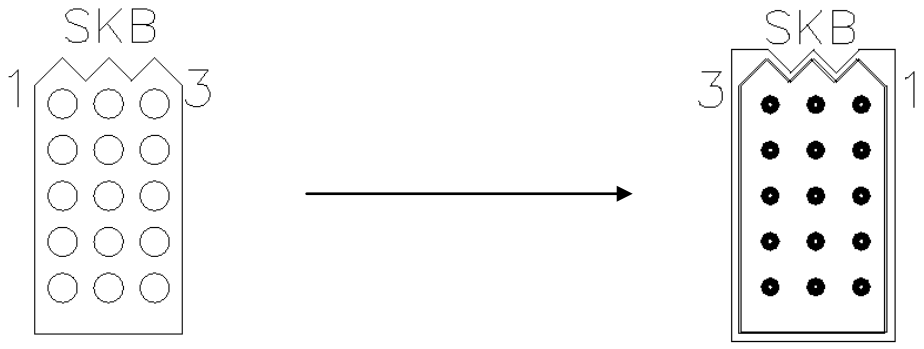
ECO 1730: Final up limit switch has been made obsolete by Burgess. *(Concession: 10017)*
ECO's 1675 & 1730: Mains input /output connectors changed to Wieland connectors
ECO 1675: PSU to Powerpack Solenoid twin core replaced with 4 core version VE31 8007

Molex Connectors

All PCB mounted 15 way connectors are now plugs with male contacts. (Molex 10181150)
All PCB mounted 12 way connectors are now plugs with male contacts. (Molex 10181120)
All 9 way connectors are now plugs with either male or female contacts. (Molex 10181090 & 10181091)

These connectors are now a one piece header with the contacts moulded in. They are easily identified as they are black and a lower profile than the existing connectors.

Please note that as these new connectors are all plugs, when fitted in place of a receptacle, the connector will be a mirrored, with pins 1 and 3 swapped.
For example, on the original VM control PCB, EC15 1030, SKB was a receptacle with female contacts, as shown on the left.
SKB is now a plug with male contacts (shown on the right). So the connector is mirrored, with pin 1 now on the right hand side



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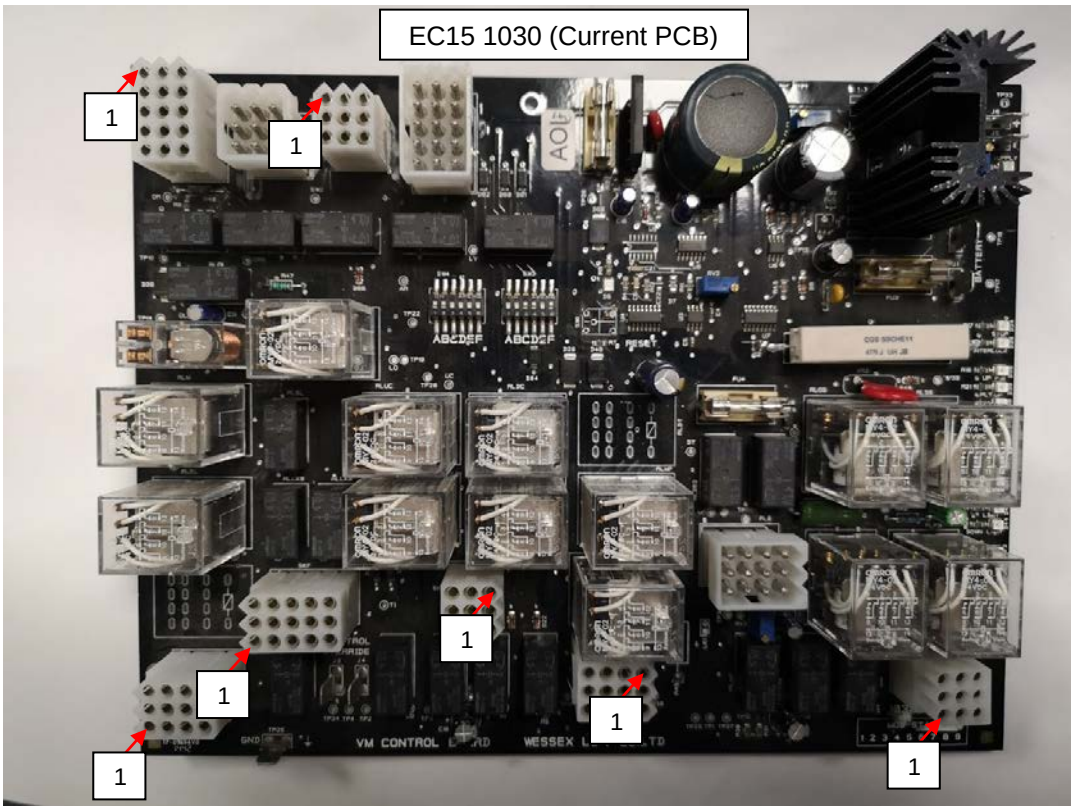
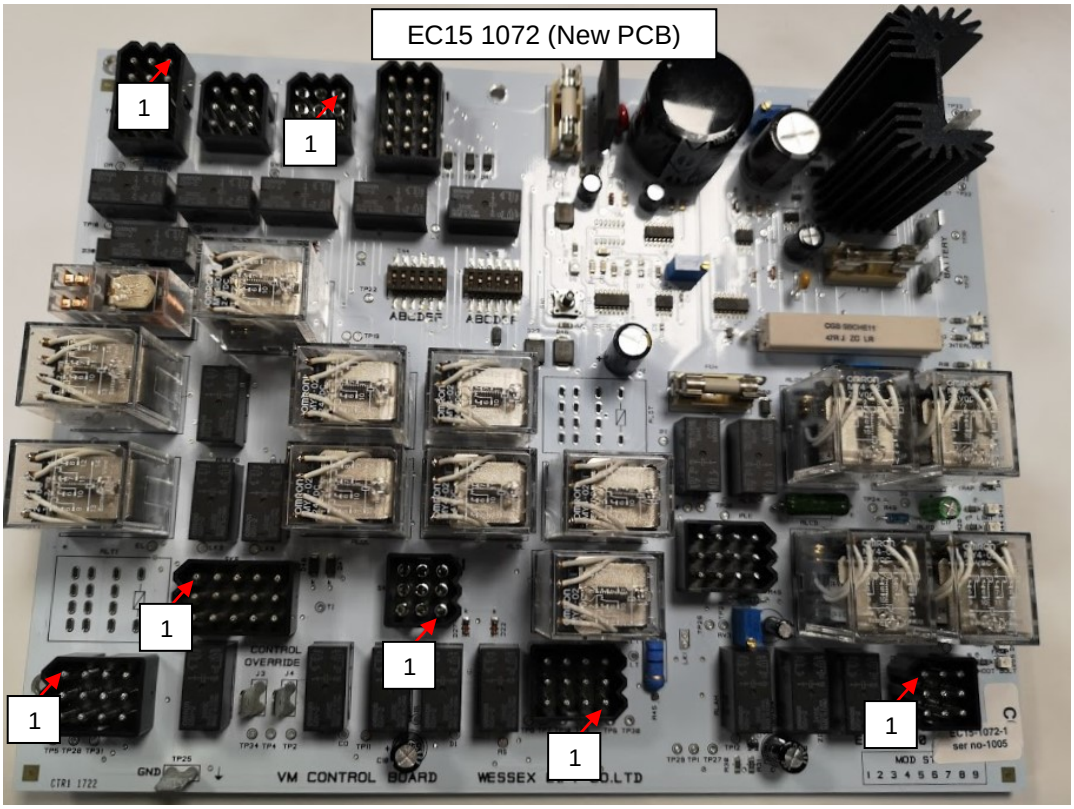
The below pictures detail Pin 1 position on the old and new PCB's:

The new Main Control PCB **EC15 1072** can be identified by black Molex connectors and a white PCB.

All Molex connectors except PLA, PLE and PLK are mirrored with pin 1 moving to the opposite side.





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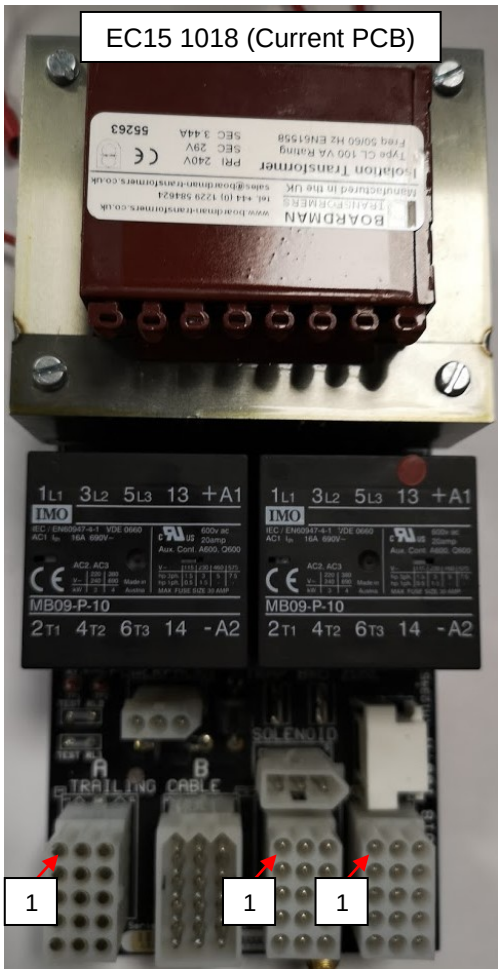


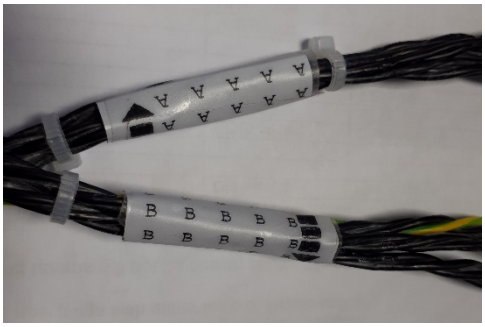
The new power supply PCB (PSU) **EC15 1074** can be identified by the black Molex Connectors and the mains output being a flying lead. (On future boards, the PCB will be white).

Connector ‘B’ and the solenoid output connectors are also now both black headers, but the connector configuration is the same as before (plugs with male pins).

When fault finding on looms connected into the new connectors, use the pin numbers on the looms, not on the PCB legend. Over the coming months, PCB legends will be updated to correct this.

Also note that due to limited variation in connector types, for example 15-way connectors are only available as plugs with male contacts, a PCB will have more than one connector of the same type. Extra care must be taken to ensure that looms are fitted in the correct positions.

To help with this, the looms are now labeled with the connector destination adjacent to the connectors.



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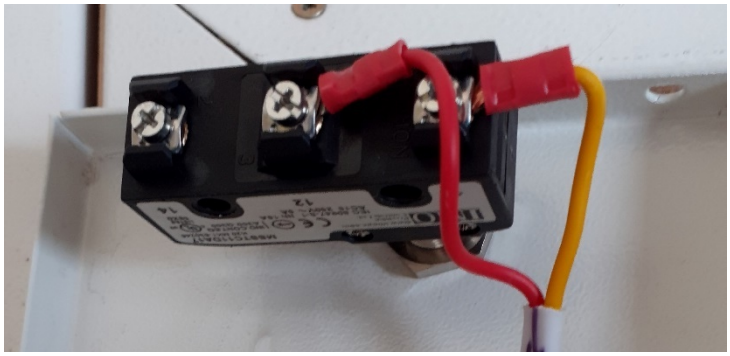
Final Up Limit Switch

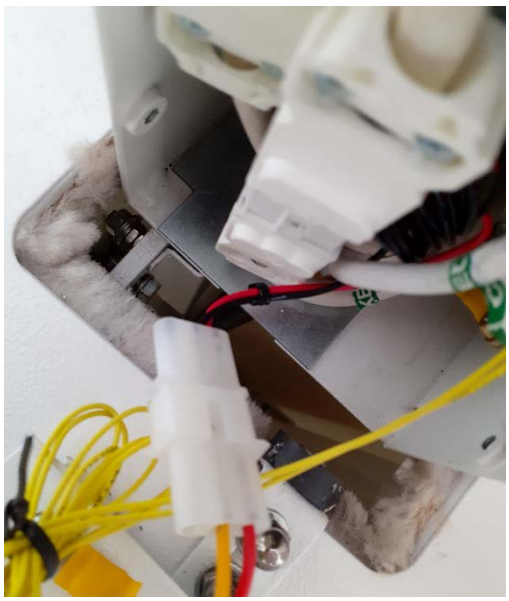
The Final Up Limit Switch has also changed, due to obsolescence of EC08 3035.

The final up limit switch now breaks the low voltage AC supply to the lift instead of the mains supply. The effect of the limit switch being activated is the same as before, with the lift only being able to be lowered using emergency lowering function of the lift. ECO 1730 incorporates/replaces concession 10017.

The new switch EC08 3044 is now mounted onto the power supply lid, effectively in the same position as the original switch. It is connected to the low voltage AC supply to the lift carriage via a short loom and 3 way Molex connector. (VM30 8140).

Note: As the switch is now on the low voltage side and doesn't present an electrical shock hazard. The rear switch cover detailed on concession 10017 has been removed.





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Mains Input and Output Connectors

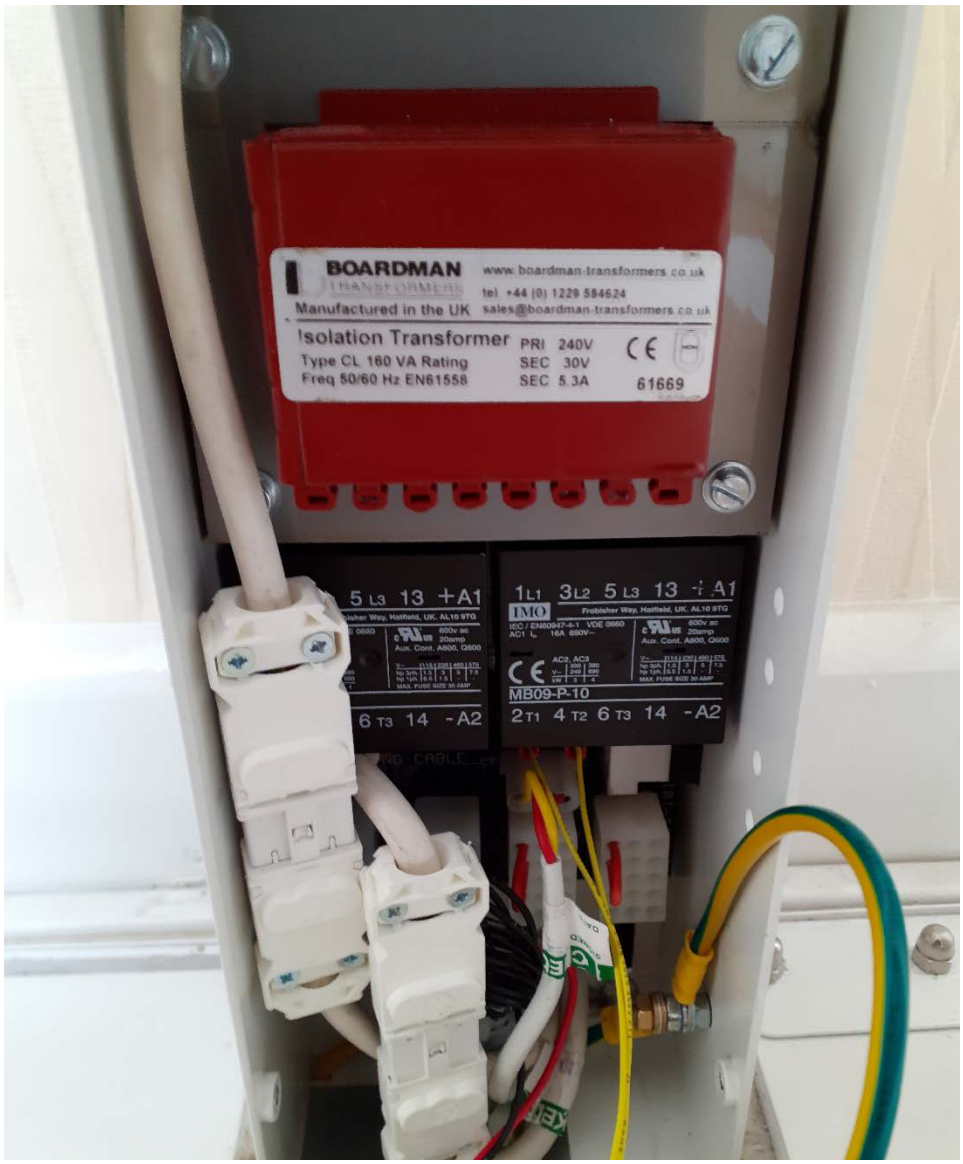
(ECO 1675 & 1730)
To improve assembly, installation and testing, the mains input connection and mains powerpack connection is now made using Weiland GST15 connectors.

This allows us to safely carry out high voltage and functional testing on the complete assembly of power supply with trailing cables.

The Aperture Liner kit will include the mating connector for the mains input (Wieland socket 91.931.3053.0, EC11 5025). This is wired during initial electrical installation.

The 3 core mains input cable from the lift isolator (switch fused spur) to the connector detailed above will now be supplied by the electrical installer. This was previously supplied by Wessex Lifts as part of the pre-install kit. Refer to electrical installation drawing VM30 9006 for more details. This cable must be a multi-core PVC flexible cable, e.g. 3183Y.

VM30 9006 details information on cable type, routing and fitting the connector.



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Part Numbers

As the affected PCB's and Looms will not be directly backwards compatible, they have been given new numbers as below:

Description	Old number	New number
PCB's		
Power Supply PCB	EC15 1018	EC15 1074
VM Control PCB	EC15 1030	EC15 1072
VM Control Autohome PCB	EC15 1031	EC15 1073
VM Looms		
Wired Call Station Loom	VM30 8018	VM30 8118
Limit Switch Loom	VM30 8036	VM30 8119
Lower Limit/Shootbolt loom	VM30 8037	VM30 8120
L/H Side Loom	VM30 8054	VM30 8121
Lower Limit/Shootbolt loom	VM30 8060	VM30 8122
R/H Side Loom	VM30 8061	VM30 8123
Control Console	VM30 8066	VM30 8124
Limit Switch Loom (Smoke)	VM30 8075	VM30 8125
Lower Limit/Shootbolt loom	VM30 8076	VM30 8126
R/H Side Loom (Smoke)	VM30 8077	VM30 8127
Loom Call Station Wireless	VM30 8079	VM30 8128
Limit Switch Loom	VM38 8036	VM38 8119
L/H Side Loom	VM38 8054	VM38 8121
R/H side Loom	VM38 8061	VM38 8123
Control Console	VM38 8066	VM38 8124
Limit Switch Loom	VM38 8075	VM38 8125
R/H Side loom	VM38 8077	VM38 8127
Trailing Cable 3m	VM30 8068	VM30 8129
Trailing Cable 3.5m	VM50 8005	VM50 8006
VE Looms		
Control Console	VE15 8001	VE15 8021
Control Console	VE31 8001	VE31 8021
RH side Loom	VE31 8008	VE31 8022
Side Loom	VE31 8010	VE31 8023
RH Side Loom	VE38 8008	VE38 8022
Side Loom	VE38 8010	VE38 8023
LS Looms (previously VE Mk2)		
Door Test Loom	VE15 8015	LS15 8019
PCB to door control loom	VE15 8016	LS15 8020
Control Console LS15/25	VE15 8019	LS15 8021
Control Console LS36/56	VE31 8019	LS36 8002
Overall Wiring Schematics		
VM	VM30 8105	VM30 8141
VE	VE31 8100	VE31 8108
LS	VE15 8104	LS15 8104

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Spares

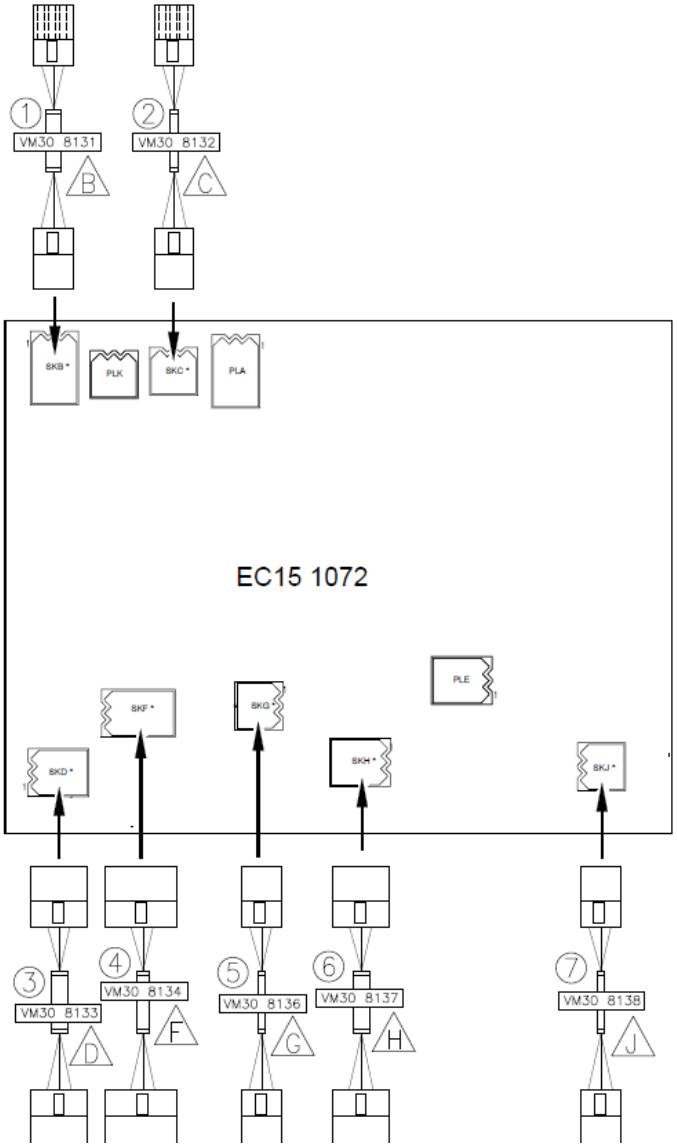
Replacing EC15 1030/31 by EC15 1072/73

As the new control PCB (EC15 1072/1073) is not directly backwards compatible with the original EC15 1030/31 PCB, a set of adapter looms (VM30 8145) will be supplied with a replacement PCB. Comprising:

SKB - VM30 8131
SKC - VM30 8132
SKD - VM30 8133
SKF - VM30 8134
SKG - VM30 8136
SKH - VM30 8137
SKJ - VM30 8138

(PLA, PLE and PLK do not require adapter looms)

These short looms connect between the existing looms and the new PCB as shown below:



For example:

To connect an existing trailing cable into SKB, Adapter loom VM30 8131 is fitted between SKB and Connector B on the trailing cable.

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Replacing the complete power supply unit (PSU) & trailing cable assembly to an existing lift installation with EC15 1030/31 Main Control PCB and Wireless Call stations:

One of the below options will be required: (new PSU & trailing cable assembly):

VM30 0133 (230V)	3m Range
VM30 1741 (120V)	
VN30 8008 (with test switches)	
VM50 0133 (230V)	3.5m Range
VM50 1741 (120V)	
VN50 8008 (with test switches)	

In addition to one of the above PSU assemblies the following parts will be required:

- VM30 8131 Trailing cable Adapter loom (to connect to existing Main Control PCB, SKB)
- EC11 5026 Wieland plug (to connect to PSU to Powerpack mains cable)
- EC11 5025 Wieland socket (to connect to PSU to Mains Isolator input)
- VM30 8128 Loom Call Station Wireless (2 off) (shorting plugs for PSU call station connections)

As above but with wired call stations:

- VM30 8146 Additional wired call station adapter looms, 1 per call station (to connect to the call station connections in the PSU)
- Do NOT need VM30 8128 (Call station shorting plugs)

Replacing the PSU PCB only (Not complete assembly as above):

One of the below PSU PCB options will be required: (new PSU PCB):

- EC15 1074 (230V)
- EC15 1062 (120V)
- VN30 8010 (with test switches)

In addition to the above the following parts will be required:

- VM30 8139 Trailing cable Adapter loom. (to connect existing trailing cable to new PSU PCB, SKA)
- EC11 5026 Wieland plug (to connect to PSU to Powerpack mains cable)
- EC11 5025 Wieland socket (to connect to PSU to Mains Isolator input)
- VM30 8128 Loom Call Station Wireless (2 off) (shorting plugs for PSU call station connections)

As above but with wired call stations:

- VM30 8146 Additional wired call station adapter looms, 1 per call station (to connect to the call station connections in the PSU)
- Do NOT need VM30 8128 (Call station shorting plugs)

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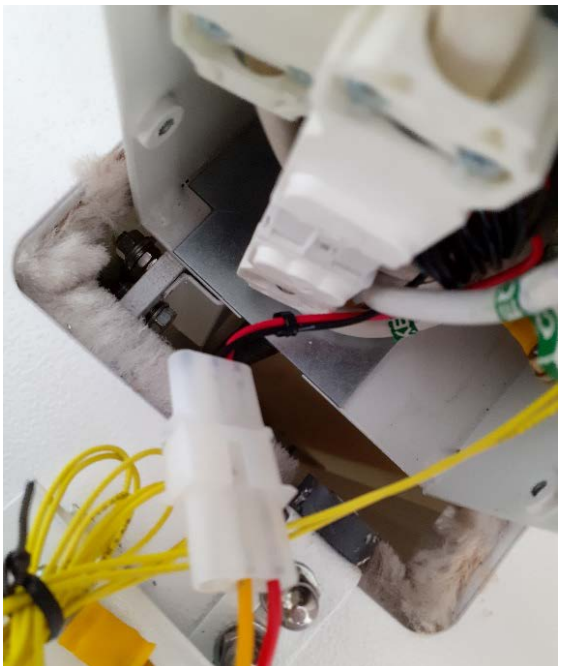
ECO 1730 Trailing Cable update

The new trailing cables, VM30 8129 and VM50 8006 have an additional 3 way Molex Connector fitted at the power supply end.

This connects to the Final up limit switch mounted to the power supply (PSU) lid.



Please note that connector A has a red wire (connected to the final up limit switch via the 3-way Molex connector).

ECO 1675 PSU to Powerpack Solenoid Loom changed.

VE31 8007 LOOM PSU TO POWERPACK SOLENOID is now the standard loom for all powerpacks. (4 core version)

Please note the powerpack remains unchanged. The twin valve loom VE31 8007 will fit both single & twin solenoid valve powerpacks.

Build Date and Serial Numbers

The changeover to the new PCB's and looms is expected to be around 22nd March 2021 (subject to stock/production /installation schedules)

Lifts with serial numbers prefixed with "**MX**" will be built with the new PCB's and looms etc.

Lifts built with these serial numbers will not require adapter cables or additional connectors when ordering spares.