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July 17, 2015

TECHNICAL BULLETIN 150717

TO: All operators of Magic Carpet Lifts using the Control Techniques SK drive **with Logic Stick option** mounted on the front of the drive, to include Area Management, Operations Management, Lift Maintenance Management, Risk Managers and Maintenance Personnel.

SUBJECT: SELF STARTING OF THE LIFT

It has been reported that 2007 Magic Carpet Lifts using the Control Techniques SK AC drives with Logic Stick can self-start after a normal stop command is given. The drives have been ruled out as the cause of this issue but we cannot rule out the Logic Stick, which is a thumb drive style device that plugs into the front face of the drive. The Logic Stick performs the same function as an external PLC, controlling over speed, under speed, start and stop functions. It does not control the E-Stop or Relief Plate function.

While we have not been able to duplicate this type of occurrence at the factory, it is thought the enable wire could become intermittently loose causing this type of lift response. The factory has offered us a software change which "should" prevent this from happening. Since the refresh rate of the Logic Stick is slow (500 msec.) and the factory cannot guarantee this change will be 100% effective, we are requiring that users of Magic Carpet Lifts with the SK Drives and Logic Sticks replace the Logic Stick with a safety PLC, reconfigure the drive software and re-wire the Start, Stop and Reset functions per the attached drawing.

Not affected are lifts with Vacon Drives, Control Techniques SE, SP and SPM Uni-Drives or other brands of adjustable speed AC drives.



DRIVE WITH LOGIC STICK

ACTION REQUIRED

Remove the Logic stick and return the SK drive to the default program condition. Remove and replace the Euchner Emergency Stop relay ESM BA 301 and ESM TE 301. These units will be replaced by a Pilz Safety PLC, Pilz card chip and Pilz relay output with spring terminals. The existing Relief Plate sensors with control module will remain in place.

Wiring changes include re-routing the wiring circuit of:

- a) the keyed reset and start;
- b) the M1 contactor coil;
- c) the drive enable;
- d) the ramp select;
- e) the Start and normal Stop;
- f) the relief plate control module

Documentation furnished:

- 1) Original as furnished drawings showing equipment and wiring change areas
- 2) Revised drawings showing new devices and wiring changes
- 3) Motor Matrix for new program in SK Drive,
- 4) Drive parameters to be installed in SK drive

We understand that these lifts are older units and that wiring changes may have been made over the years which we have no documentation on. We will work with areas to incorporate any area specific wiring changes into the revised drawing. Please contact Magic Carpet Lifts if changes in wiring have been made.

EQUIPMENT TO BE INSTALLED

1 – Pilz Safety PLC, PNOZ MM01.1P, pre-programmed	\$ 914.27
1 – Pilz Relay Output w/ Spring terminals, PNOZ S22	\$ 319.39
1 – Pilz card chip, 32k, #779212	22.81
4 – Pilz spring terminals, 751008 @ 16.09 each	<u>64.36</u>
TOTAL	\$ 1, 320.83

Parts availability is 2 weeks after receipt of order. No applicable state or local taxes are included. FOB factory with freight prepaid and added to invoice.

CONCLUSION

After this modification is made, Qualified Personnel are to perform an acceptance test to verify the logic of all pushbuttons, to verify stopping distances, to verify maximum speed of the lift and to verify over-speed/overcurrent conditions.

An acceptance test procedure for either Canada or USA will be provided along with documentation of these changes. If re-certification of the lift is required by local authorities, that will be the responsibility of the owner to arrange.

This change is required for the safety of the operators, mechanics and patrons. If you wish to furnish the Pilz products listed above, we will program your safety PLC for \$100.00 each. Wiring and wire numbers are to be furnished by the areas unless it is requested that we furnish. Please advise if wiring + numbers is required.

For specific application advice, please contact Magic Carpet Lifts at 800.223.3740