Subject: NORTHERN ELEVATORS WIRING CHANGES IN LEVELLING CIRCUITS PER BULLETIN #85-034

Sent to: ALL ELEVATOR CONTRACTORS IN SCOPE A1 & F1 (& CONSULTANTS)

ORDER TO CONTRACTORS MAINTAINING THE FOLLOWING NORTHERN ELEVATORS:

If you are maintaining elevators that:
   a) are manufactured by NORTHERN ELEVATOR LTD. between 1972 and 1985
   b) are of hydraulic, or two-speed A.C., for VV geared type
   c) utilizing REED type levelling switches
   d) have relay based controller, or solid state Normic 100 or 100

you MUST immediately carry out all wiring changes on such elevators in conformance with the procedures specified in the attached Northern bulletin #85-034.

You are also required to mark up the wiring diagram on site to incorporate the changes as outlined in figures 1 to 6 of the attached Norther bulletin for future reference. Refer to the chart on page 2 of the Northern bulletin to identify which figure 1 to 6 is applicable.

CLARIFICATION OF NORTHERN BULLETIN

If your require any clarification or additional information regarding the implementation of Northern bulletin #85-034, refer your questions directly to Northern Elevator Ltd. (See page 2 of the attached bulletin.)

RESPONSIBILITY OF NORTHERN BULLETIN

We are unable to provide you with the list of installations that require the changes. It is your responsibility to identify the need for and to complete the changes within 3 months from the date of this ruling.

If the subject changes do not constitute a part of your maintenance contract and you cannot obtain authorization from the elevator owner to carry out the work, you must inform this branch immediately, indicating the installation numbers of the elevators involved (to the attention of N.L. Benn, re EDB Ruling #93/92), so that we may issue an order to that owner to have the required changes completed.

CONCLUSION

We wish to commend Northern Elevator Ltd. for sharing this important safety related information with the elevator industry. The dissemination of information is in line with section 24 of O.Regulation 229/81 under the Elevating Devices Act and is an important tool in ensuring public safety. It is the responsibility of each manufacturer or contractor to report a discovered safety related defect in an elevator component if such defect exists in more than one device.

T.Gordon Smith, Director
A wiring change must immediately be carried out on some Northern controllers that have been installed and/or maintained by you.

This change affects all hydraulic and geared traction jobs that are equipped with levelling switches/relays.

This change is required to prevent the elevator from starting/running while outside of the levelling/door zone with the doors in the open or unlocked position, should any of the following single devices fail to operate in the intended manner:

a) The levelling reed switch.

b) Arc suppressor device (connected across reed), if provided.

c) The levelling relay itself.

Of course, this contravenes the C.S.A. B44 Code 3.12.9 (c) ii, which reads as follows:

(c) The failure of any single magnetically operated switch contactor or relay to release in the intended manner, or the failure of any static control device to operate as intended, or the occurrence of a single accidental ground, shall not:

   (ii) Permit the car to start or run if any hoistway door interlock is unlocked or if any hoistway door or car door or gate electrical contact is not in the closed position.

However, it must be pointed out that the single failure mentioned above would only pose a potential hazard when the car is outside the levelling zone (between levelling vanes). When the car is in the levelling zone, a failure of any one of the aforementioned devices would not create a hazard; for example:

A failure of a device in the level circuit of one direction could cause the car to move with the doors open; however, it would be stopped by the opposite levelling device circuitry before the car has moved off level more than approximately 1"). This is due to the fact that the up/down level circuits are electrically interlocked with one another; however, this interlocking for safety reasons is dependent on the vane being present, which is only the case when the car is in the levelling zone.

The following wiring changes will prevent the levelling devices from moving the car, unless the door lock circuit is closed, or the car is in the door zone.

...continued
Over the years, several circuit variations have been utilized in the levelling area. The attached diagrams show the six (6) levelling circuit variations. The actual job schematics (and the attached diagrams should be compared) and the appropriate diagram selected to make wiring changes on that job. Contact numbering may vary slightly from job to job, so little or no contact numbering is shown, except for circuits to be added on attached diagrams.

If, for any reason, these changes cannot be performed as outlined or further clarification/information is required, please contact the undersigned in writing:

NORTHERN ELEVATOR LIMITED
270 Finchlea Square
Scarborough, Ontario
M1X 1A5

Thank you for your co-operation in this matter.

NORTHERN ELEVATOR LIMITED

S. Fisher
Field Engineering

Note: Letters are also being sent out to all provincial elevator inspection branches notifying them of this situation.

Note: The chart below will be helpful for determining which diagram (figure) will apply to a particular job.
Controller Wiring Change (Levelling Circuits)

RELAY CONTROLLERS (Utilizing N.O. REED SW/UL, DL, DZ RELAYS PICK-UP IN VAN)

NOTE: ADDED RELAYS "CD" AND "DZL" ARE P&B TYPE KUP 14415 120 VAC OR "OMRON" TYPE MJ3P-UA-AC120

This circuit usually found in section S11 of schematic
Controller Wiring Change (Leveraging Circuits)

Relay Controllers utilizing N.C. REED Switches ULX, DLX, DZX Relays Used

Please attach a copy of this diagram to your schematics for future reference.

NOTE: ADDED RELAYS
CD and DZL are
P+B Type KUP14A15
120 VAC or "Omron"
TYPE MJ3P-U4-AC120

Figure #2
RELAY CONTROLLERS (utilizing N.C. Reed SW./UL, DL, DZ relays drop out in vane)

Please attach copy of this diagram to job schematics for future reference.
Further information may be obtained by contacting: Director - ED/AD Division, Technical Standards and Safety Authority.
4th Floor – West Tower, 3300 Bloor St. West, Etobicoke ON., M8X 2X4 Ph:416 325 2000 Fx:416 326 8248
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Controller Wiring Change (Leveling Circuits)

NOTE: DZL Relay 15 P+8 Type
KUP 16 DIS 24 VOLT DC or
"OMRON" MJ3P-UA-DC24

"NORMIC" 200 TYPE MICRO JOBS

Figure #6