Subject: NORTHERN ELEVATORS WITH NORMIC CONTROLLERS MAY REQUIRE WIRING CHANGES PER NORTHER BULLETIN #91-062

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

ORDER TO CONTRACTORS MAINTAINING THE SUBJECT NORTHERN ELEVATORS

If you are maintaining elevators:
a) manufactured by NORTHERN ELEVATOR LTD. before 1985,
b) equipped with NORMIC type microprocessor based CONTROLLER,
c) which have the levelling pilot relays ULL/DLL controlled by the microprocessor and not directly by the levelling devices themselves, and
d) the wiring changes required in Northern bulletin #85-034 have not been completed,

you MUST immediately carry out all wiring changes on such elevators in conformance with the procedures specified in the attached Northern bulletin #91-062.

You are also required to mark up the wiring diagrams on site to incorporate the changes in figures #1 & #2 of the attached Northern bulletin for future reference.

CLARIFICATION OF NORTHERN BULLETIN

If you require any clarification or additional information regarding the implementation of Northern bulletin #91-062, refer your questions directly to Northern Elevator Ltd. (See page 2 of the attached bulletin.)

RESPONSIBILITY FOR THE ENFORCEMENT OF THIS RULING

We are unable to provide you with a list of installations that require the wiring 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 #91/92), 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.
A wiring change may have to be implemented on some Northern controllers that have been installed and/or maintained by you.

This change relates to all "Normic" type microprocessor based controllers, which have the levelling pilot relays (ULL/DLL) controlled by the microprocessor and not directly by the levelling devices themselves.

This change is required to prevent the remote chance of the car starting running away from the floor and outside of the levelling door zone with the doors in the open or unlocked position. Although highly unlikely, this could occur, should the 5 volt logic power supply regulator for the microprocessor fail in such a way that it produces a low voltage output at a level which is critical to the operation of the logic controller and its ability to respond to or control its input and output functions, resulting in an unpredictable and potentially unsafe operation.

Of course, this contravenes the intent of the C.S.A. B-44 code 3.12.9 (c)ii which reads as follows:

c) The occurrence of a single ground or the failure of any single magnetically operated switch, contactor or relay, or any static control device, or any levelling switch shall not:

   ii) permit the car to move beyond the levelling or truck zone

The following wiring changes ensure that the microprocessor system will be unable to move the car, unless the door lock circuits are closed or the car is within the levelling door zone. The attached diagrams show the typical levelling circuit arrangements. They should be compared with and used in conjunction with the actual job schematics to ensure that changes are made appropriately, as some variations in contact numbering may be encountered. Also shown is a change which would call attention to the failure of the levelling/door zone restricting relay ("DZ or DZL") to cycle as intended and although no redundancy circuit monitoring was required by the previous code, we would recommend that this be added as well.

It should be pointed out that all controllers manufactured after 1985 have the levelling with open doors restricted to the levelling/door zone, and all controllers built in 1985 or before should have this redundant protection, if they were modified according to Bulletin # 85-034 (levelling circuits) dated April 1, 1985. Although a hazard resulting from the failure of the 5 volt logic power supply was neither envisioned nor listed, Bulletin #85-034 addressed also such failures.
Unfortunately, it is apparent from a recently reported occurrence that some companies did not see fit to either implement the safety changes outlined in bulletin # 85-034 or pass the bulletin on to the current maintenance contractor or building owner, even though parts kits were made available free of charge. It seems involvement and co-operation of inspection authorities is required to ensure compliance with safety related bulletins.

A copy of this bulletin, as well as any other ones showing all changes made, should be attached to the job schematics for future reference.

If, for any reason at all, these changes cannot be made as outlined or if further clarification and information is required, please contact in writing, stating all details:

Steve Fisher
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270 Finchdene Square
Scarborough, Ont. M1X 1A5

Tel. (416) 291-2549
Fax (416) 291-4654

We like to thank you for your co-operation in this matter.

Northern Elevator Limited

Steve Fisher
Mgr. Field Engineering

P.S. Copies of this bulletin will also be send to all Provincial Elevator Inspection Branches.
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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