



Government of Western Australia  
Department of Transport  
Office of Rail Safety

## SAFETY ALERT

DATE of ISSUE: 5 June 2012

NOTICE No: RSN 2012 - 02

SUBJECT Wrong side failure of OS Track Circuit Module.

ADVICE TO:	All affected Rail Transport Operators / All Regulators
FROM:	Rob Burrows - Director Rail Safety

A wrong side signalling failure occurred recently on a Pilbara railway when a US&S 'OS' Track Card performing the function of an Over Switch track circuit (directly connected to a Microlok 12V Vital Input 16 Board) failed to a high output state when the N12 and B5 connections became open circuit. The investigation into the occurrence has found that the card was not firmly held to the connector on the backplane and that under these circumstances the N12 and B5 connections could be broken while the two outputs of the card were still connected and carrying a high potential despite the track circuit being occupied. It was possible to replicate the fault at will whenever the card was not pushed home properly in the card frame. The investigation by the railway concerned found that this same fault could be replicated at other locations where the card was installed and under simulated testing on a work bench. The Pilbara railway has reported that it could bring up the fault condition only when both the N12 and B5 connections to the card were broken and when the card was properly inserted into the card frame no fault could be detected.

Ansaldo STS, the suppliers of this equipment, has referred the fault to the Original Equipment Manufacturer for review of the card design and is now awaiting a response as to what long term remedies will be available to RTO's that have these cards in service.

In the meantime RTO's that have these cards in service should consider what functions the cards are performing in their signalling systems and to ensure the cards are well held in the backplane connectors. To this end RTO's should include in the routine maintenance cycles a provision to regularly check the cards are held firmly, that the correct track circuit readings are confirmed by measurement and that a method of maintaining pressure from the cover plate to the front edge of the card be devised. The affected railway in the Pilbara has determined it will glue a strip of foam rubber of a suitable depth on the inside of the cover plate in such a position that when the plate is screwed onto the card frame the foam rubber will press gently on the edge of the card and hold it in place.

Ansaldo has advised that it has notified all railway companies that are known to have purchased the card of the above occurrence and will keep the customers informed of remedies that will become available. This Safety Alert is issued to all Rail Safety Regulators for your information and forwarding to RTO's in your jurisdiction. It is hoped that this process will ensure all railway operators that could be affected will be made aware of the potential unsafe condition in using the OS Track Card.

For further information, contact Peter Malaspina on (08) 6551 6707.

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