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**Government of India (Bharat Sarkar)**  
**Ministry of Railways (Rail Mantralaya)**  
**(Railway Board)**

No.2012/Sig/M/DAC/DD

New Delhi,

dt. 13.4.2018

PCSTEs,  
All Indian Railways  
CORE, Allahabad, Metro Railway, Kolkata

Director, IRISSET/Secunderabad

ED(Co-ord)/Signal, RDSO, Lucknow.

Sub: Safe & reliable detection – Redundancy in design- Report of Task Force on Safety dt.10.1.17.

Ref: Rly.Board's letter dt.2017/Safety(A&R)/19/3 dt.9.4.18  
(enclosed)

The issue of restricting the signal aspect to Y/YY when the track circuit has failed in dual train detection system has been examined in Board. The letter issued to COM/NCR/ALD by the Railway Board's Safety Directorate, duly approved by Chairman, Railway Board, is enclosed for information and further needful please.

Encl: 1/As above.



(Arvind Mital)

Principal Exe.Director (Signal)

GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS  
RAILWAY BOARD

No. 2017/Safety(A&R)/19/3

New Delhi dated 09/04/2018

The Chief Operations Manager,  
North Central Railway,  
Allahabad

**Sub: Report of Task Force on Safety Dated-10 Jan, 2017.**

**Ref: COM/NCR's letter No. T/Gen./R.Bd. Inst./02/05 dated  
12.09.2017.**


The recommendations of Task Force on Safety made vide item No. 20.5.7 of their report dated 10.01.2017 regarding Dual Detection, the issue has been examined in consultation with Signal, CE and Traffic Directorates in Board's office.

Track circuits cannot detect a rail fracture in a reliable and fail safe manner since the track circuit on electrified sections on IR work in single rail configuration with the other rail used for traction return current which is also connected to the traction masts. Due to this, rail fracture on return rail may not drop the track circuits. Even on the other rail, the track circuit may drop only when there is full breakage of rail and partial breakage/crack goes undetected.

Restricting the signals to Y/YY when the track circuit has failed in dual detection system will result in bunching of trains and trains will get delayed. Even by restricting to Y/YY, some LPs may see the auto signal ahead in 'G' aspect and speed up the train, defeating the very purpose of this restriction.

In view of the above, it has been decided that rail fracture should be delinked from the failure of track circuit for ensuring safety and smooth operations of trains.

This has the approval of CRB.

  
(Vinod Kumar)  
Principal Executive Director/Safety  
Railway Board

