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**ABSTRACTS OF
RAILWAY ACCIDENT INQUIRY REPORTS**



ABSTRACT - 2025-26

COMMISSION OF RAILWAY SAFETY

Ministry of Civil Aviation

Government of India

www.civilaviation.nic.in/ccrs

FOREWORD

This publication contains the extracts of enquiry reports of railway accidents conducted by Commissioners of Railway Safety and includes the comments of the Railway Board. Though every care has been taken to ensure accuracy in preparing the document, the Commission disclaims liability for any inconvenience, expense or loss/damage caused by the use of the information given in this periodical.

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ABBREVIATIONS

ACP	:	Alarm Chain Pulling
ACTM	:	Alternating Current Traction Manual
ADEN	:	Assistant Divisional Engineer
ARME	:	Accident Relief Medical Equipment
ART	:	Accident Relief Train
BG	:	Broad Gauge
BGML	:	Broad Gauge Modified Loading
BP	:	Brake Pipe
BPC	:	Brake Power Certificate
CAMTECH	:	Centre for Maintenance of Advanced Technologies.
CAO	:	Chief Administrative Officer
CBC	:	Centre Buffer Coupler
CBE	:	Chief Bridge Engineer
CCRS	:	Chief Commissioner of Railway Safety
CE/PCE	:	Chief Engineer/Principal Chief Engineer
CRIS	:	Centre for Railway Information Systems
CRPF	:	Central Reserve Police Force
CRS	:	Commissioner of Railway Safety
CSO	:	Chief Safety Officer
CTE	:	Chief Track Engineer
CUG	:	Closed User Group
DEMU	:	Diesel Electric Multiple Unit
DEN/Sr DEN	:	Divisional Engineer/Senior Divisional Engineer
DFWO	:	Defective Weld Observations
DFWR	:	Defective Weld Removal
DGsP/IGsP	:	Director General of Police/Inspector General of police
DMU	:	Diesel Multiple Unit
DN	:	Down
DRM	:	Divisional Railway Manager
DRT	:	Double rail tester

DSC	:	Divisional Security Commissioner
EMU	:	Electric Multiple Unit
G&SR	:	General & Subsidiary Rules
GC	:	Gauge/Conversion
GM	:	General Manager
GRP	:	Government Railway Police
ICF	:	Integral Coach Factory
IGBT	:	Insulated Gate Bipolar Transistors
IMR	:	Immediate replacement
IOH	:	Intermediate overhaul
IRBM	:	Indian Railway Bridge manual
IRCA	:	Indian Railway Conference Association
IRICEN	:	Indian Railway Institute of Civil Engineers
IRPWM	:	Indian Railways Permanent Way Manual
IRTMTTC	:	Indian Railways Track Machines Training Centre
KRCL	:	Konkan Railway Corporation Limited
LEDs	:	Light Emitting Diode
LHB	:	Linke Hofmann Busch
MBG	:	Modified Broad Gauge
MG	:	Metre Gauge
MLR	:	Mid-Life Rehabilitation
NDRF	:	National Disaster Response Force
NG	:	Narrow Gauge
NMI	:	Network Management Interface
OBS	:	On Board Service Supervisor
OEM	:	Original Equipment Manufacturer
OEM	:	Original Equipment Manufacturer
OHE	:	Over head Equipment
P.Way	:	Permanent Way
PA System	:	Public Address System
PCCM	:	Principal Chief Commercial Manager

PCOM	:	Principal Chief Operations Manager
PCSC	:	Principal Chief Security Commissioner
PCSO	:	Principal Chief Safety Officer
POH	:	Periodic Overhaul
PSC	:	Pre-Stressed concrete
RCF	:	Rail Coach Factory
RDSO	:	Research Designs & Standards Organisation
RPC-IV	:	Revised maintenance pattern of coaching train
RPF	:	Railway Protection Force
SAIL	:	Steel Authority of India Limited
SEJs	:	Switch expansion Joint
SM/ASM	:	Station Master/Asst. Station Master
SPARME	:	Self Propelled Accident Relief Medical Equipment
SRT	:	Single Rail Tester
SS	:	Station Superintendent
SSE	:	Senior Section Engineer
TMS	:	Track Management System
TP	:	Telegraph Post
TPWS	:	Train Protection Warning System
TRR	:	Through Rail Renewal
TWR	:	Through Weld Renewal
USFD	:	Ultrasonic Flaw detection
VCB	:	Vacuum Circuit Breakers
VHF	:	Very High Frequency

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ACCIDENT - I

THE ABSTRACT OF STATUTORY INQUIRY REPORT OF COMMISSIONER OF RAILWAY SAFETY ON REAR END COLLISION OF TRAIN NO. UP GVGN LOAD WITH RTPR LOAD AT NSIR STATION OF EDFC AND DERAILMENT OF LOCO NO.60059, 09 BOXNL OF GVGN AND 04 WAGON OF RTPR LOAD RESULTED IN FOULING OF UP & DN MAIN LINE OF IR AND FURTHER COLLISION OF DERAILED LOCOMOTIVE NO.60059 WITH LOCO OF PASSENGER TRAIN NO.04681 UP (KOLKATA-JAMMU TAWI HOLIDAY SPECIAL) CAUSING GRIEVOUS INJURY TO BOTH LOCO PILOTS OF UP GVGN AND DERAILMENT OF LOCO AND DAMAGE TO 02 COACHES OF THE PASSENGER TRAIN BETWEEN SADHOOGARH-SIRHIND STATIONS OF UMB DIVISION OF NORTHERN RAILWAY AT 03:16 HRS ON 02.06.2024.

I. BRIEF DESCRIPTION

1.1 THE ACCIDENT

On 02.06.2024 at about 02.57 hrs, train no. UP GVGN load (loco no-60059 WAG12 SRE) left SBJN UP Advance Starter Signal (S-99) and entered New Sirhind station (NSIR) via UP Home signal (S-1) with Yellow aspect with route for line no.02 (common loop line) at 03:11:50 hrs. UP rear starter signal no. S39 was in Red aspect since 01:06:54 hrs. of 02.06.2024. At line no.06 i.e., of common loop line, there was already a Train no. RTPR (23379+23403) stabled from 00:40 hrs of 01.06.2024 (As per TSR of NSIR). Train no. UP GVGN load passed S-39 Signal at Danger and collided (rear end collision) with Train no. RTPR (23379+23403) which was already stabled. Subsequently UP GVGN one locomotive (No. 60059 WAG12) climbed over brake van of RTPR (23379+23403) and front locomotive capsized resulting in the infringement of IR DN & UP Main Line & DFCC Main Line between Sadhoogarh-Sirhind stations of Ambala-Ludhiana Section of Ambala Division of Northern Railway. Soon after the accident Train No.04681 UP (Kolkata-Jammu Tawi Special) passed Sadhoogarh (SDY) station at 03.14 hrs, while approaching ON aspect of Home Signal at Sirhind station, the side collision of engine no.33469 WAG-9/CNB took place with the engine no.60059/WAG-12/SRE of GVGN load at 3.17 hrs. The locomotive of Train no.04681 derailed by all wheels of one bogie and one GSLRD and WGSCN damaged from the side due to obstruction by capsized loco no. 60059.

II. CAUSE OF THE ACCIDENT:

Having carefully considered the factual, material and circumstantial evidences so far available at my disposal, I have come to the conclusion that the Rear end collision of UP train no. GVGN Load with RTPR Load at NSIR station of EDFC and Derailment of loco no. 60059 and 09 BOXNL of GVGN load and 04 wagons of RTPR Load resulted in fouling of UP & DN main line of IR and Collided with loco of passenger Train no. 04681 UP (Kolkata-Jammu Tawi Holiday Special) between Sadhoogarh and Sirhind Stations of UMB Division at about 03:16 hrs. on 02.06.2024, was occurred because the Loco Pilot and Assistant Loco Pilot fell asleep while approaching the NSIR home signal, resulting in the overshooting of the loop line starter signal S-39 and collision with the stationary UP RTPR Load. The accident is classified under the heading of "failure of the Railway staff and systemic failure".

III. REMARKS AND RECOMMENDATIONS:

3.0 Remarks and recommendations made by Commissioner of Railway Safety and Action Taken by Railways are given below:

3.1

(a) Recommendation:

The Vigilance Control Device (VCD) is provided as a technological aid to ensure alertness of the Loco Pilot while driving. But cases of Signal Passing at Danger (SPAD) continue to happen while VCD is in working condition. This happens because of the fact that the existing VCD technology is not monitoring the behavioural pattern of LP in terms of true alertness or drowsiness condition. The Railway should reinvent the VCD so that it can detect the drowsiness of the loco pilot by taking additional inputs of behavioural parameters of the Loco Pilot which give indication of fatigue, micro-sleep, and drowsiness.

(b) Action Taken by Railways:

To make VCD more effective, the location of VCD acknowledgement switch has been revised from a foot operated pedal switch to a hand operated push button, placed on the driving desk near the LP's hand to prevent rhythmic operation in micro sleep. This modification serves the intended purpose. This modification has already been completed in 99.4% of IR's three phase electric locomotives (9566 completed out of total 9627 locos). Similar modification has also been carried out in the WAG12B class of locomotives (involved in the accident), and 77.5% of the total fleet has been modified so far (386 completed out of total 498 locos). Additionally, RAILWAY DRIVER ASSISTANCE SYSTEM (RDAS) to detect the drowsiness/lack of alertness nature of the loco pilot and alert him immediately, has been incorporated as a functional requirement in latest specification of IP based VSS for Rolling Stock.

3.2

(a) Recommendation:

The signal interlocking at NSIR station permits signalled movement on the blocked line without any isolation, which is contrary to the provisions of DFC General Rule paragraph 68.

i. Signal Interlocking of NSIR and all other stations of the DFC network where similar condition existing, should be modified such that signal for the first loop line should only be cleared if the loop line, where the train is to be received, is isolated from the occupied longer loop line and same should be clearly stipulated in the SWR.

ii. As a long term measure DFC station yards with longer loop shall be modified with provision of physical isolation as per standard layouts for the longer loops circulated by Railway Board vide letter number 2012/PL/9/2 dt. 20.12.2016.

(b) Action Taken by Railways:

Provision of DFCR GR Rule 68 (2) has been included in SWR. In case of planned movement, adequate distance is being ensured before signal is taken OFF to receive the train in the rear leg of the longer loop as per DFCR G&SR Rule no. 70 (Lowering of Home signal rule complied for Direct reception of the train). Simultaneous movement has been permitted in accordance with DFCR GR rule 76 and DFC HQ safety order no 01/2021 dated 11.02.2021. In addition to above, Railway Board Vide Rly Bd. Letter no. 2021/Safety (A&R)/19/49-Pt.I NDLS dated 31/07/2023 has issued gazette notification of amendment in GR paras where following sub rule is added in GR para 3.47 "Taking Off signals for more than one train at a time when two or more trains are approaching simultaneously from any direction may be permitted over non isolated lines; under special instructions when requirements of adequate distance under Rule 3.40 are fulfilled; and under approved special instructions when requirements of adequate distance under Rule 3.40 are not fulfilled." The present design of interlocking at NSIR and all other stations has been done as per the extant instructions contained in DFC G&SR and safety circulars issued from time to time. Change of interlocking without insertion of point would require changes in SIP, RCT, SWRD, SWR,

Selection table, VDU layout in the entire DFCCIL. Modification in longer loops for provision of physical isolation will severely restrict the yard flexibility by 25% specially at crew changing point. Also, required changes in the layout will consume significant time and resources. In the long term, the provision of an Automatic train protection system is being planned over DFCCIL which will address all such concerns.

3.3

(a) Recommendation:

Availability of walkie-talkie sets, being the safety critical item, to all loco Pilots and Train Managers shall be ensured all the times. Railway administration should immediately full fill the deficiency of number of walkie-talkie set for Loco Pilots and Train Managers.

(b) Action Taken by Railways:

Noted. A Monthly inspection drive for Walkie-Talkies has been launched in DFCCIL.

3.4

(a) Recommendation:

Monitoring of the Loco pilots by the Supervisory officials needs to be more intensive and effective. Assessment of the behaviour of the LPG's, their counselling and measures to ensure their alertness should be taken immediately. In the present case both LPG and ALP were performing continuous night duties for 3rd and 2nd days respectively, it should be ensured that one of the Loco pilots should be not on continuous night duty.

(b) Action Taken by Railways:

Instructions for monitoring and assessment of Loco Pilots (LPs) are already in place vide Board's letter No. 97/Safety-I/23/15 dated 29.03.2007. Based on, these instructions, LPs are categorized for different levels of counselling and monitoring during footplate. MIS reports for monitoring through foot plating, are also available in Crew Management System. However, in the instant case, the LP and ALP were well within the norms for continuous night duty i.e. "Continuous night duty for Running Staff should be limited to 4 nights with fourth night towards headquarters" stipulated vid Board's letter No. E(LL)/2016/HPC/7 dated 13.10.2016

3.5

(a) Recommendation:

There are extent Railway instructions regarding the issuance of competency certificates to the operating staff, but these have not been followed on the DFC network. The competency of the Station Master and Section Controller posted on the Dedicated Freight Corridor should be reviewed using parameters comparable to those used by Indian Railways and appropriate training imparted to the staff so as to make them competent to discharge the responsibilities assigned to them.

(b) Action Taken by Railways:

Training to the DFC staff is imparted as per prescribed training module at DFC facility Centre (Heavy haul Institute, Noida), which is at par with the training module of Indian Railways.

3.6

(a) Recommendation:

For Disaster Management, comprehensive instructions by DFCCIL in consultation of the Zonal Railways should be issued clearly specifying the actions to be taken by the Station Masters, Controllers, TPC and other Train running staff in the event of Accidents/ emergencies. Also, mock drills should be conducted periodically on the DFC network.

(b) Action Taken by Railways:

The running staff including supervisors deployed on DFC presently are IR's staff and are trained by the concerned Zonal Railways for all relevant rules and regulations, for working over DFC territory. The same has been confirmed by Northern Railway, whose crew was involved in the incident, vide letter no Traction- 40/RS/67/4/CRS/ Recomdt./ 3016/ Pt.I dt 23.02.2026.

Railway Board has issued instructions to concerned Zonal Railways regarding infringement of DFCCIL track due to derailment on IR track or vice-versa on 05.03.2022. Further, DFCCIL has submitted the updated directory for private crane operator /emergency machinery with response time ETA.

3.7

(a) Recommendation:

The Mail Express Train no. 12446 coming towards the accident spot in DN direction could stop after departure from Sirhind station due to OHE tripping as a result of damage to the OHE in the accident. Appropriate instructions should be issued by the Railway to immediately switch off the OHE of the adjacent lines (IR and DFC wherever applicable) in case of any major accident like collision/ mid-section derailment/ derailment of run through trains in the station yards, and fire, etc. occurred on both networks, so that the probable accident due to infringement on adjacent lines may be averted.

(b) Action Taken by Railways:

GGM/EL/TS/EIG/CO has reiterated vide letter no. HQ/EL/TS/TRD dated 25.07.24 regarding switching OFF the OHE of the adjacent line by CTPC and TPC working at OCC. Instructions already exist in DFC G&SR no. 269 and Accident Manual Para No. 702.

Letter has also been sent to PCSO/NR by GM Mech. & Safety dated 30.10.24.

Letter sent to All CGMs/DFCCIL by GM/Mech. & Safety dated 30.10.24.

3.8

(a) Recommendation:

Crash Barrier type hard fencing should be provided between the DFC and IR tracks at such locations where IR running lines are close to the DFC lines and infringing the safety zone of each other.

(b) Action Taken by Railways:

The matter has been examined in details, and it is felt that the crash barrier/hard fencing may not be able to sustain heavy impact of train load during accidents/derailments. Hence provision for the same has not been planned on DFCCIL. In these locations, keyman patrolling may be done daily as it covers lot of safety and security aspects other than missing fitting etc.

3.9

(a) Recommendation:

Timing of Data logger, station master clock, Section/TPC control and Locomotive event recorder clocks should be synchronized.

(b) Action Taken by Railways:

Noted. The same has been checked by all units in both corridors. A letter in this regard was issued to CGMs/DFCCIL on 25.11.2024.

3.10

(a) Recommendation:

DFC administration should launch a drive to identify and ensure availability of 25 watt VHF equipment on the SM's room on his operating table. The VHF set should not be placed away from the operating table.

(b) Action Taken by Railways:

Noted. The same has been checked by all units in both corridors. A letter in this regard was issued to CGMs/DFCCIL on 25.11.2024

3.11

(a) Recommendation:

The intensity of the accident was so severe that all the tracks of DFC station yard as well as both main lines of the IR network got infringed/ affected and even one wagon was almost vanished and could not be accounted in the initial joint observations recorded at the accident site. Its repercussions would have been much severe if both up and down passenger trains had not escaped by chance. As the DFC's station yards are falling in the IR's mid-section and DFC tracks are running parallel to the IR tracks. Therefore, DFC should not merely be considered as Goods system, its standard of inspection, maintenance working should be raised at par with the Passenger train working system of IR.

(b) Action Taken by Railways:

The Railway Board's letter No. 2024/Infra/17/4, dated 26.03.24 instructed a review of training modules across various branches (Electrical, Mechanical, S&T, Operating, and Commercial). On this basis, a Committee of GM level official was formed for the purpose of aligning the DFCCIL training modules with that of IR. Thereafter, training modules of department have been revised and issued with the approval of the Competent Authority. Civil staff receive training at IRICEN, Pune and HHI (DFCCIL), while other departments undergo training at HHI, Noida. Train operations follow the DFC GR (notified on 10th August 2018) along with Accident, Operating, and Block Working manuals. Inspection schedules for Mechanical, S&T, and Electrical departments broadly align with IR practices keeping in mind the level of operations in DFCCIL. Maintenance manuals and OEM instruction are being followed to ensure safety. The frequency of attention of equipment, and details of activities to be carried out during maintenance have been adopted based on prevalent practices over IR for similar assets. Key man inspection in DFCCIL is on alternate days (IR does it daily) due to the new track design (Fishplate joints are not present in DFC yards, as DFC is only using weldable crossings). Due to this, loose/missing fitting cases are very less. Hence key man inspection frequency has been reduced to every alternate day. The current inspection schedule for points and crossings in loop line and sidings is once a year in rotation with sectional in DFCCIL and once in 6 months with sectional in IR. The joint inspection with S&T is regularly done in 3 months at IMSD in charge level. So present inspection frequency may be considered adequate.

ACCIDENT - II

THE ABSTRACT OF STATUTORY INQUIRY REPORT OF COMMISSIONER OF RAILWAY SAFETY ON DERAILMENT OF GOODS TRAIN NO. N/JBCT AND SIDE COLLISION OF TRAIN NO. 12810 (HWH - CSMT MAIL) WITH DERAILED GOODS TRAIN NO. N/JBCT IN CHAKRADHARPUR DIVISION OF SOUTH EASTERN RAILWAY ON 30.07.2024.

I. BRIEF DESCRIPTION:

1.1 THE ACCIDENT

- (i) On 30.07.2024, Goods Train no. N/JBCT with Loco no. 34056/074 (BIA), 57+1, loaded with clinker, departed BRM station at 03:33:22 Hrs. from DN Main line.
- (ii) Rear trolley of 20th wagon of the Train no. N/JBCT derailed near Stock Rail Joint (SRJ) of Point no. 103A (BRM) at Km.300.767 (OHE Mast no. 300/22-24) while passing in trailing direction.
- (iii) Train no. 12810 UP HWH-CSMT Mail/Express, working Loco no. 37077 (TATA), load- 22/44, departed Rajkharswan (RKSJ) W/Outer station at about 03:35 Hrs. on UP Main line.
- (iv) Side collision of train no. 12810 took place while passing on UP Main line between RKSJ - BRM stations, with derailed 20th wagon of Train no. N/JBCT on DN Main line, which was lying at KM 299.088 infringing the track on UP Main line.
- (v) Side collision of Train no. 12810 on UP line with Train no. N/JBCT on DN line resulted into derailment of 18 coaches, power car and locomotive of the train. In all, 8 wagons of Train no. N/JBCT derailed during the incident. This derailment obstructed UP, DN and 3rd line between BRM and RKSJ.

II. CAUSE OF THE ACCIDENT:

Shifting of adapter and failure of cap screws for CTRB of left wheel on 3rd axle of wagon no. NCR 12130660344/BOXNHSM1 during service. Sleepers and fittings on track in the vicinity of Stock Rail Joint of point no. 103A at BRM station failed to hold the track in position and to resist the rotation of rails during passing of train no. N/JBCT. Crew of train no. N/JBCT not only failed in timely detection of unusual in the train but also in Switching off the head light and display of red light to the approaching train no, 12810.

III. REMARKS AND RECOMMENDATIONS:

3.0 Remarks and recommendations made by Commissioner of Railway Safety and Action Taken by Railways are given below:

3.1

(a) Recommendations:

It is advisable not to reuse fasteners in critical applications. Hence, Cap screws of CTRB should be a must change item during ROH.

(b) Action Taken by Railways:

End Cap Screw has been recommended to be included in the must change Item list during ROH of Wagons if CTRB removed during ROH. Guidelines in this regard has been issued to all ZR vide Board's letter no. 2003/M(N)/951/22(E-3322865) dated 10.04.2026.

3.2

(a) Recommendations:

Specifications for the material of end cap screw should include "inclusion rating" in acceptance criteria as same is crucial for cleanliness of the alloy.

(b) Action Taken by Railways:

RDSO has been advised vide Board's letter no. 2023/M(Safety)/7/10/1 (E3448752) dated 20.11.2025 to examine inclusion rating in acceptance criteria in specifications of end cap screw.

3.3

(a) Recommendations:

Proposals for sanction of track renewal works should be initiated well in advance so that all components of track are within the prescribed service life and reliability of assets is not compromised. Further, progress of sanctioned track renewal works should be closely monitored to identify and resolve the reasons for delay.

(b) Action Taken by Railways:

Instructions have been issued vide Railway Board's letter No. 2024/CEII/CRS/12810 dated 18.10.2024 regarding timely sanctioning of work. Para 2 of the said letter is as under: "Zonal Railway should propose track renewal works well in advance so that sanction is available when asset life is complete. It will help to minimize the asset uses in overdue condition." Same principles are being followed for sanctioning of work for track renewal.

3.4

(a) Recommendations:

Overloading in wagons should be visible in Weigh Bill- Receipt and instructions for movement of such wagons should strictly be followed to avoid overstressing of assets including rails and bridges.

(b) Action Taken by Railways:

Weighment details are transmitted from weighbridges to FOIS. Accordingly, weight of wagons is captured in weighment sheet, which also contains overloading details, if any. Commercial Directorate's guidelines are also laid down for load adjustment of overloaded wagons and levy of Punitive Charge. Further, a letter 2013/TT-V/25/Weighbridge dated 30.01.2025, reiterating PCOMs of all Zonal Railways to ensure strict compliance of instructions regarding load adjustment and movement of overloaded wagons has been issued.

3.5

(a) Recommendations:

Setting of time for speedometers in all locomotives should be synchronized with GPS so that sequence of events can be correlated with event log maintained at other locations.

(b) Action Taken by Railways:

This has been provided on one loco on trial basis from May 24 to Jan 25. The recording has been found to be satisfactory. Draft MS for modification in existing speedometers and draft Specification for procurement of new speedometers has been issued by RDSO vide EL/2.2.9/10 dt 01.04.25.

3.6

(a) Recommendations:

All infringements to Item- 1(i) of Chapter- II, Schedule- I of IRSOD should be identified and suitable speed restrictions should be imposed till rectification.

(b) Action Taken by Railways:

All infringements to item (i) of Chapter-II, Schedule-I of IRSOD has been identified and rectified. Now, Track centre has been made minimum of 4265 mm in BRM-RKSN section.

ACCIDENT - III

THE ABSTRACT OF STATUTORY INQUIRY REPORT OF COMMISSIONER OF RAILWAY SAFETY ON DERAILMENT OF 11 NUMBER OF COACHES & 01 PANTRY CAR OF 12551 (KAMAKHYA EXPRESS) IN KHURDA ROAD DIVISION OF EAST COAST RAILWAY ON 30.03.2025.

I. BRIEF DESCRIPTION

1.1 THE ACCIDENT

- (i) Train no. 12551 started its journey on 29.03.2025 from SMVT Bengaluru station of South Western Railway and it was going to Kamakhya station in North East Frontier Railway. Train was received in East Coast Railway via Duvvada and arrived at Bhubaneswar at 11.01 Hrs. where fresh crew took over the charge of the train before starting at 11.13 Hrs.
- (ii) The train was fully air-conditioned, and was being worked with WAG-9HC locomotive and had a load of 23 LHB coaches. As the maximum speed for WAG-9HC locomotive was 100 KMPH, speed of train was restricted to 100 KMPH against the sectional speed of 130 KMPH.
- (iii) The train passed through KNPR station at about 11.52 Hrs. and met with an accident on DN line in KNPR-NRG section of Khurda Road Division.
- (iv) Derailment took place at KM 401.321 at about 11.54 Hrs., when the train was running at the speed of 85 KMPH.
- (v) Locomotive and six immediately following coaches were unaffected and 12 coaches of train, from 7th coach onwards, derailed during the accident.
- (vi) UP line on the section was clear and same was not affected by derailment.

II. CAUSE OF THE ACCIDENT:

Having carefully considered all the evidences, records submitted, observations made during the site inspection, and other circumstantial evidences produced by East Coast Railway so far, I have come to the conclusion that the accident of Train no. 12551(SMVB-KYQ AC Superfast) Express at KM 401/2-14, BG, Electrified Double line Auto signalling section between KNPR-NRG of CTC-BHC section in KUR Division of East Coast Railway on 30.03.2025 at about 11:54 hrs. occurred due to 'error in train working' i.e. multiple failures on the part of Engineering Department of the Railway, as follows:

- (i) Failure to comply with the provisions in Para 345 and Annexure 3/10 of IRPWM regarding regulation of track maintenance activities & minimum level of supervision.
- (ii) Failure to adhere to schedule for measurement of toe load of ERCs prescribed in Para 628 (1) of IRPWM and to impose suitable speed restriction at the location despite deficiencies in track components and overdue renewals.

III. REMARKS AND RECOMMENDATIONS:

3.0 Remarks and recommendations made by Commissioner of Railway Safety and action taken by Railways are given below:

3.1

(a) Recommendation:

Mandatory period (including period in a year and patrolling hours) for hot weather patrolling in various sections should be decided by CTE of the Railway and issued, considering all relevant factors including temperature records for the previous years, condition of track components, ballast deficiency & toe load of ERCs.

(b) Action Taken by Railways:

Period of hot weather patrolling has been prescribed by CTE/ECOR vide letter No. W7/637/TMS/Pt-VIII/Spl. dated 16.06.2025.

3.2

(a) Recommendation:

All the LWRs in the Railway should be reviewed and LWRs approved/laid in violation to the provisions in IRPWM should be rectified.

(b) Action Taken by Railways:

All the LWRs in this Railway have been reviewed and LWRs approved/laid in violation to the provisions of IRPWM-2024 are being rectified. Action is being taken for undertaking RSI analysis of the bridges to check for continuation of LWR over ballasted girder bridges. The details of all such LWRs along with action plan of rectification are enclosed.

3.3

(a) Recommendation:

A detailed survey should be carried out by Railway to identify the LWRs where behaviour is abnormal and cut rails have been inserted near the SEJs for adjustment of gaps. Railway should impose suitable speed restrictions on all such LWRs, till the defects are rectified.

(b) Action Taken by Railways:

Detailed survey was conducted to identify free joints in LWR and necessary action has been taken by Railway. No cut rail is existing without speed restriction in LWR in ECoR railway. All the field officials have been instructed to avoid free joints in LWRs and if inevitable, suitable speed restriction is to be imposed as per provisions of IRPWM.

3.4

(a) Recommendation:

Para 628 of IRPWM stipulates that if 20% or more of sample size records toe load below 400 kg, which is to be confirmed by 5% sample size, proposal of through fastening renewal should be initiated. In the present case, sanctioned renewal has not been completed even after passage of more than 4 years after sanction. In Annexure- 3/19 of IRPWM, minimum toe load of 600 Kg for ERCs has been stipulated for LWRs on curves sharper than 4 degrees. Minimum allowable toe load for straight as well as curved track up to 4 degree should also be specified in IRPWM, linking with sectional/permissible speeds.

(b) Action Taken by Railways:

Recommendation of prescribing minimum toe load in straight and curved track up to 4° is not agreed. Stipulations covered in Para 628 regarding toe load of ERCs are adequate.

1. 938.96 KM of TSR (P) has been sanctioned since last 05 years in KUR division, i.e in 2021-22: 196.93Km, 2022-23: 192.27 Km, 2023-24: 166.3Km, 2024-25:- 190.68 Km & 2025-26:-192.78 Km.
2. Total TSR(P) done in KUR division 674.4 Km; i.e in 2021-22: - 101.2 Km, 2022-23:- 134.9 Km, 2023-24:- 159.6 Km, 2024-25:- 167.3 Km & 2025-26 (Up to Oct'25):- 111.4 Km considering that 192.78 Km has been sanctioned in 2025-26 only.
3. Out of total 196.93 km TSR (P) sanctioned in 2021-22, 158.5 Km has been completed as on Oct 2025. TSR(P) in balance patch of 38.43 Km of 2021-22 is in progress. TDC-31.03.2026.
4. TSR(P) include TFR by default. Along with sleeper renewal, TFR is being done and overdue will be completed accordingly.
5. Toe load measurement of ERC is being ensured as per the provisions of IRPWM.
6. Total 68 Km was identified in KUR Division with ERC toe load 400 kg. Out of which 50.6 Km has been renewed by MK-V to ensure proper toe load. For Balance TDC 31.03.2026.
7. RDSO has been referred for policy guidelines on minimum allowable toe load for straight as well as curved track vide letter no. W-7/664/CRS Recommendation/Pt.TI / 4033 dt.10.06.2025.

3.5

(a) Recommendation:

General Managers should monitor the compliance of stipulations in the sanctions granted by CRS for raising of sectional speeds to 130 KMPH and availability of traffic blocks/speed restrictions of required duration for activities related to track maintenance/renewals.

(b) Action Taken by Railways:

Noted. It has been closely monitored and the status of compliance to the stipulations of CRS in sanction letter dated 23.02.2023 is enclosed.

3.6

(a) Recommendation:

Setting of time for speedometers in locomotives as well as monitoring devices in coaches/locomotives should be synchronized with GPS so that sequence of events can be correlated with logs maintained at various locations.

(b) Action Taken by Railways:

Speedometer: RDSO has issued the revised specification for setting and updation of time in speedometer through GPS, vide EL/2.2.9/10 dt. 07.08.2025.

VCD: It has already been incorporated in Microprocessor for conventional locomotives, which have synchronization with built-in GPS. Same is applicable for 3 phase locos.

VCU: Synchronization of clock through GPS has been incorporated in latest specification of propulsion systems, in Rev'6' for future procurements. For existing 3 phase locos, scheme for synchronization of VCU and speedometer timing with GPS is under development by RDSO.

The issue regarding harmonization of the system clocks of speedometers and Traction Control Unit/VCU of locomotives with standard time was referred to RDSO vide Board's letter No. 2003/Elect(TRS)/113/Safety(Misc.) dated 30.10.2023, and subsequently reminded vide letter dated 19.01.2024. The matter was again advised vide Board's letter No. 2024/Elect(TRS)/113/5(13174- GFCJ) dated 12.08.2024.

Further, LHB Coaches have WSP system with time setting arrangement, which is to be done at the time of coach commissioning.

In this regard, Zonal Railways has been advised (vide RDSO Letter No. MC/LHB/Brake Date: 26.09.2025) to ensure and set the current timing of the WSP system during D2 schedule (monthly).

3.7

(a) Recommendation:

Primary maintenance of the rake of train no. 12551 SMVB-KYQ express was conducted and its BPC was issued on 26.03.2025 at KYQ/NFR. As parameters of coaches in train found beyond prescribed limits, even for coaches which were unaffected, North East Frontier Railway need to review the system of checking & maintenance of LHB coaches.

(b) Action Taken by Railways:

Permitted variation in tread diameter of wheels on the same axle is 0.5 mm and it shall apply only at the time of wheel change/ tyre turning. There is no 'In service' limit for this variation. Rejection during service is governed by tyre defect gauge. A Committee has been set up to examine the issue of in service limits for wheel diameter in coaches and report of the same is under consideration at Board.

RDSO has issued comprehensive maintenance guidelines for Air-Brake Systems in coaches vide letter no. MC/LHB/Brake dated 17.01.2025.

The following have been prescribed regarding Brake pad & disc clearances:

1. D1 (Trip schedule) Check functionality of pneumatic brake system by physically shaking the brake callipers as per required brake positions.
2. D2 (Monthly schedule) - Check the clearance between each brake pad & brake disc.

The deviations noted during measurement of spring bellow heights are cumulative result of the following factors:

- a. All these coaches were shunted for more than 30 km in bellow deflated condition which would cause distortion in the rubber items which are 'not designed to take physical load of the entire coach structure.
- b. Two of the derailed coaches B4 & B5 are also included in measurement whose brackets for fixing horizontal lever were bent and the secondary suspension damper was damaged due to derailment. The measurements therefore as invalid and need to be ignored.
- c. The measurement of bellow height is required to be done on level track which was not available
- d. in the post accidental scenario.
- e. The measurement of bellow height was not conducted using proper GO -NO GO gauges which would lead to measurement deviation from standard values.

In view of the above it is considered that these measurement deviations do not imply any deficiencies or deviations from standard maintenance practices. However, keeping in view the observation made by CRS, all depot staff involved in the activities have been again counselled to be ensuring that measurement is done at prescribed frequency, and by using prescribed GO-NO GO gauges, and that deviation if any should not be permitted.

The buffer height of B4 coach was found to be 1142 mm, the reason for this deviation in height from prescribed max of 1105 is the higher height of air bellow which was caused by bent horizontal lever bracket and secondary damper getting damaged. Therefore, this height deviation is not being considered as defect at all.