

क्या यह उचित है।



रेल ट्रैक से खिलवाड़ जान लेवा हो सकता है।



इसे बच्चों का खेल न समझो।



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ANUBHAV



(JANUARY – MARCH 2019)



GM'S ANNUAL INSPECTION ON BR. NO. 521



Published by:

Safety Department, Head Quarters, Maligaon
Northeast Frontier Railway

Electrical Hazard Awareness

Electrical hazard safety means

any potential or actual threat to the wellbeing of people, machinery or environment

Why know about it?

Because failing to take the necessary precautions can lead to:

- injury or death
- fire or property damage

If you come across a person receiving an electric shock:

- If possible, disconnect the electrical supply (switch)
- Assess the situation – never put yourself at risk
- Take precautions to protect yourself and anyone else in the vicinity
- Apply the first aid principles (e.g. DRABCD)
- Assess the injuries and move the casualty to a safe area if required
- Administer first aid if trained
- Seek urgent medical attention

Can you protect yourself from electricity?

- Don't wear metal objects
- Turn power off
- Wear appropriate clothing
- Don't touch live parts
- Don't install or repair electrical equipment
- Use qualified personnel
- Clean and dry leads and plugs before use
- Use PPE

What are other safety measures?

- Heed warning signs
- Use the right equipment
- Study the operation manual
- Take care of extension leads
- Use only approved extension lamps
- Don't pull on leads
- Use the proper fuses and circuit breakers

Electrical hazards exist in almost every workplace.

Common causes of electrocution are:

- making contact with overhead wires
- undertaking maintenance on live equipment
- working with damaged electrical equipment, such as extension leads, plugs and sockets
- using equipment affected by rain or water ingress

Do you want to be a victim?

You could be the victim if you:

- Don't follow proper procedures around electricity
- Use electrical equipment improperly
- Use faulty electrical equipment

What are the levels of effect of current?

AC current (mA)	Effect on human body
1	Slight tingling sensation
2-9	Small shock
10-24	Muscles contract causing you to freeze
25-74	Respiratory muscles can become paralysed; pain; exit burns often visible
75-300	Usually fatal; ventricular fibrillation; entry & exit wounds visible
>300	Death almost certain; if survive will have badly burnt organs and probably require amputations

TAKE CARE WHEN USING ELECTRICITY



Regular safety inspections

- are a part of YOUR job...
- Electrical equipment should be checked each time before use for defects
- If not tagged or the tag is out of date then report it and place it out of service

Electricity is essential but, improperly used, it can be DEADLY!

To STAY ALIVE, you have to STAY ALERT

www.doshti.com

INDIAN SAFETY ASSOCIATION

YOUR VIGILANCE CAN PREVENT A

DISASTER



Any unclaimed or suspicious looking objects, luggage, packets or persons moving suspiciously noticed, please inform RPF, GRP and police personnel AT ONCE !



We seek your **Active Co-operation** in helping us to make your train journey safe and secure. Please do not carry and do not let your co-passengers to carry inflammable objects in the Train.

One more initiative for your safe and secure journey

Please dial **Security Helpline 182** for immediate security assistance

Visit us at <https://www.facebook.com/NFRailway> & follow us at [twitter](#) @RailNf



NORTHEAST FRONTIER RAILWAY

Your Safety - Our Concern

MANOJ KUMAR AGRAWAL, IRSME

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FOREWORD

Dear Readers!

The main aim of Safety Bulletin is to guide the staff related with running of trains in a simple manner. Also, analyze the accidents and learning from inputs necessary steps is being taken to stop the reoccurrence. Indian railway is the life line of the country and we should take part for the development and progress of the country by way of safe running of trains.

I am happy to place the next issue of Safety Bulletin of N.F. Railway in your hands. Safety in train operation is of paramount importance.

Safety begins with all involved in the train operations including Loco Pilots, Station Masters, Guards, Engineering and S & T Supervisors.

All the Officers and Supervisors are requested to conduct vigorous and meticulous "Safety Checks" in the field and take immediate corrective action.

We must remember that our constant vigil can avert many unsafe situations.

I am confident that all N.F. Railway men shall do their best to bring a quantum jump in our safety performance.

Suggestions for improvement are welcome.

Happy reading!

Sincerely yours,

(MANOJ KUMAR AGRAWAL)
Chief Safety Officer
N.F. Railway

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**GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)**

No. 2018/Safety(A&R)/1/8

New Delhi, dated 25.01.2018

General Managers,
All Indian Railways,
(Including Metro Railway, Kolkata).

Managing Director,
KORCL, Navi Mumbai.

Subj: Revision and Standardization of Observations/ Measurement Proforma for Accident Investigation/Inquiry.

Ref: 1. RDSD letter No. CT/Safety dated 08.08.2018.
2. CCRS's letter No. M.15013/1/2017-18 T.W.(P/H) dated 07.08.2018

A revised Observations/ Measurement Proforma for various parameters related to track and rolling stock for Accident Investigation / Inquiry has been prepared by RDSD in consultation with Commission of Railway Safety. Board (CRS) has approved the proforma for uniform adoption over Indian Railways for CRS Inquiry as well as Joint/Departmental Inquiry of the accidents. The approved proforma (total 34 pages) is enclosed herewith.

This is for kind information and necessary action please.



(Pankaj Kumar)
Director (Safety)-IV
Railway Board
Ph: 430-43574, 011- 23079844
Mob. : 9910407540

Copy to :

1. DG/RDSD, Lucknow and Commission of Railway Safety, Lucknow for kind information in connection with letter under reference.
2. Chief Safety Officers, All Zonal Railways.

You will find.....

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One Caveat :

We have tried to give all information as accurately as possible. However, readers are advised to go through the original circular/instructions also.

Notes

SECTION - I

Letter issued from Railway Board/HQ



M. K. Agrawal
एम के अग्रवाल
Chief Safety Officer



Govt. of India
Ministry of Railways
N. F. railway: Maligaon
Guwahati-781011, Assam
Tel 0361-2676016

No. T/2/67/A/Pt-VI (Vol-2)

Dated – 05.02.2019

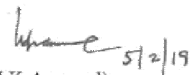
All PHODs/CHODs NFR
All DRMs NFR
All SrDSO NFR

Sub: Revision and Standardization of Observation/Measurement Proforma for
Accident Investigation/Inquiry

Ref: Director (Safety)-IV/Railway Board's L/No 2018/Safety (A&R)/1/8, dated
25.01.2018

Enclosed herewith please find a copy of Director Safety-IV Railway Board's Letter No-
2018/Safety (A&R)/1/8, dated 25.01.2018 along with **Revised Observation/Measurement
Proforma for Accident Investigation/Inquiry** for your information and necessary action. It
should be given vide circulation among Officials under your control for strict
implementation.

DA- As above


(M.K. Agrawal)
Chief Safety Officer

C: GM, AGM

CC: PCOM for incorporation of the above Revised Performa in Accident Manual

CC: DyCSO/T,M,E,S&T/HQ/MLG

Annexure – 'A'

Proforma for Motive Power/ Locomotive (Diesel & Electric)

Proforma to be filled in case of accident/denialment when loco is involved in accident.

1. Basic Information

- Date of Accident;
- Train No.;
- Loco Class;
- Loco Number;
- Loco manufacture year and place;
- Base Shed of Loco;
- Date & Place last POH;
- Distances covered after last POH;
- Date & place of last major inspection;
- Date & place of last schedule inspection;
- Whether any schedule is overdue?;

2. Give brief particulars of the safety items not provided or provided but missing/not working

Whether Loco is provided with

Safety fittings	Provided	Working
Headlight		
Speedometer		
Speed Recorder		
Flasher light*		
Horn		
Brake System		
VCD		

TO BE JOINTLY SIGNED BY		
SUPERVISOR (C&W Loco)	SUPERVISOR (TRAFFIC)	SUPERVISOR (P.WAY)


General Guidelines

1. Careful observation of clues and a comprehensive record thereof is vital for accident enquiry. In addition, a comprehensive record of track and rolling stock parameters and operating features is required for investigation of denialments.

2. There are two broad categories of denialment.

Sudden denialment caused by wheel set jumping of the rails. Such a denialment indicates that the derailling forces were high enough to suddenly force the wheel off the rail. These are typically caused by failure of vehicle/ track components, obstruction on track, entanglement of hanging parts of rolling stock etc. These denialments are characterized by a short mark on rail table between Point of Mount and Point of Drop. In some cases the Point of Mount may even be absent.

Denialment by flange coming, caused by wheel mounting the rail in a relatively gradual manner. It indicates that the derailling forces were powerful enough to overcome the normal stabilizing forces, yet not sufficient to cause a sudden denialment. Such denialments are characterized by a longer mark on the rail table between Point of Mount and Point of Drop. Track and rolling stock parameters and operating features influence the rail-wheel interaction forces and, hence, their complete record and a comprehensive analysis is required to arrive at the mechanism of denialment. Cause and consequences of denialment are required to be differentiated through this comprehensive analysis.

3. Locating and examining the wheel mounting marks at the initial point of denialment is very important for identifying the category of denialment. Precise measurements and critical and detailed examination of the wheel mounting marks should be made e.g. their length, strong or faint, broken or continuous, single or multiple, etc. Photographs should be taken of such marks, not only on the rail, but also on the fastenings, sleepers and ballast.
4. Denialment proneness increases with increased Lateral wheel force, reduced Vertical wheel load (Off loading) and increased Positive Angularity of wheel. Denialment proneness becomes substantially higher in case of axle moving with a persistently positive angularity. Track and rolling stock parameters and operating features should be critically analyzed for their contribution towards these causes. In case of denialments in curve, proper functioning of Bogie rotation system to ensure undue angularity needs close examination. Contribution of track twist and spring defects and twist in bogie frame/ vehicle underframe to denialments caused by wheel Off loading needs to be analyzed. In case of denialments at high speed, parameters affecting vehicle oscillation and damping thereof needs a close analysis.



5. While analysing the mechanism of derailment, relative contribution of track and rolling stock parameters to the rail-wheel interaction forces needs a comprehensive analysis. Reference should be made to the safety limits/ Maintenance limits specified in IRPF/WV IRCA Rules/ Maintenance Manuals.
6. Proforma for measurement of locomotive, wagon, and carriage are attached as annexure-A, B and C respectively for recording the details. The joint measurement to be submitted by senior supervisors shall not be complete till all the measurement of rolling stock and track as per enclosed proforma have been recorded. Only completed joint measurement w.r.t. rolling stock and track shall become a document to be relied upon by the enquiry committee for drawing conclusion regarding cause of accident.
7. No enquiry shall be completed before the complete measurement of rolling stock and track is available and made part of the enquiry report. Enquiry Committee may get additional measurements done as per requirement of the derailment case.
8. The photographs of the concerned sections of track and part of rolling stocks shall be taken and annexed in the enquiry report. ART personnel should be trained for identifying such relevant part of track and rolling stocks involve in the accident.
9. In case of derailment of passenger trains causing injury to passengers, video recording of the concerned part of track and rolling stock shall be carried out by nominated ART personnel, trained for the purpose.

Photography & videography of accident site shall be with great care & precision, similar to a crime scene photography/videography. ART personnel nominated for this shall be suitably trained for the purpose. The photographs, videos should be self explanatory such that relevant conclusion can be drawn.
10. Site sketch of the derailment/accident location shall be prepared giving due care that all the relevant items are included along with the dimensions. A sample sketch is attached for the guidance. Instructions for the preparation of sketch of the site of accident has given in "Accident Manual" shall be followed.

Preservation of relevant clues, documents& photographs/videography of the accident scene shall be done under supervision of Safety Officials of the Division.
11. M&C report from IRGC must also be part of accident enquiry report in case accident is attributed to breakage of any component of track or rolling stock.



12. In case of a suspected sabotage, Tell-tale sign must be preserved and recorded.
13. If rail/weld failure is suspected to be cause of derailment, assessment of impact loading to which the rail/weld was subjected to prior to its failure becomes important. In such cases, WILD data for few preceding trains shall be analyzed for critical alarms and any critical alarm shall be brought out and deliberated by enquiry committee.
14. Observations of SM's Panel need to be recorded in case accident takes place in station area.
15. Speed recorders and event recorders in the locomotives shall be frozen immediately post the accident. SM's control panel shall be frozen till the time position of the knobs, switches, points & crossings etc. are jointly recorded. It is the responsibility of the concerned controlling officer / safety officials to ensure freezing of the above. Safety official shall take into custody of all the relevant documents, broken parts etc.



5. Measurement of other relevant items:

S. No.	Description	Observed Value (in mm)	Remarks
1	Buffer/coupler height Measurement of parameters such as buffer length etc may also be done to check possibility of buffer entanglement.		All measurements shall be taken on a level tangent uncanted track. This measurement is required to be taken only in case of trailing stock is with buffers.
2	Lateral clearance	Rail Axles (1,2,3 & 4)	
		Middle Axles (2& 3)	
3	Lateral clearance	Rail Axles (1,2,3 & 4)	Applicable for Metro locomotives only.
4	Longitudinal clearances between axle box & bogie pedestal liner (for all axle)		Except WDP3A, WDP4, WDP4, WDP4B, WAP3, WAP3, WAG7 locomotives
5	Longitudinal clearance between axle box & bogie pedestal liner (for middle axle)		Applicable to WDP3A locomotive only.
6	Height of Rail Guard from rail level		
7	Condition of suspension springs i.e. normal/ broken/ fresh and old fracture or deformities occurred after derailment due to sudden impact.		
8	Deflected height of coil spring after re-railing on level, uncanted track		
9	Condition of Rubber/ Elastic Spring Assembly at the Secondary stage		

Note – Measurement of items (a) to (j) in Para 5& items 8 & 9 in Para 5 will be done as per site condition.

SIGNED BY

SUPERVISOR (C&W/ Loco)	SUPERVISOR (TRAFFIC)	SUPERVISOR (P.WAY)



8. Check & record the observations as follows:

- Position of control handles, various cocks etc after the accident.
- Functioning of brake synchronizing valve whether working or not.
- Position of brake blocks after the accident- whether applied or not.
- Condition of cattle guard.
- Any sign of seizure of roller bearing in Axle box including condition of its components
- Condition of Pivot and Side Beaver arrangement of bogie including obstruction to Bogie rotation.
- Condition of Friction Damper components/ Hydraulic Damper
- Condition of Traction Rod/ Guide Rod including its connection.
- Condition of Traction Link including its connection.
- Condition of Lateral Stop components between Bogie and Loco body underframe
- Any other observation in respect to mechanical defect of the locomotive, which might have any bearing on safe running of loco.

Note: Defective or broken material should be sent to CMT for testing, if necessary.

TO BE JOINTLY SIGNED BY

SUPERVISOR (C&W/ Loco)	SUPERVISOR (TRAFFIC)	SUPERVISOR (P.WAY)



4. Measurement for Wheels for All Classes of Locomotives with wheel gauge (B4 locations applicable for Bu-Bu Loco)

S. No.	Description	Observed Value (in mm)		Remarks
1.	Particulars of axle (ID No.)	1		
		2		
		3		
		4		
		5		
		6		
2.	Diameter of wheel at tread	LH	RH	
		1		
		2		
		3		
		4		
		5		
3.	Wheel Flange thickness	LH	RH	
		1		
		2		
		3		
		4		
		5		
4.	Wheel foot wear	LH	RH	
		1		
		2		
		3		
		4		
		5		
5.	Tread wear	LH	RH	Tread wear should be measured from tread at 63.5mm from wheel gauge face (from the back face of flange) in BG and at 57mm from wheel gauge face (from the back face of the flange) in MGT.
		1		
		2		
		3		
		4		
		5		
6.	LST of axle: Give the date of last LST test done	Axle	Observation	Information is relevant in case of axle breakage
		1		
		2		
		3		
		4		
		5		

Measurement for Wheels for All Classes of Locomotives with wheel gauge (B4 locations applicable for Bu-Bu Loco) (Continued)

Notes:

1. Wheel number one is the outer end axle of truck under the short hood and wheel count increases towards the Long hood on diesel loco, whereas for Electric Loco, wheel number one is the outer end axle under Cab-1 (Cab-1 is that side of the loco which has the compressors and Cab-2 is that side of the loco which has the ARNO converter) and wheel count increases towards the Cab-2.
2. The measurements of wheels are to be done using wheel gauges as per drawing No. SKDL-3492 for all BG locomotives except WAP3 loco. For WAP3 loco RDECO drawing No. SKDL-4446 and SKDL-4447 may be followed.
3. All measurements are to be taken on a level, un-canted track at the nearest yard.
4. Service limits given in the Maintenance Manual are for good maintenance practice and these are not safety limits. However, the measured values shall be compared with the service limits and degradation in values shall be discussed while finalizing the findings.

S. No.	Description	Observed Value (in mm)		Remarks
7.	Wheel gauge: For checking wheel gauge, three measurements at equal spacing on the inner periphery of the two wheels on the same axle is to be recorded. Check for bent axle, if any.	1		All measurements shall be taken on a level tangent un-canted track. Information is relevant in case of wheel disc shifting/bent axle only.
		2		
		3		
		4		For safety, similar limits as applicable for track gauge are relevant for wheel gauge also.
		5		
		6		

TO BE JOINTLY SIGNED BY

SUPERVISOR (C&W/ Loco)	SUPERVISOR (TRAFFIC)	SUPERVISOR (P.WAY)

Wheel and Axle								
Wheel diameter (i) Measurement (ii) Record in table according to it (Yes/No)	Wheel groups in run *Takes at three places)	Observation after measuring the profile with tyre depth gauge (Good/Defective) **						
26	27	28	Thin flange	Shary flange	Worn rim road	Deep flange	Hollow tyre	Flat tyre
	1		1L					
	2		1R					
			2L					
	3		2R					
			3L					
	4		3R					
			4L					
			4R					

*The wheel gauge is to be measured at the horizontal plate passing through the corner of the shaft.

TO BE JOINTLY SIGNED BY		
Supervisor (CAB)	Supervisor (Trail & C)	Supervisor (P. & M)

Abstract-18

Problems for Review

Books regarding all described vehicles should be shown except:

1. (0) Where vehicles have derailed due to locomotive derailment.
  - (0) When the locomotive and individual cause is attributable to an obstruction on track.
  2. Front end car and right (R) are with respect to direction of movement.
  3. For an obvious cause of derailment such as a broken rail, spring dropping off the rim, another some part of under gear hanging loose and causing obstruction only relevant past incident may be filed.
  4. Particulars for each derailing vehicle should begin in one short. Information against column 5, (0), (B), (I), (F), (Z).
- The best details of adjacent vehicles should also be given if cause of derailment is not apparent.

S.No	Date of Incident & Time	Trainer No.	Details of EPC along with the name of station from where it is issued and of engineer (C&W) who issued	Wagon No.	Type	Mech. Code	Year in Tonnage	Carrying capacity and axle load	Build Date	Renew Date
1	21	3	4	5	6	7	8	9	10	11

[illegible]

Field Particulars		BOM Particulars		Payable to Transport		Connectivity loaded and remarks regarding interest loading (give details for details of interest loading)	Station		Position from Engrin
Date	Slips	Date	Slips	From	Actual Weightment		From	To	
2	11	14	5	16	17	8	18	28	21

TO BE JOINTLY SIGNED BY		
Supervisor (P&W)	Supervisor (Traffic)	Supervisor (P, W&D)



BOM/Compter Slips	What and why has Particulars (in case of breakage of wheel/rail)	Under the particular	Ultimate particulars in the bulk of the slip	Stamping particulars on wheel/rail regarding identification/AVD
(1) Minimum BOM/Compter Slips after successful downloading in account head track	(2) Record whether there is buffer release position (T/C/S/S)	(3)	(4)	(5)
End 11.		11	11	
End 12.		12	12	12
End 13.		13	13	13
End 14.		14	14	14
End 15.		15	15	15
End 16.		16	16	16
End 17.		17	17	17
End 18.		18	18	18
End 19.		19	19	19
End 20.		20	20	20
End 21.		21	21	21
End 22.		22	22	22

TO BE JOINTLY SIGNED BY		
Supervisor (P&W)	Supervisor (Traffic)	Supervisor (P, W&D)



Checkers For Caudal Angle (Corresponding measurements to be taken for BGS (EC: Bgs))			
Type of Bogle	Lateral clearance between side frame at base in mm	Lateral clearance between side frame at base in mm	Longitudinal clearance between side frame at base in mm
41	41	41	41

TO BE JOINTLY SIGNED BY		
Supervisor (C&B)	Supervisor (Traffic)	Supervisor (P. & A.V)

Roller Bearing		
(To be recorded issue of any abnormality observed in Roller bearing/ Axle Box)		
Condition of base cover plate	Condition of locking plate & studs	Condition of Roller Bearing and its components
26	26	31

TO BE JOINTLY SIGNED BY		
Supervisor (C&B)	Supervisor (Traffic)	Supervisor (P. & A.V)

Aisle Bar after BCS (Standard) (To be recorded only when failure of plain bearing is observed in a run)			
Lateral clearance mm	Condition of box and bottom	Condition of side plates	Condition of journals
33	35	34	35
			36

TO BE JOINTLY SIGNED BY		
Supervisor (C&B)	Supervisor (Traffic)	Supervisor (P. & A)



Aisle Guard (for BCS) (C. Stock)			
Lateral clearance between axle box and axle guard in (mm)	Whether axle guard can work clear of axle box	Are the axle guard bent or otherwise damaged in present free movement of axle box	Remark regarding axle bar
37	38	39	40

TO BE JOINTLY SIGNED BY		
Supervisor (C&B)	Supervisor (Traffic)	Supervisor (P. & A)



Procedure for Carriage

Form to be filled in case of Derailment:

Note: Details regarding all derailed vehicles should be given except:-

- (i) Where vehicles have derailed due to locomotive derailment.
- (ii) When the vehicle is responsible or an obstructive or an obstructive in the track or broken and/or shifted.
- Particular for each derailed vehicle should be given in case above. Information against columns nos. (3), (6), (7), (14), (20) and (21) should invariably be given for adjacent coaches on the same train.
- Front and Rear, end (L) and Right (R) are with respect to direction of movement.
- For an obvious cause of derailment such as a broken axle, spring, dropping off or run and/or some part of underframe hanging loose and causing obstruction, only relevant particulars need to be filled.
- Relevant details of adjacent vehicles should also be given if cause of derailment is not apparent.

S. No.	Date of Derailment	Train No.	Details of RMC along with name of the station where found and Engine No. (L/R) also denote it.	Vehicle no.	Type	Turns taken	Capacity (Tonnage)	Make and	Remarks	DOH details
1.	2	3	4	5	6	7	8	9	10	11

TO BE JOINTLY SIGNED BY

SUPERVISOR (C&P)	SUPERVISOR (T&TFC)	SUPERVISOR (W&V)



SPRING AND SPRING GEAR						
Any Broken/loosening/insufficientness of axle/side and axle/side pin and general condition (for UIC/IES)	Thickness of packing plate under spring seat in mm	Remarks whether any spring eye touches side bar for laminated spring (if any)	Condition of suspension springs i.e. normal, broken/fractured and old fractured or deformed occurred after derailment due to sudden impact	Number of spring in main other re-stiffing on a level mounted track (for laminated spring only)	Deflected height of coil spring after re-stiffing on level mounted track (for Coaxial)	Condition of elastomeric pad above adapter (for Coaxial)
45	46	47	48	49	50	51

TO BE JOINTLY SIGNED BY

SUPERVISOR (C&P)	SUPERVISOR (T&TFC)	SUPERVISOR (W&V)



Boogie			
Condition of Center Post including lubrication and wear (for Camels)	Condition of Side Boomer including Vertical clearance at side boomer (for stock having clearance (top side boomer only)	Condition of Friction Shoulder Wedge Assembly (for Camels)	
81	83	84	

TO BE JOINTLY SIGNED BY			
Supervisor (C&M)	Supervisor (Traffic)	Supervisor (P. M&T)	

Whether a load is placed on more than one wagon	Any other defect in vehicle which may have contributed to or caused the derailment	Details of broken parts giving location w.r.t. point of impact and drop	List of damages to the wagon due to accident	Other observations ²
85	86	87	88	89

Note – Measurement of item 1, 4, 8, 9 of opening sets, item 42, 43, 44, 46, 47, 48, 50, 50A, 59 will be done in per this condition.

TO BE JOINTLY SIGNED BY			
Supervisor (C&M)	Supervisor (Traffic)	Supervisor (P. M&T)	

Condition of Bridge Components	
Condition of Hanger after (HCF)	Condition of Supporting Stay (for KCF)
36	37
	38
	39

NOTES

TO BE JOINTLY SIGNED BY		
SUPERVISOR (NAME)	SUPERVISOR (TITLE)	SUPERVISOR (PHONE)

Station	Position in front of engine	Wheel gauge in mm (to be measured at these locations), measured in empty condition at the horizontal plane passing through the centre of the axle	Wheel diameter (i) Measurement (ii) Record whether below conducting meat/Ven/Med	Any indication of front axle or wheel having adjustment axle	Wheel and axle free particular (in case of leakage of any wheel / axle)		Stomping particulars on wheel discs regarding manufacture/ B.A.R.D (in case of leakage of any wheel / axle)	Observations after measuring the profile with wheel defect gauge (Good / Reparable)			
					Asile front particular i	Ultasonic particulars on the hole of the disc		L	R		
12	13	14	15	16 (i)	16 (ii)	17	18	19	20	21	22
							21	22	23	24	25
							26	27	28	29	30
							31	32	33	34	35
							36	37	38	39	40
							41	42	43	44	45
							46	47	48	49	50

RECENTLY

[illegible]

ROLL NO. 2014-00040			
(To be inserted in case of any abnormalities observed in Rubber bearing/ Axle Box)			
Condition of axle box, nut and load carrier/rod cap (PLAT)	Condition of load carrier plate (PLAT)	Condition of bearing nut & nut/ locking plate and bolts (PLAT)	Condition of Rubber Bearing and its components
21.	24	21.	25

TO BE JOINTLY SIGNED BY			
SUPERVISOR (C&M)		SUPERVISOR (TECHNICAL)	SUPERVISOR (TRAIN)

Spring and Spring-Gear						
Condition of Coil spring i.e. Normal/ Fractured (collectively)	Condition of Rubber spring i.e. Normal/Cr (crack) including length of each (for LHB only)	Condition of Air Spring including bolts in piping	Deflected height of coil spring after re- rolling on a level standard track	Vertical clearance (in inch)		Height of Bogie frame plate from rail level (for LHB)
				Clearance between frame - rubber clearance	Body - Bogie frame clearance	
21	28	29	30	31	31	34
						35

TO BE JOINTLY SIGNED BY			
SUPERVISOR (C&M)		SUPERVISOR (TECHNICAL)	SUPERVISOR (TRAIN)

Abstract

Proforma for Track measurement sheet - 40

Proforma showing the related particulars to be collected in the case of Permanent/Temporary Accident

Soil		Type of Fertilizer	Rate /kg	Soil		Depth before digging bottom	Drainage
Type of Soils	Condition - firm, wet, sticky etc.			Type of Moorum, Sand, Silt etc.	Depth before digging bottom		
Sl	loamy clay						
Se	Moorum, Black clay etc.						
1	2	3	4	5	6	7	8

TO BE FORWARDED BY		
COMPANY NAME	SUBSCRIPTION (TRADE)	SUBSCRIPTION (PRIVATE)

Conditions of Acid Guide: Clean Inside Pot including Oil level (for KCF)		Damping System	
	Oil	Condition of Hydraulic Dampers	Condition of Acid Pot: Bar (for LPH)
		41	42

Case Number	Case Name	Case Status
1	Case 1	Open
2	Case 2	Open
3	Case 3	Open
4	Case 4	Open
5	Case 5	Open
6	Case 6	Open
7	Case 7	Open
8	Case 8	Open
9	Case 9	Open
10	Case 10	Open
11	Case 11	Open
12	Case 12	Open
13	Case 13	Open
14	Case 14	Open
15	Case 15	Open
16	Case 16	Open
17	Case 17	Open
18	Case 18	Open
19	Case 19	Open
20	Case 20	Open
21	Case 21	Open
22	Case 22	Open
23	Case 23	Open
24	Case 24	Open
25	Case 25	Open
26	Case 26	Open
27	Case 27	Open
28	Case 28	Open
29	Case 29	Open
30	Case 30	Open
31	Case 31	Open
32	Case 32	Open
33	Case 33	Open
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90	Case 90	Open
91	Case 91	Open
92	Case 92	Open
93	Case 93	Open
94	Case 94	Open
95	Case 95	Open
96	Case 96	Open
97	Case 97	Open
98	Case 98	Open
99	Case 99	Open
100	Case 100	Open

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Butter/Coupler height (to be taken on a level, unsaturated track after un-coupling and re-coupling (if any))	Condition of 5th Buffer/Coupler	Details of broken parts giving location w.r.t. point of onset and direction and whether fracture considered due to accident	Any other defect in the vehicles which may have contributed to or caused the derailment such as condition of coupler, draft gear, pinion, clearing plates etc.	Link of Damage to the Goods due to accident	Order of Observation to be submitted relevant to derailment
Front 50	52	51	54	55	56

Source: Information from the company's website.

TO BE COMPLETED BY	
CITY OF BOSTON	
DATE OF RECEIPT	

Problems for "Track Measurement" Part - B

Station No.	Distance apart (meters)	Target starts to light from the East in loaded condition (min)	Coast Limit under loaded condition (min)	Marks on progress or ratings	Conding or plotting marks on rails
1	2	3	4	5	6

THE UNIVERSITY OF CHICAGO

TO BE IDENTIFY SECURITY		
DATE	REPORTING (REPORTING)	SUPERVISOR (SUPERVISOR)

[illegible]

TO BE JOINTLY SIGNED BY

TO BE JOINTLY SIGNED BY		
APPROVED FOR PUBLICATION		STANDARD FOR PUBLICATION

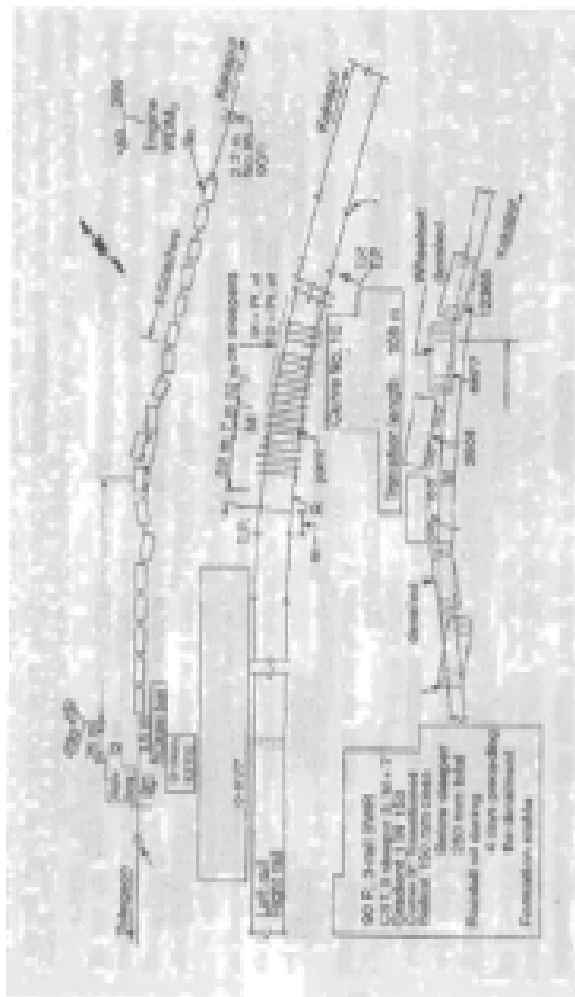
Rails		Rail fastenings		Rail joints	
Weight (2 kg/ 50N/15 lb etc.)	Condition of wear (affected rail joints or footings)	Condition of rail (Carriage)	Distance between rails, length of bars, cotter, loose joint etc.	Condition: Hogged, timbered, low etc.	Causes: Direction and extent of creep, type of cross-section, number of rails affected section
18	19	20	21	22	23
					25

TO BE JOINTLY SIGNED BY	
SUPERVISOR (C&W)	SUPERVISOR (TELAPRO)

General remarks about cracks or fracture of fish plates, fish bolts and other components	Description of defect (slabbing, corrugation, etc.)	Location of joints of rail		Location of joints of dismant	
		Whether on a straight, curve or transition	Whether on a falling grade, level or rising grade and/or on sag	Whether on a straight, curve or transition	Whether on a falling grade, level or rising grade and/or on sag
26	27	28	29	30	31

- Note -
- (1) Left and right are with respect to direction of Train movement.
  - (2) The data in Col. 2 to 26 need not be collected when the defect is obviously and indisputably on account of sabotage and/or obstruction of track.
  - (3) Only broken track material which is not indisputably to be broken after the accident should be included in Col. 28 and should be preserved.
  - (4) Col. 27 need be filled in only where there is a suspicion about sabotage being the cause of dismant.
  - (5) Sag extends 50 metres on either side of theoretical junction of the grade lines Col. 29 and 30.

TO BE JOINTLY SIGNED BY	
SUPERVISOR (C&W)	SUPERVISOR (TELAPRO)



THE JACOBSON POLYMERIZATION

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SECTION II

**GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)**

No.2012/Safety(A&R)/19/1   New Delhi, dated 04.12.2018

The General Manager
All Indian Railways including
Konkan Railway Corporation

Sub: Securing of vehicles/loads/trains/locomotives at stations and in block section.

There have been few recent incidences of rolling down of loads/vehicles resulting in accidents. The matter has been considered in Board's office. Precautions to be taken for stabling loads/trains and securing of vehicles/loads/trains/locomotives at stations as well as securing of trains stranded in block section are consolidated and reiterated below:-

1. Action by Station Master/Traffic Staff when vehicles/load/train is to be stabled at Station:-
  - a) The vehicles/load/train be chained and padlocked using atleast two chains, one at either end;
  - b) Atleast four sprags/wooden wedges be used, two each below the outermost pair of wheels at either end;
  - c) Hand brakes of atleast 6 wagons from either end must be fully tightened. In case coaching vehicles are stabled, Guard's hand brakes in SLR(s) must be applied. The hand brakes must be operated under the personal supervision of the Guard, and in the absence of Guard, by SM/ASM on duty;
  - d) The vehicles of stabled load/train should be coupled together. In case the stabled load has to be split for any reason, each such split part should be treated as a separate load for the purpose of securing;
  - e) The points must be set, clamped and padlocked against the blocked line and towards dead end or trap point (if

Cause of accident:- Derailment Occurred due to non clamping of Accident prone point T 1. While being pushed towards sick line lead, one pair of wheel of coach No- NF LWFAC - 12002C (14th from MU Loco) first derailed passing point T1 and somehow the coach got TWO WAY at point No- T2. As a result of continuous push back by MU loco, other 03 pair of wheels of the above same coach also got derailed and subsequently all 04 pair of wheels of coach no- NF LWACCW 13060C got derailed. The long dragging of about 100M, from the first point of drop, has result into huge damage to both the coaches and lateral shifting of above coaches causing track damage also. This heavy dragging occurred due to use of MU power for shunting purpose.

Staff held Responsible :- Primary - YM/KYQ

Secondary - i) LP/S/NGC

ii) MSPTR/KYQ

Important Remarks/Recommendation:-

- i) Shunting to be performed with the assigned shunting loco only.
- ii) Clamping to be ensured before shunting, considering the previous history at KYQ.
- iii) Necessary JPO may be prepared for the shunting rules for KYQ considering high gradient.

5. Accident ID No:- 20181105002

Brief of Accident :- Derailment of L/E No- 70396 WDG4D by leading trolley 3 pairs of RH side wheels after dashing with 7th to 13th no wagon of Pola HSD. resulting

Accident Inquiry conducted by JS Grade Officers:- (AOM/ GHY, ADME/P/LMG, ADEN/T/GHY)

Cause of Accident: - Loco turner who was shunting the derailed loco should not have moved ahead on Line No- 7 without receiving due instruction in this regard from the Points man. Further, he should not have gone ahead without having a piloting Points man on board. The Points man should have made additional effort to board the train and instruct the Loco Turner not to go ahead thus he failed

should jointly record in a register to be maintained with Station Master that the load & loco has been secured as prescribed above.

5. Action to be taken by Loco Pilot/Assistant Loco Pilot and Guard when the train i!) stalled in block section due to accident, failure, obstruction or any other reasons:-
  - (a) Loco Pilot/Assistant Loco Pilot and Guard should protect the train as per provisions of G&SRs 6.03;
  - (b) The train should be secured by applying loco brakes (SA-9, A-9 & hand brake) and hand brakes of atleast six wagons at either end of the train. The hand brake should be operated by Assistant Loco Pilot from leading end and by the Guard from the rear end. In case the train is being worked without Guard, the duties of the Guard shall devolve on the Assistant Loco Pilot. In case of coaching trains, the Guard should apply hand brakes of the SLR in addition to the application of loco brakes by the Loco Pilot.
6. Station Staff, Guard, Crew and Section Controller should be aware of gradients at Stations/Yards/Sidings and block sections.
7. Frequent counseling in this regard should be done by concerned Supervisors.
8. The Railways must ensure availability of adequate number of sprags & chains of approved design at stations and wooden wedges on locos.

Sd/-

(Vinod Kumar)

Principal Executive Director/Safety
Railway Board

SECTION III

Lesson to be learnt

1. Accident ID No: - 20180405001
On 10.04.2018 In course of Shunting for withdrawing empties from NGC Marshalling Yard Line No- 1 to for placement in Sick line via Points No- T/28, Wagon No- NR-BCNE-105091 (Positioned 3rd from Loco) got derailed by all wheels & wagon No- NCR BCNE-20655 (4th from Loco) got derailed by Front Trolley 1 pair of wheel, Main line free.
The accident Inquiry was conducted by :- AOM/GHY, ADME/NGC, ADEN/T/GHY
Cause of accident :- From the joint measurement of wheel it was evident that the flange portion of wheel No- 7 had initiated a sharpness and this cannot be lead to a derailment during normal position of shunting movement as the same wagon had initiated several point and crossing before the derailment occurred.
Responsibility :- NIL
Remarks/Recommendation :- Electrical point/socket should be provided for operated hand grinding tool.
2. Accident ID No: - 20180405003
Brief of Accident :- On 18.04.2018 in course of shunting of Empty rake of 15605 from line no 9 to pit line no. 1 to attach with 15603 up Coach No- NF SLR 03712 got derailed after passing point no. T/10 at GHY Yard. Main line free.
Inquiry Committee :- Sr.SM/G/GHY, ADEN/T/GHY, ADME/GHY
Cause of Accident :- Derailment occurred due to improper setting of Point No. T/10 by point man who operate the point for pit line No-1 for the said shunting.
Staff held responsible :-
Primary - P/Man/GHY.
Remarks/Recommendation: - It was observed that same type of accident occurred in last few months in GHY, NGC Yard in non-interlocking tumbler/spring points due to various reasons. It may be minimized if all the tumbler/

- spring non-interlock points are clamped and padlock during shunting or all these non-interlock points are connected by motor operate point.
3. Accident ID No:- 20180605001
Brief of Accident: - On 20.06.2018 in course of Shunting, while push back the empty rake of 15606 from line No- 10 to pit no. 1, front trolley one wheel got derailed over interlocked point no. 124 after passing of 8 coaches. South line no. 5 to 10 blocked. North line is clear.
The Inquiry was conducted by: - Sr. SM/G/GHY, DME/P/NGC, DEN/MLG, SDTE/MLG
Cause of Accident :- The derailment of Engine No- 11505 WDM3D occurred as the stretcher bar got bent due to unknown foreign material (Which could not be traced during inquiry and was overlooked). During inquiry profile of the coaches was also overlooked for any possible hanging parts and also presence of foreign material.
Staff held responsible: - Primary - NIL
Secondary - i) SSE/P-Way/GHY,
ii) Shunter.
Remarks/Recommendation :-
i) Stretcher bar was corroded, the same should have been mentioned in joint check list of SI & PWI also there should not be any corrections without initials of SI & PWI.
ii) Joint inspection by all the departments should be conducted immediately after the re-railment.
iii) All measurements related to accident should be done as early as possible to avoid tempering with related parameters.
  4. Accident ID No:- 20180805001
Brief of Accident: - Derailment of Coach No- NF LWFAC 12002 C & NF LWACCW 13060 C at KYQ Yard on 06.08.2018.
Accident Inquiry conducted by SS Grade Officers (Sr. SM/G/GHY, DEN/GHY, CDO/GHY)

Inquiry Committee :-ARM/BPB, CDO/SCL, ADEN/KXJ
Cause :- Derailment caused due to irregular cross level variation of the track during course of shunting for withdrawal of 24 BTPNE + 1 BCNE + 1 BV from IODT siding at DMR.

Staff held responsible:-

Primary - SSE/P-Way/Con/SCL

Secondary - NIL

Blameworthy - NIL.

Department Responsible:- As the line is not handed over to open line yet department responsible is construction department / NFR.

Important Remarks/Recommendation:-

- i) Effective P/Way inspections should be done at all yard lines where traffic movement is infrequent.
- ii) Proper yard layouts and design which eliminate the need for S curves.

9. Accident ID No:- 20181205002

Brief of Accident :- Derailment of Loco No- 12817 WDG4 (NGC) at HJI FCI siding on line No- 1 at about 10.12 hrs on 04.12.2018.

Inquiry Committee:- JS Scale (DME/P/NGC, DEN/IV/LMG, AOM/CHG/LMG & ACM/LMG)

Cause :- Reason behind the derailment is the track found full of earth causing no clearance for flange of wheels at the location due to truck movement i.e unauthorized trespassing the track inside FCI Gate. As per joint observation of SR. Subordinates, the other reasons of the derailment are (i) Insufficient ballast (ii) Check rail not covered full curved track and ended where point of drop occurred.

Responsibility :- SSE/P-Way/HJI & ADEN/II/LMG

Important Remarks/Recommendation:-

P-Way is clearly responsible for the accident because they have failed to keep siding in safe condition at their cost or FCI's cost. Since FCI had to pay for maintenance, AEN & PWI should be warned not to repeat in future.

to perform his duty properly.

Staff held Responsible:-

Primary - LP/G/NGC - Working as Loco Turner, is held responsible for the accident as he decided to carry out an unsafe movement without proper instruction as well as without a Piloting Points man in a Non signaling area thus violated Rule 313(b) of Operating Manual 2005 edition.

Secondary - NIL

Blameworthy - P/Man/A/NGC - for not making sufficient efforts to board the train and prevent the accident.

Important Remarks/Recommendation:-

- i) The primary cause of the accident was that shunting was being carried out without proper instruction and without a piloting points man present on the loco. Shunters need to be advised not to carry out any shunting movement in NGC yard without a piloting points man present.
- ii) At the time of accident, Loco No- 70396 was being operated from the GHY end, that is, the rear cab on the long hood side. It is recommended that shunting should be carried out from the front cab side as far as possible.
- iii) Had there been an ALP accompanying the Loco Turner, there are high chances that the collision could have been avoided. It is recommended that ALP booked with Loco Turner as far as possible.
- iv) From the site observation, it is found that there was high growth of vegetation besides the track. It is suggested that vegetation should be cleared timely to prevent any lack of visibility during shunting operation at NGC Yard.

6. Accident ID No:- 20181105008

Brief of Accident: - Derailment of Coach No- NF/ACCW/00053 of Empty Rake of 15644 at KYQ Yard on 22.11.2018.

Accident Inquiry conducted by: - CDO/KYQ, ADME/P/LMG, ADEN/TRACK/GHY, AOM/GHY

Cause of Accident:- Derailment caused due to two path of the derailed wheel. The derailed wheel has taken a path from T3 itself. Two paths had occurred as the point under

the dynamic loading of the rake movement had failed.

Staff held Responsible:-

Primary - NIL

Secondary - SM/KYQ for failing to supervise the shunting operation & not ensuring locking of point T3.

Blameworthy - P/Man A/KYQ for not ensuring clamping of point T3.

Important Remarks/Recommendation:-

- i) The SWR is totally silent about shunting operation at KYQ Yard. As such the committee had to go by GR&SR and Operating Manual, edition 2004. SWR should be suitably modified/amended.
- ii) All the points in the yard should be converted to non-interlocked motor operated points to ensure maximum housing.
- iii) All points should be clamped while shunting in accordance with GR 3.39/1 (a) and Operating Manual point 803 (a).
- iv) The delay in conducting the inquiry as per the stipulated timeline by Railway board was because AOM/GHY was on training outside NFR and could not attend the committee sittings. It is recommended that in such cases a replacement be immediately given because if inquiries are not conducted immediately the narratives of the involved parties are affected and unbiased inquiry cannot be guaranteed.

7. Accident ID No:- 20181105009

Brief of Accident :- Derailment of Coach No- NF/LWACCN-16142 in stabling Line No- 1 of KYQ Yard at about 02.10 hrs on 26.11.2018.

Inquiry Committee: - CDO/KYQ, ADME/P/LMG, ADEN/TRACK/GHY, AOM/GHY

Cause of Accident:- As per joint inquiry committees report the derailment of 16142/NF/LWACCN on the dead end of stabling line No-1 had occurred due to dashing with dead end and inadequate protection resulting in wheel drop.

Staff held Responsible:-

- i) Primary - P/Man-A and P/Man-B - for failure to protect to the three stabled coaches thus violated rule No- GR 5.20, 5.23 & subsidiary rules there under along with GR 5.20/2 (c).
  - ii) Secondary - NIL.
  - iii) Blameworthy - MS/Porter/KYQ for not being able to convey proper shunting instructions to the Shunter.
- Important Remarks/Recommendation:-
- i) The SWR is totally silent shunting operation at KYQ Yard. As such the committee had to go by GR&SR and Operating manual, edition 2004. SWR should be suitably modified/ amended.
  - ii) The holding capacity of stabling line 1 is currently taken as 18 coaches. It should be reduced to 17 coaches for all stabling operations.
  - iii) Shri Arun Kumar, MS/Ptr/KYQ, is very weak in communicating instructions which was noticed by the committee during his interrogation. Such staff should not be deployed in KYQ yard as any minor miscommunication in future might lead to a bigger and costlier derailments as this yard mainly handles LHB coaches.
  - iv) The dead ends have been converted to standard RCC dead ends.
  - v) Proper protection must be given to vehicles stabled near dead ends in accordance with GR 5.20/2(c).
  - vi) The delay in conducting the inquiry as per the stipulated timeline by Railway Board was because AOM/GHY was on training outside NFR and could not attend the committee sittings. It is recommended that in such cases a replacement be immediately given because if inquiries are not conducted immediately the narratives of the involved parties are affected and unbiased inquiry cannot be guaranteed.
8. Brief of Accident: - Derailment of Wagon No- SE BCN/E 300789/60913 at IODT siding/DMR at about 13.15 hrs on 17.07.2018.

12		Duryodhan Reddy LP/M/APDJ	On 10 th January while working 22501 Up observed one elephant was standing on the railway track at KM 66/2 between CLD-NKB. He immediately applied emergency brake and stopped the train at very short distance from the elephant. Thus he saved the elephant as well as accident averted.
13		Vinod Kumar Bagdi ALP/APDJ	On 10 th January while working 22501 Up observed one elephant was standing on the railway track at KM 66/2 between CLD-NKB. He immediately applied emergency brake and stopped the train at very short distance from the elephant. Thus he saved the elephant as well as accident averted.
14		Ravi Bhusan Choudhary SSE/P-Way /DLO APDJ	On 15 th December while inspected Binnaguri station yard, he observed heavy smoke coming out from the second coach of train No.22502 (Dn TSK-SBC Exp). He immediately took step to control the train. The train was controlled and after check it was found that smoke coming out from the rear trolley RHS axle box due to Hot Axle. The said coach was detached at BNQ. For his alertness accident was averted.



In recognition of the meritorious service and for preventing probable accidents, certificates with cash awards of Rs. 2500/- each were awarded by General Manager, N.F. Railway on 26th JANUARY - 2019 at N.F.Railway Stadium on the eve of Republic day.

10. Accident ID :- 20181205003
Brief of Accident :- Derailment of 75715 UP Siliguri - Dinhata DEMU Passenger between BRQ-DDM station of APDJ Division on 13.12.2018.
Inquiry Committee :- JAG Grade (Sr. DME/APDJ, Sr. DSO/APDJ & Sr. DEN/III/APDJ)
Cause :- Installation of RH Girder at Bridge No- 9A which is situated in a curve alignment of 2.75° and with a super elevation of 140mm.
Responsibility: - Primary - SSE/P-Way/NMZ
Secondary - NIL,
Blameworthy - NIL
Important Remarks/Recommendation:-
  - a) Normally RH girder should not be laid on curve, these should be laid on straight only.
  - b) RH girder should be laid without any super elevation.
  - c) SSE/Works should maintain the proper safety of the soil formation and they should aware of the work pertaining to them
  - d) SSE/P-Ways should ensure proper safety of the track before issuing track fit certificate.
11. Accident ID No: - 20181205004
Brief of Accident: - Derailment of Coach No- NF LWACCN - 192150 at Point No- T/1 at KYQ hauled by Loco No- 12504 WDG4 at about 21.50 hrs on 17.12.18.
Inquiry Committee :- Inspected by DRM/LMG on 20.12.18 & finalized the case. Further inquiry not required.
Cause :- The condition of maintenance of point was bad & tongue rail was gapping.
Responsibility: - PWI/IC/GHY
Remarks/Recommendation :-
DRM personally inspected the site along with Sr.DSO and Other Officers of GHY area, a practice of not clamping the tumbler points is going on in the Division, with knowledge of all the higher Officers of Division. So, no responsibility can be fixed up for it at lower levels. Now, this unsafe practice has been stopped. The condition of maintenance of points was bad and tongue rail was gapping. PWI I/C is held responsible for that.

SECTION IV
Honourable Mention
GM safety award for the month of December-2018

N	Name & Designation	Citation
1.	 Giridhari Das TM/9U/SM/ KIR	On 1 st December, while performing duty as key man he detected "rail fracture" at KM 200/4-3 between Kumarganj – Samsi up line. He immediately protected the track and informed to his In-charge as well as concerned on duty station master. For his alertness accident was averted.
2	 Binod Kumar Chauhan TM/7U/MQG/KIR	On 2 nd December, while performing duty as patrolman he detected "rail fracture" at KM 184/0-1 between Harishchandrapur – Bhalukaroad in DN line. He immediately protected the track and informed to his In-charge as well as concerned on duty Station Master/BKRD. For his alertness accident was averted.
3	 Bikram Yadav TM/7U/MQG/KIR	On 2 nd December, while performing duty as patrolman he detected "rail fracture" at KM 184/0-1 between Harishchandrapur – Bhalukaroad in DN line. He immediately protected the track and informed to his In-charge as well as concerned on duty Station Master/BKRD. For his alertness accident was averted.
4	 Md Anwarul Haque Gate Man / NJB /KIR	On 8 th December, while working as gateman he detected "Rail fracture" at KM 13/0-1 between Nijbari-Rangapani. He immediately protected the track and informed to his In-charge and Station Master of Nijbari. Due to his alertness a probable mishap was averted.
5	 Ranjeet Kumar Sah Tech-I / C&W/KIR	On 10 th December, while performing duty noticed unusual sound from train No. Dn NJP BTPN. After checking detected "Rear trolley front wheel flat tyre beyond permissible limit and all wheel skidded of wagon No. 4004081368 NFR/BTPN which was unsafe to run. Finally, the said wagon detached. Due to his alertness a probable mishap was averted.
5	 Abhishek Kumar Tech-I / C&W/KIR	On 10 th December, while performing duty noticed unusual sound from train No. Dn NJP BTPN. After checking detected "Rear trolley front wheel flat tyre beyond permissible limit and all wheel skidded of wagon No. 4004081368 NFR/BTPN which was unsafe to run. Finally, the said wagon detached. Due to his alertness a probable mishap was averted.
7	 Thema Oraon TM / 17BG / HWR KIR	On 28 th December while performing duty as a key man he detected "Rail fracture" at KM 98/9-8 between Hatwar-Kanki. He immediately protected the track and informed to his In-charge and Station Master/ HWR. Due to his alertness accident was averted.
3	 Kamlesh Rajbhar TM / 23BG / SUD KIR	On 29 th December while performing duty as key man he detected "Rail fracture" at KM 133/7-6 between Barsoi-Sudhani. He immediately protected the track and informed to his In-charge and Station Master SUD. Due to his alertness accident was averted.
9	 Jitendra Kumar Ram Helper/S&T/HCR KIR	On 31 st December, while he was attending to rectify the failure of Track circuit, he detected the "Rail fracture" at KM 178/8-9. He immediately informed to Station Master HCR as well as Engineering official. Due to his alertness accident was averted.
0	 Rohit Basfore Sr.Tech/C&W/KIR	On 3 rd July during examination of sick coach No.17141/C NFLWACCN in upper and lower gear simultaneously, he detected five inner primary springs in broken condition. Thus he averted the probable mishap.

1	 Chayan Das LP/G/RPAN/RNY	On 21 st December worked as the first Loco Pilot who worked Dn FSTP coal over the newly constructed Bogibee bridge from NTSK to RPAN which left NTSK at 16.30 hrs and arrived RPAN at 04.40 hrs of 22.12.2018.
2	 Diwakar Kumar Sr. ALP/RPAN RNY Div.	On 21 st December worked as the first Assistant Loco Pilot who worked Dn FSTP coal over the newly constructed Bogibee bridge from NTSK to RPAN which left NTSK at 16.30 hrs and arrived RPAN at 04.40 hrs of 22.12.2018.
3	 Bibekananda Biswas LP/G/NGC /LMG	On 7 th January while working by 15417 Up (GHY-SHTT Rajya Rani Exp) after passing Puranigudam station suddenly noticed two unidentified boys waving by both hands to stop the train. He immediately applied the emergency brake at KM 17/7-8 and observed rail fracture at about 20 to 30 mtrs ahead from the loco. Due to his alertness a major mishap was averted.
4	 Surya Pratap Singh ALP/NGC/LMG	On 7 th January while working by 15417 Up (GHY-SHTT Rajya Rani Exp) after passing Puranigudam station suddenly noticed two unidentified boys waving by both hands to stop the train. He immediately applied the emergency brake at KM 17/7-8 and observed rail fracture at about 20 to 30 mtrs ahead from the loco. Due to his alertness a major mishap was averted.
5	 Bikas Das (Villager) Nagaon/LMG	On 7 th January the boy noticed that there was rail fracture at KM 17/7-8 and at the same time Rajya Rani Express is coming. Emerging danger he waved his both hand and signalled to LP/ALP to stop the train. Accordingly LP & ALP stopped the train in short of the fracture. Due to his alertness a major mishap was averted.
6	 Surya Das (Villager) Nagaon/LMG	On 7 th January the boy noticed that there was rail fracture at KM 17/7-8 and at the same time Rajya Rani Express is coming. Emerging danger he waved his both hand and signalled to LP/ALP to stop the train. Accordingly LP & ALP stopped the train short of the fracture. Due to his alertness a major mishap was averted.
7	 Bipul Konwar Sr. Tech/C&W/ GHY/LMG	During examination he detected crack in 3 equalizing stay of coach No.ACCN 07108 which was in a very difficult position to detect. Due to his alertness accident was averted.
8	 C. S. Gogoi LP/MXN/ TSK	On 4 th December while working by 15603 Up Intercity Express he suddenly noticed an elephant at KM 373/4 was crossing the railway track. He applied the emergency brake and stopped the train just near the elephant and saved the elephant. Thus accident was averted.
9	 Ravi Kumar ALP/MXN/TSK	On 4 th December while working by 15603 Up Intercity Express he suddenly noticed an elephant at KM 373/4 was crossing the railway track. He applied the emergency brake and stopped the train just near the elephant and saved the elephant. Thus accident was averted.
10	 Haridas Biswas LP/P/APDJ	On 5 th January while working by 75714 Dn noticed that traction motor of the DEMU showing over load and unusual sound coming from under gear of working DPC and heavy smoke coming out from the undergear. He stopped the train and found that TM-3 of working DPC was caught fire. He used FE and controlled the fire. Thus accident was averted.
11	 Praveen Kumar Sr.ALAP/APDJ	On 5 th January while working by 75714 Dn noticed that traction motor of the DEMU showing over load and unusual sound coming from under gear of working DPC and heavy smoke coming out from the undergear. He stopped the train and found that TM-3 of working DPC was caught fire. He used FE and controlled the fire. Thus accident was averted.

- Recruitment-Psychology in workplace can help to select/recruit the right person for right job. Identifying key skills, educational requirements and work experiences employee must possess.
- Training- It can help to pinpointing employee's training needs, and guiding relevant training on engaging fashion.
- Performance Appraisal - Designed to provide employees with feedback about performance leading to increased productivity.
- Compensation- it can help an important part of employee satisfaction and psychology in work place.
- Motivation & productivity- Motivating employee in order to increase efficiency and productivity of organization.

We all have to admit that work place can be quite stressful settings. Employers search for ways to deal with this stress because it is a crucial part of employee productivity and job satisfaction. Employer would need such employees who are highly efficient with good judgment and quality performance. All these fall under the category of employees those have good work output. Good work has been defined by the psychologists as truly high quality, meaningful to person who accompanies it and socially responsible. Overall and at any rate good psychology in work place also produce good work outputs.

Complied by -
(Arundathi Kalita)
Scientific Officer

SECTION - V KNOWLEDGE QUIZ

1. Point obstruction test to be done with test piece of width
(a) 3.25 mm (b) 5 mm (c) 1.75mm (d) 7 mm
2. POH of a shelf type track relay is -----
(a) 15 Years (b) 10 Years (c) 20 years (d) 25 years.
3. POH of DLBI and TLBI
(a) 5 & 10 Yrs (b) 10 & 15 Yrs
(c) 15 & 20 Yrs (d) 7 & 10 Yrs.
4. The normal shelf life of detonators manufactured during 2010 and thereafter shall be -----years, reckoned from the year of its manufacture. It can, however, be extended further for a maximum of ----- more years, provided that detonators which are more than 5 years old and are effective.
(a) 10 & 5 yrs (b) 5 & 3 yrs (c) 7 & 5 yrs (d) 7 & 3 yrs
5. ----- is used only the means of isolation and can't be substitute of signal over lap.
(a) Snag Dead End. (b) Sand Hump
(c) Trap Point (d) Derailing switch
6. Flasher light is situated at
(a) Just below the head light of the engine
(b) In the back of the SLR/Brake Van
(c) Right side of Engine Head Light
(d) Left side of the engine Head light.
7. What does this (R) of signal post indicates?
(a) Starter signal. (b) Repeating signal
(c) Calling On signal (d) Bracketed home signal.
8. Which section of Railway Act, 1989 deals with the punishment in case of breakage of Level Crossing?
(a) Sec.158, (b) Sec.180, (c) Sec.360, (d) Sec.160
9. Gradation of staff are classified according to:-
(a) Performance parameters (b) Seniority in service
(c) Senior in age
10. During temporary single line working, the speed of the first train passing over the temporary single line will be restricted to.....
(a) 15 kmph (b) 30 kmph (c) 25 kmph (d) None of the above

CHECK HOW WELL YOU HAVE PERFORMED

IF YOU HAVE ANSWERED:

1	2	3	4	5	6	7	8	9	10
b	c	a	b	a	c	a	b	a	c

No of correct Answers	Your knowledge Grade is
10	A
9-7	B
6-5	C
LESS THAN 5	Ready to proceed to ZRTI

SECTION VI
ROLE OF "PSYCHOLOGY"

Psychology is the scientific study of the mind and behavior, from communication and memory to thought and emotions. The purpose of psychology is to describe thinking and behavior, look at the relationships between them and try to explain the causes for them. A psychologist's intention is to understand, predict and/or influence behavior. When we talk about psychology at work place, we refer the application of principle within the work setting.

Mostly people define themselves by what they do. Work can be a key part of our social identity to build our sense of self. A "Psychologically healthy work place" outlines the principles behind meaningful work and what can keep people fulfilled and productive in their jobs. Most of us spend a good amount of time at work. But work is not universally positive experience. Poorly designed job environment, work place that is not organized well, difficult work environments, poorly trained managers and lack of understanding of human behavior in work place can create hazardous mental health condition. Organizational psychologists apply the principles of "psychology in work place" to enhance the work environment more attractive and dynamic.

"Work place Psychology" refers to the practice of applying psychological principles and approaches to work environment. The goal is to identify and solve problems, increase employee satisfaction and improve work place dynamic.

Role of Psychology in the work place - Recruitment, Training, Performance Appraisal, Compensation, Motivation and Productivity.



2. Working instructions for Engineering Level Crossing Gates, Non-Interlocked, provided with Telephone, with normal position "CLOSED TO ROAD TRAFFIC"

Exchange of Private numbers:

(i) Gateman must seek permission from Station Master for opening the gate.

(ii) Station Master shall ensure that there is no train movement in the block section. Thereafter Station Master shall give his private number to the gateman allowing him to open the gate for the purpose of clearing road traffic.

(iii) Suitable entries shall be made by the Station Master in the Train Signal Register, Private Number Book and Log Book in red ink.

(iv) After passing of road traffic, the gateman shall close the gate and confirm this to Station Master, under exchange of private number.

(v) Before any train is allowed to enter the block section again, the Station Master must ensure that private number from the gateman has been received in token of his having closed the gate.

(vi) Gate once closed for road traffic must on no account be opened unless this is authorized by the Station Master, under exchange of private number.

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SECTION VII

(संरक्षा गीत)

प्राइवेट नंबर एक विश्वास है

प्राइवेट नंबर एक विश्वास है,

इसे कभी तोड़ना नहीं !

रेल संरक्षा का मजबूत एहसास है,

इसे कभी छोड़ना नहीं !!

गेटमैन भाई.....

गेट को सही में बंद किये बिना ,

स्टे.मास्टर को बंद का प्राइवेट नंबर देना नहीं !

हमेशा बंद रहने वाले गेट में,

बिना प्राइवेट नंबर लिए गेट खोलना नहीं !!

क्योंकि, प्राइवेट नंबर एक विश्वास है.....!!!!

स्टेशन मास्टर जी .....

गर मिले 'कॉशन आर्डर' तो स्टेशन/कंट्रोल के साथ सभी को,

प्राइवेट नंबर के साथ देना/लेना भूलना नहीं !

गर हो 'चेट्टी' कॉशन आर्डर तो उसी तरह सभी को,

प्राइवेट नंबर के साथ देना/लेना भूलना नहीं !!

इंजीनियरिंग ब्लाक/मशीन कार्य या हो सिग्नल की विफलता,

कंट्रोल/स्टेशन से प्राइवेट नंबर लिए बिना अनुमति देना नहीं !

ब्लाक क्लियर हो या कार्य समाप्ति,

प्राइवेट नंबर के साथ लिखित मेमो के बिना ट्रेन चलाना नहीं !!

क्योंकि, प्राइवेट नंबर एक विश्वास है.....!!!!

लोको पायलट बाबू.....

शंटिंग के दौरान गर ब्लाक बैक हो या फारवर्ड

बिना प्राइवेट नंबर के ब्लाक सेक्शन में जाना नहीं !

ओ.पी.टी./पी.एल.सी. लेते समय भी,

उसमे लिखे प्राइवेट नंबर को देखना भूलना नहीं !!

क्योंकि, प्राइवेट नंबर एक विश्वास है.....!!!!

रेलकर्मी साथियों .....

ट्रेन पार्सिंग ड्यूटी में गर मिले कोई असामान्य घटना

प्राइवेट नंबर के साथ सभी सम्बंधित को तुरंत बताना भूलना नहीं !

क्योंकि प्राइवेट नंबर एक विश्वास है

इसे कभी तोड़ना नहीं !!

-स्वरचित-

धर्मेन्द्र कुमार

संरक्षा सलाहकार/यातायात/रंगिया मंडल

पू.सी.रेल.

SECTION VIII DUTY OF FOG SIGNAL MAN

GR.3.61- Placing of detonators in thick, foggy or tempestuous weather impairing visibility:-

In thick, foggy or tempestuous weather impairing visibility, whenever it is necessary to indicate to the Loco Pilot of an approaching train the locality of signal, two detonators shall be placed on the line, by a railway servant appointed by the Station Master in this behalf, about 10 meters apart, and at least 270 meters outside the signal or signals (first stop signal) concerned. SR 3.61/1:-

(d) In thick, foggy or tempestuous weather or in dust storm impairing visibility, when station signals cannot be seen, the Station Master on duty shall personally ensure that the station signals are lit, and then send two trained men to act as Fog signalman, one in either direction to the fog signal posts, which are erected at all stations 270 meters in rear (i.e. outside) of the first stop signal.

(e) Each of these men should be provided with 20 detonators (Fog signals) or such lesser number as may be prescribed under special instructions.

(f) After the passage of each train over the detonators (fog signals), which have been so placed on the rails, the Fog signalman shall immediately replace them by two fresh detonators.

(g) When a railway servant has placed one or more detonators on the line, he must withdraw beyond the safety radius of 45 meters from the detonator or detonators before they are exploded by an approaching engine or train. He shall be responsible for warning as far as circumstances permit, any person in the vicinity to stand beyond the safety radius.

(j) Each of the trained men sent out with detonators (fog signals), shall carry a lighted hand signal lamp.

GR, Appendix-II.8 (ii) - If the Fog Signalman is aware of any obstruction on the line, he shall show a Stop hand signal to an approaching train. Under no other circumstances shall a Fog Signalman show a hand signal to the LP of an approaching train,

but on single line sections, for a train leaving a station the Fog Signalman shall show a "proceed" (green) hand signal to the LP.

Exchange of Private Number to be ensure as per G&SR Appendix - VIII:-

1. Working instructions for Engineering Level Crossing Gates, Non-Interlocked, provided with Telephone, with normal position " OPEN TO ROAD TRAFFIC"

a) Exchange of Private Numbers, When Gate is connected with the station at the dispatching end:

i. Station Master at the dispatching end shall advise the gateman the number, description, direction and expected time of passage of train at the gate, under exchange of private number.

ii. Such advice shall be given before taking 'OFF' departure signals or giving an authority to proceed to the LP.

iii. The gateman on receipt of the advice shall close the gate well in time and confirm the same, under exchange of private number of the gateman.

iv. Station Master will lower the departure signals after getting the private number of the gateman.

v. Gate once closed for road traffic must on no account be opened unless this is authorized by the Station Master under exchange of private number.

b) When Gate is connected with the station at the receiving end:

i. Station Master at the dispatching end shall advise the Station Master at the other end, the number description, direction and expected time of passage of the train at the gate, under exchange of private number.

ii. Such advice shall be given before obtaining line clear.

iii. Station Master at the receiving end shall in turn convey the same advice to the gateman, under exchange of private number.

iv. Gateman shall closed the gate and thereafter give his private number to the Station Master.

v. Only then shall the Station Master at the receiving end grant line clear to the Station Master at the dispatching end.

vi. Gate once closed for road traffic must on no account be opened unless this is authorized by the Station Master, under exchange of private number.