चालक पत्र

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Chalak Patra

विद्युत परिचालन

पूर्व रेलवे आसनसोल

ELECTRIC OPERATION

Eastern Railway Asansol

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FOREWORD

Technological advancement & changes in rules & procedures necessitates updation of knowledge of running staff. To this and to create awareness among running staff the Chalak Patra is being published by the department of Electric Operation. This covers cases of good practices and bad practices of running staff, preventive measures to avoid SPAD and Stalling, different operational forms, quick trouble shooting techniques for 3Ø loco, critical locations of signals of HWH, SDAH, ASN and some relevant information regarding Crew Management System (CMS) etc.

I hope this will facilitate all the running staffs and supervisors to enrich their knowledge and adopt suggested corrective measures to avoid similar type of failure on line.

(N K Sachan)
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Contents

Disclaimer

This periodical is for the purpose of utilization of technical and safety related subject in connection with operation of Electrical Locomotives and trains. It contains various information gathered from experience or from various draft reports, all of which are not accepted/circulated by Rly. Board or zonal head quarter. This, however, limits the periodical from being referred for deriving, any authority for any purpose.

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This magazine is also available on **www.er.indianrailways.gov.in**

1.Good Work Done by the LP

SL	Date	Loco/ Train	LP/ ALP	Location/Time	Incident	Action Taken by LP	Recommendation/Award
1	15.10.14	21389/G5/ASN 13132 DN	K.P.Sharma/ Sunil Kumar (3)/ ASN	KMNO-363/24 on DN M/Line at 15.57 hrs	On look back found smoke coming out from Luggage.	1. Put "ON" F/L 2. Applied Train Brake & Loco Brake. 3.Used 3 nos. of F/Ext but fire not controlled. 4. Detached 1st coach from affected coach and kept the coach with engine at a distance about 150 meters. **Vide Circular No. GR/SR-6.10** 5. Loco made dead & secured both Engine & Coach with wooden wedge & Hand brake.	**GM/Safety Award**
2	15.10.14	23544/ DGR/ PT	A.K.Singha/ Raju KumarUDL	PFPD sidings at DGR	Insulator broken and hanging condition from OHE	Immediately informed TLC & DGR/PA to rectify the defect. By this action he saved a major break down of TRD. TRD staff fit the OHE.	**DRM AWARD Certificate of merit & Rs.1000/-**
3	09.11.14	24626/AG-7/LDH BCN/E for Laffarge	R.K.Coudhury /Ranjit Kumar /UDL	RNG RCD-1	Wheel No.3 & 4 Brake Shoe broken since 06.11.14 Loco Brake Power weak.(PB)	He quickly opened out the broken Brake Shoe & normalized Bogie-1 and get full Loco Brake power without hampering the traffic movement.	**DRM AWARD Certificate of merit & Rs.1000/-**
4	04.12.2014	31027/ WAG9 DER	Dharmendra Kumar Pritam Choudhury	South Rec/Yard/UDL at 16:50 hrs	Fish plate nut bolt was missing from the line.	He immediately stopped his train at 16:50 hrs and the matter was brought to the notice of PWI/UDL.	**DRM AWARD Certificate of merit & Rs.1000/-**

5	16.01.15	28144/28098 WAG-7/MU	Santosh Kumar Singh/ UDL	UDL/ L -3 BW at 15.30 hrs	Signal OFF but point was not set	On seeing point, he stopped the train and informed cabin man.	**GM GROUP AWARD**
6	15.03.15	23364+23146 / WAG-5/MU Ec/EQR	B.P.Sin gh4 Mukesh Kumar/ UDL	UDL	Side bearer between Wheel No.3-5 of L-23364 cracked and displaced.	He immediately informed TLC & SSE/UDL. M/Staff attended and failed the loco.	**DRM AWARD Certificate of merit & Rs.1000/-**

2. Some Tips for Knor Brake Loco

Abbreviations used –

CODE	ABBRIVIATION	CODE	ABBRIVIATION
TRL	TRAIL	EMER	Emergency
ZBAN	Banker SWitch	BPVR	Spring loaded return back Push Button switch for VIGILANCE RESET
HLPR	Helper Switch	BPVA	Spring loaded return back Push Button switch for VIGILANCE ACKNOLEDGEMENT
FS	Full Service	MU	Multi Unit
REL	Release	PTDC	Pnematic Time Dependent Control
PVEF	Pedal switch for Synchronizing brake release	PER-COS	Pneumatic Equalizing Reservoir Cut – Out Switch (Penamatic Panel)
BPPB	Spring loaded return back Push Button switch for Application and Releasing of Parking Brake.	SIFA-74	Vigilance Exhaust Cock (Pneumatic Panel)

Cab Set Up:

Cab Equipment	Cab	Leading / Single Loco	Trailing Loco of MU Loco	Banker Loco
Mode Switch	D/Cab	LEAD	TRL	(i) ZBAN switch- "ON" (ii) HLPR before node information reaches at **"550"**
	R/Cab	TRL	TRL	TRL
Auto/A-9 handle	D/Cab	Unlocked	Locked at FS with lock pin	Unlocked
	R/Cab	Locked at FS with lock pin	Locked at FS with lock pin	Locked at FS with lock pin

Procedure of Test to check BP leakage of train:

MODE SWITCH → **TEST** → BP Charging will be stopped & Loco brake will be applied (BC pressure- 3.5 kg/cm^2) till its Test position). After test is over) → **LEAD** to come out form Test Mode then BC pressure will be "0" kg/ cm^2

AUTO/A9 OPERATION: Procedure for BP charging in Loco:

A-9 → FS → Energize Loco → See O.K to run in LCD Screen → A-9 to RUN → BP will be charged to 5.0 kg/cm^2 BC pressure will be reduced to "0" kg/cm^2

Over Charging of BP pressure (5.5 Kg/cm$^{2)}$ in Loco: Procedure:

A-9 → Keep on REL position for 3 Seconds → Once when Over Charge started → Leave A-9 handle → BP will charge to 5.50 ± 0.1 Kg/cm^2.

Quick Release of Auto Brake in Loco: Procedure:

Lift Bail-Ring (provided in Direct Brake/SA-9) or Press PVEF Foot Switch.

Service Penalty Brake:

Indication- BP drops to 3 Kg/cm2 & Message appears on Screen "Safety Penalty – Keep Handle in FS"

Recovery Procedure:

A-9 → FS → Back to Run → See message on LCD BP would charge to 5.0 Kg/cm^2

Emergency Penalty Brake:

Cause: It is applied by over speed relay or Emergency Stop Button and also at the time of Connection of load with loco.

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Procedure of Dead Locomotive Operation

Switch OFF Control electronics → Close SIFA Cock-74 (Horizontal to Close) → Connect BP Hose to another loco or train → Open Cock-47 → Allow BP & 240 Ltr Reservoir to charge $\geq$ 4.8 Kg/cm^2 → Close FP cock -136 (vertical to Close) → Auto/A-9 (both cab)lock in FS position → SA-9(both cab) REL position → After BP pressure making 5 Kg/cm^2 Verify BC pressure "0" and loco brakes are released (If BC pressure not reduced to "0" pull quick release spindle of DV.

Note: If loco Brake remains applied, press 20TP (Test point) of 20CP on Pneumatic Panel to Release BC to Zero) → Release Parking Brake by Plunger (red color on apply/release solenoid) on Pneumatic aux. panel or by Pulling Manual Release Pins of Parking Brake Cylinders.

CAB CHANGING PROCEDURE

In currently operating cab:

Put A-9 in FS position and lock ⟶ Mode Switch Lead to Trail ⟶ BL key to Self hold Mode

Go to another cab and:

Mode Switch Trail to Lead ⟶ BL key to unlock ⟶ Unlock A-9 and bring to FS position to RUN to charge the BP.

लघु मार्ग अल्प आयु

A-9, SA-9, Mode Switch and Display Unit of Knorr Brake Loco

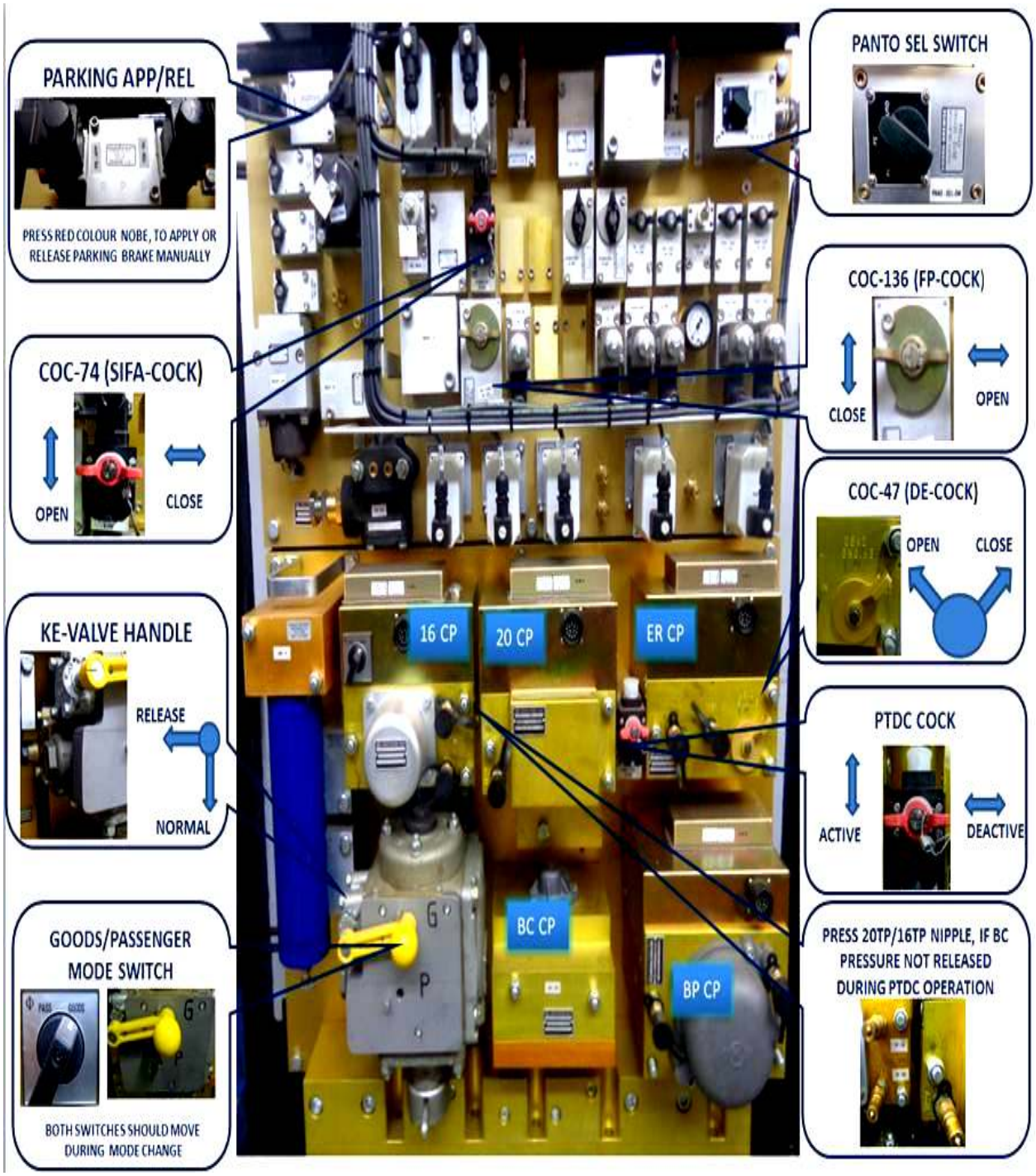
LEAD - Automatic/Independent brake control is available via the (EBV) Independent/Automatic handle.

TRAIL - BP is 'Cut-Out' and is not controlled by equalizing reservoir pressure. The EBV will not respond to handle movement except to create an emergency application when the Auto handle is moved to 'EMER'.

TEST - Auto BP is cut out, ER follows the EBV Automatic handle, and Direct BC will build to 3.5 BAR automatically. This position is used for testing the Automatic Brake tightness of the train.

HELPER - Independent brake control is available via the EBV Independent handle. ER control is available via the EBV Automatic handle but BP is 'Cut-out' and will not follow the Automatic handle positions. Emergency brake is always available via the AUTO handle.

Pneumatic Panel of Knorr Brake Loco



एक संरक्षित कार्य दूसरे संरक्षित कार्य की प्रेरणा है.

3. Cases of Mal operation of Loco Pilots in past six months.

Loco trouble occurs on line and causes loss punctuality of the same train as well as other following trains also. It is also a fact that we can not prevent failure of loco fully but can avoid LOP with proper and prompt trouble shooting. It is seen that in many cases of loco trouble major LOP could be avoided as a result of prompt and proper trouble shooting by LPs. Such LPs are awarded for their effort. But in some cases LPs couldn't perform proper trouble shooting as a result loco was failed and trains were detained.
Some times our running staff avoids safety measures and adopts short cut method while working the train/loco. It results in to collision, SPAD and derailment.
Different cases of Mal operation by LPs with remedial measures are given here with a hope that same failure cases can be avoided in future.

SL	Date	Loco/Train	Occurrence & Location	Action		
				LP/HQ	CLI/M Staff	Remarks
1	01.09.14	8483/ 8484 (WAG-7/BKSC) Train-42BCN NMKL	After passing BQT rear loco (28483)'tripped on notch	LPG/ANR demanded M/Staff at RNG	CLI found GR of rear loco was stuck up on 2nd notch. He simply brought GR on "0" manually closed DJ normally.	LP might have done same trouble shooting Letter sent to concerned division for Disciplinary Action
2	11.09.14	23767 23807 AJJ/WAG-5/MU. Ld-	LP couldn't pull the load beyond Adv/St signal due to TLTE in rear loco (23767)	LPG/ASN Could not identify the trouble backed the load & demanded M/Staff	CLI found CTF-2 of rear loco not on traction position properly and leakage also. He set it and fit the loco.	LP failed to identify the trouble and trouble shooting also. SF-11 issued to LP One set P/Pass stopped.
3	26.10.14	21381/WAM-4 train – 13137 UP	After passing neutral section train stopped at KM-206/3A-5A (NMC-KPK) due to ICDJ. LSGR was glowing even digital NR was displaying on 8th notch	LPM/SDAH failed the loco ignoring it. B/pilot was arranged and train started from the spot arrived at ASN	CLI attended the loco at ASN and found GR stuck up on 8th notch and due to that Q-45 was not being energized. He brought GR on "0" manually and closed DJ normally.	LP should have doubt about GR as digital NR was showing on 8th notch and Q-45 was not being energized. Detention of Mail express could have been avoided. Letter sent to concerned division for Disciplinary Action.

4	02.11.14	23416/WAG-5, train-Coal Pilot	After opening BP angle cock for BP charging DJ tripped RS pressure not increasing more than 4.0kg/cm^2	LPG/UDL failed the loco and demanded M/Staff	CLI attended the loco and found air leakage from RS pipe line nut. He tightens the	When leakage was apparently from RS pipe line nut then LP should have tighten the nut. **LPwas warned.**
5	02.12.14	**Wrong start** MEMU rake.	Rake of 63506 DN derailed in ORL/YD	LPS/ASN Started the rake without proper authority	Starting of rake without proper starting	LP should start the train from any point on proper authority. **3years increment stopped**
6	04.12.14	22640/WAP-4 train-12315UP	Train was stopped JRW-MDP due MP/EEC failed.	LP/SDAH cleared the block-section on manual control of GR, arrived at MDP.	CCNL/MDP attended the loco and operated ZSMS switch 2-3 times and fit the loco.	LP should have done prescribed trouble shooting of MP/EEC failure and operated ZSMS switch. Letter sent to concerned division for Disciplinary Action.
7	09.12.14	28045/28172/WAG-7/MU train No- ASN	After passing ULT/H/Signal,LP tried to energies rear loco to avoid stalling but pantograph of rear loco couldn't be raised. B/Pilot was arranged to clear the block section.	LP/ASN started the load from DHN with rear loco dead even excess tonnage with single loco.	Pantograph couldn't be raised.	LP should have worked the train with both multi loco in working condition. **SF-11 issued to LP. (Censored)**
8	24.12.14	23363 23150 /WAG-5/MU ASN,/ MFP	Train stalled STN-STN/L after starting from STN/Yd. Load was backed to Yd but rail was burnt at stalling place.	LP started train with rearloco-Q-51 wedged and took the notch continuously ignoring wheel slipping and high intensity.	Rail burnt due to notch not regression in rear loco at the time of wheel slipping.	Before starting LP should have ensured that Q-51 of rear loco is not wedged in de-energized condition. In this condition notch of rear loco is not regressed while regression is done from front loco which causes rail burnt. SF-5 issued to LP and ALP.LP- **2** Years increment stopped and ALP censored

9	16.01.15	2845928450 BNDM/LE/ CHC Pilot	**ROLL DOWN** While waiting for further programme Loco was rolled down and dashed with on going shunting load.	After supplying the load in the section, LP & ALP/ASN waiting for further movement.	Loco rolled down due to release of loco brake.	While waiting for further movement advice, both LP & ALP should have been alert on duty and taken safety measure to avoid roll down of loco.
10	23.01.15	27537 WAG-7train - 50BOBY/L PSE	Stopped at TNW on through signal due to not achieving required attacking speed	LP did not observe SR of 30kmph prior o up gradient properly, applie excess brake so that he couldn't achieve require attacking speed	Stalled due to excess barking by the LP for caution observation before rising gradient.	LP should have applied the brake judiciously to negotiate the caution before up gradient and achieved required attacking speed.
11	04.02.15	22291/WAP-4, train no- 13009 UP	Train was stopped UDL-BQT due to DJ tripping with drop of QLM/QOP-1&2/QRSI-1&2 and all pilot lamp extinguished.	LPM/GMO failed the loco immediately without performing any trouble shooting.	But again LP himself trouble shoot on advice of TLC and fit the loco.	LP should have performed prescribed trouble shooting before giving failure memo. **Loss Punctuality** of a mail express train could have been avoided. Letter sent to concerned division for Disciplinary Action.
12	13.02.15	23157/24464/ WAG_5H/M U train- 42 BCN BWN	Train was stopped at RNG on through signal due to Air leakage from underneath after CRO at NMC.	LP/GZD/DHN Informed that leakage was from BP metal pipe.	CLI attended and found leakage form FP. He isolated it's cock and given fit the loco.	LP should have identified the pipe correctly and isolated FP pipe cock. Letter sent to concerned division for Disciplinary Action.

13	10.03.15	23681 / 23176/WAG-5/MU KYN Train-TD	MT was derailed at KAO UP loop due to backing of load by the LP.	LP on load loc with load and made pressure ready. Loco w out of the str signal. He backed the loa to bring the lo inside the sign on verbal instruction of SM and Guard through walki talkie	Derailment was due to negligence of the guard.	Loco Pilot should have demanded written paper for backing the load and guard also alert to apply the emergency brake. SF-11 issued to LP and ALP and 6 months increment stopped for both.
14	09.03.15	23292/23669/ WAG-5/MU train – 59 BOBRN DSTPS	Train stalled after passing ULT/H/Signal due to TLTE in rear loco.	LP/ASN couldn identify the faul in rear Loco.	CLI found trouble through Q-51 of rear loco. He rectified the same.	LP should have identified the trouble and trouble shoot accordingly. SF-11 issued (One set P/Pass postponed)
15	18.01.15	22866/ 12361 UP	LP entered in the cab of loco on drunken condition.	LPM/ASN turns up on the loco without undergoing BA test and refused to get down. Another LP took the charge of loco and worked the train	CLI managed to get down the LP any how. Train was detained for Left 20.10	LP must perform BA test at the time of on duty. SF-5 was issued to LP and removed from the service.

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4. Preventive Measures to avoid stalling

All the Loco Pilots are advised to follow the following instructions rigidly while working with loaded train to avoid stalling:

1. Comply strictly the load table and JPO (page no- 100 -107) of Working Time Table.
2. Ensure working of sander, dry sand available in sand box and dropping of sand on rail top at the time of taking the charge of loco. If any discrepancies are found inform TLC.
3. Ensure release of complete train brake, hand brake and adequate BP pressure and at the time of starting from the yard.
4. ZQWC/BPQWC switch has been provided in the locomotives to use Electrical Weight Transfer Compensation Arrangement. This switch should be operated / pressed on (0-1) notch & proceed cautiously to get its effect up to 15th notch. Do not use ZQWC/BPQWC if no wheel slipping is noticed. ZQWC/BPQWC should be operate before taking notch when the wheel slipping take place.
5. If load is running heavy (jam) then stop the train at the next station and inform controller.
6. Control the train on notch and ensure the release of brakes from a distance to negotiate Speed restriction less than 20-30kmph or neutral section at the up gradient (1 in 150 or more).
7. Maintain the speed according to load and road and attain adequate speed before coming gradient section observing rising gradient Board (↑) & Costing board (C) also.
8. If less hauling capacity is felt then ensure working of all traction motors.
9. If stop signal at the up gradient is "ON" then come near to signal slowly by controlling the speed on notch so that brakes may be released and thereafter bale to work the train as per signal aspect.
10. If load is stalled and wheel slip starts then don't try to pull the train which may cause RAIL BURNT or DEFECTS IN WHEEL. Ask for bank pilot immediately.
11. Maintain the complete release of brakes while passing loop line or cross over and beware of over controlling. (Follow- point no-6)
12. If LP anticipates the stalling of load in the section due to drizzling rain or load jam or loco trouble or any cause then he will demand in written for assisting loco in advance.
13. While working with Microprocessor loco don't forget to use BPQD in case of LSP glowing.
14. Isolate VESA cock if continuous leakage is occurred from sander valves.
15. If Grease or grass is found on stalling prone section then inform TLC.
16. Supply prescribed full current before attacking up gradient to avoid drop of QRSI

Type of loco	Type of TM	Starting current (Amp)		One hour current rating (Amp)	Continuous current (Amp)
		2 min	10min		
WAG-5	TAO 659	1100	1000	840	750
WAG-5	HS15250	1200	1100	840	750
WAG-7	HS15250	1300	1100	960	900

17. Ensure availability of sand and working of sander in sand box.

18. Read and understand caution given at the foot of UP gradient, at the gradient and in neutral section zone provided at the gradient and be ready to work the train accordingly.
19. Don't use shunting notch at the gradient.
20. If wheel slip occurs on 100% position of throttle in WAG-9 loco then stop it by reducing throttle according to requirement. If wheel slip occurs in WAG-9 loco then operate throttle smoothly.
21. Don't use BPCS working the train with WAG-9 loco.

Note: ***If load stalls even after observing above instructions then don't try to pull the load and ask for assisting loco.***

Location of critical signal (Stalling prone):

Section: UDL-PKA

SL	Section	Signal	Location	Gradient
1	RNG	H/Sig for UP loop	194.00	1:200
2	KPK	UP Home For loop	206/3	1:200
		Home For M/L	206/3	1:200
3	KPK-ASN	EOC Home(UP2)	208/15A	1:200
4	BCQ	Home (UP1 & UP2)	215/27	1:200
5	STN	Starter (UP) Adv str.(UP)	221/11 222/09	1:200
		EOC Home (UP1&UP2)	219/7	1:200
		RRI Home (UP1 & UP2)	220/11 &220/5	1:200
6	STN-ULT	A-3	224/11	1:200
7	ULT	Starter (DN2) for diversion to DN 1	225/26	1:200
		Home (DN1&DN2)	226/14	1:200
8	KMME	Starter (UP)	231/27	1:200
9	KMME-MMU	A7:Gate (UP)	233/19	1:200
10	MMU	UP loop-2 Starter	238/19	1:200
11	TNW	UP/H/S & Str./Sig	214.87	1:200
12	KAO-	A 18	243/30	1:200

Section: UDL-PAW-UDL

SL	Section	Signal	Location	Gradient
1	KJME	UP Home Signal	3/27-4/1	1:200
2	UKA	DN Home Signal	13/02-12/32	1:200
		UP Home Signal	10/31-11/01	1:200
3	UDL	JN Cabin H/SIG.	3/03-2/1	1:200
4	PAW	UP Home Signal(West Line)	19/11-19/13	1:200

Section: STN-JAJ

SL	Section	Signal	Location	Gradient
1	SLS	UP Home	225/01	1:175
		UP Starter	226/13	1:175
2	CRJ	UP Home	236/23	1:200
3	JMT	Home	250/25	1:200
4	VDS	Home	268/27	1:200
5	JRW	UP Home	283/03	1:200
		UP Str. & A/Str.	284/05 284/13	1:200
6	MUW	UP Home	304/15	1:200
7	JSME	UP	321/27	1:185

	TNW	Gate(DN)					Home		
13	KAO	Home (UP)	245/11	1:200	8	TTN	UP Home	328/19	1:200
14	CAM	Home (DN)	256/10	1:200	9	STL	UP Home	347/03	1:200
		Home (UP)	254/31	1:250	10	STL Home	DN Home	348/30	1:100
15	PKA	Home (UP)	260/11	1:200	11	GHN	DN Home	353/32	1:100
							UP Home	353/21	1:250
					12	NRGO	DN Home	358/10	1:100

NB: Loco Pilots are advised to be cautious to avoid stalling while approaching the signal and stop the train at the foot of the signal in release condition of the load i.e. stop the train on reducing the notch gradually.

Location of critical Neutral Section (Stalling prone):
Gradient: 1:200 ( )

Section: UDL-PKA								
SL	**Section**	**Location**						
		500M	250M	OPEN DJ BD	Actual OPEN DJ	COSE DJ BD/Loco	COSE DJ BD/MEMU	TYPE
1	KMME-MMU	231/27	232/5	232/11	232/13	232/15	232/23	PTFE
2	TNW-KAO	243/25	244/1	244/9	244/11	244/13	244/21	PTFE
3	CAM-PKA	259/7	259/15	259/23	260/1	260/3	260/11	PTFE
Section: STN-JAJ								
4	MNC-JRW	280/33	281/11	281/19	281/25	281/31	281/43	PTFE
Section: JAJ-STN								
5	JAJ-NRGO	364/28	364/20	364/12	364/10	364/04	363/24	PTFE

NB: Loco Pilots are advised to attain maximum permissible speed and ensure proper release of train brakes before negotiating above neutral sections as preventive measures to avoid stalling.

असंरक्षित कार्य- निरर्थक कार्य.

5. Specimen of the forms used in connection with Train Working

(Authority- ER's Block Working Manual page-135&136)

SL	Description	Form No.	Font color
1	Signal & Telecommunication/Reconnection Notice	S&T(T/351)	Black
2	Advance Authority to Pass Defective Signals	T/369(1)	Blue
3	Authority to Pass Signals in "ON" or Defective Position	T/369(3b)	Blue
4	Caution Order	T/409	Green
5	'NIL' Caution Order	T/A 409	Green
6	Reminder Caution Order	T/B 409	Green
7	Train Examination Advise/Report	T/431	Black
8	Authority to Receive a Train on an Obstructed Line	T/509	Blue
9	Authority to start from a non signaled line	T/511	Blue
10	Authority to start from a line with common starter signal	T/512	Blue
11	Authority to proceed for Relief Engine/ Train into an occupied Block Section	T/A 602	Red
12	Authority for opening communication During Total Interruption of Communication on Single Line Section	T/B 602	Red
13	Authority for working of Trains During Total Interruption of Communication on Double Line Section	T/C 602	Red
14	Authority for Temporary Single Line Working on Double Line Section	T/D 602	Red
15	Line Clear Enquiry Message asking Line Clear for Dispatch of Trains During Total Failure of Communication on Single Line Section	T/E602	Red
16	Conditional Line Clear Message	T/F602	Red
17	Conditional Line Clear Ticket(UP)	T/G 602	Red
18	Conditional Line Clear Ticket(Down)	T/H 602	Red
19	Message on Restoration	T/I 602	Black
20	Written Permission by Guard to Driver to Proceed to next Station from Mid section	T/609	Blue
21	Shunting Order	T/806	Blue
22	Authority to Pass Automatic / Semi Automatic/Manually Operated/Gate Signals	T/A 912	Blue

23	Authority to Proceed without Line Clear on Automatic Block Signaling Territory	T/B 912	Red
24	Authority to Proceed for Relief Engine/Train into an Automatic Block Signaling Section	T/C 912	Red
25	Authority to Proceed on Automatic Block System During Prolong Failure of Signals	T/D 912	Red
26	Train Intact Arrival Register	T/1410	Black
27	Line Enquiry Message(Outward/Inward)	T/A 1425	Black
28	Paper Line Clear Ticket (DN)	T/B 1425	Blue
29	Paper Line Clear Ticket (UP)	T/C 1425	Blue
30	Trolley /Lorry/OHE Ladder Trolley Notice	T/1518	Black
31	Motor Trolley Permit	T/1525	Blue
32	Train Signal Register	ER/OP/T28	Black
33	Cabin Log Register	R.B.No./OP/CI	Black
34	Line Admission Block	T 460/OP/T113	Black
35	Private Number Sheet	-	Black
36	Brake Power Certifiacte	Mec.V/5.	Black
37	Out of Course stoppage Order	ER/OP/T-2-OP/S-2	Black

6. Precautions to Avoid Signal Passing at Danger

I. General Precautions:

1. Do not take alcohol drink, Narcotic, stimulant drugs or preparation 8 hours before Sign 'ON'
2. Take proper rest before appearing on duty.
3. Appear right time on duty.
4. Be in possession of two pair of spectacles, if passed with glasses.
5. Do not wear sun glasses/ color glasses while driving.
6. **Get yourself tested on breath analyzer. BA test is safety of yourself**
7. Be conversant with system of working and have valid learning road of the section on which you are booked.
8. Ensure those loco pilot/Asst. loco pilots are booked on all the routes so that load learning does not become overdue.
9. Read all latest circulars, caution order and notifications after signing.

10. Switch off your mobile phones while driving and keep it in your bag As per Rly.Bd's L.No.2010.Tele/2 (1)/dt.27.12.12.
11. SPAD cases on the Zonal Railways should be discussed in the training centers for bulk awareness.
12. CMS wherever provided should be fully utilized.
13. CLI should interact with their loco pilots about their problems.
14. The copy of SOB must be available in the lobby.
15. Loco pilot should refresh his knowledge.
16. Running staff should highlight every abnormality in the concerned register available in the lobby.
17. The main job of the driver is to drive the train safely and he should not be burdened with extraneous jobs. Guard being the in charge of train be made primarily responsible for these duties. He can take the help of ALP, if required.
18. Running staff should be provided with railway accommodation near their headquarters as per their entitlement on out of turn basis.
19. SPAD cases usually occur when driver stops for prolonged periods en-route and starts. Therefore, crew should be kept engaged and well informed during such period by the station/control staff.
20. The public riding on the locomotive is a law and order problem and GRP needs to tackle it as it affects the driver's performance.
21. Must switch off mobile phone during run and use it only in case of emergency only after stopping of train.

II. After Reaching Cab please check all safety equipment

1. Please check for all safety equipments like head light, flasher/ blinker light, marker light and tail light, speedometer, horn etc
2. Note the defects and booking of your Loco/EMU log book & inform to Control.
3. ALP & LP should check the working of VCD.
4. Unauthorized persons should not be allowed in driving cab.
5. LP, s/ALP, s before starting from shed/ siding, conduct brake continuity test.
6. Loco pilot must conduct Brake Continuity Test, and ensure possession of valid BPC after taking charge of train. Minimum Brake Power for goods train- 85% and for M/Express/Passenger train- 100%.
7. Ensure functioning of brake system as per procedure and loco pilot to ensure adequate MR, BP and FP pressure.

III. Before starting the train:

1. Ensure that correct starting signal pertaining to your line is properly taken OFF.
2. Loco pilot should follow rigidly SWBS (Signal OFF, Whistle, and Exchange Bell Code and Start).
3. Loco pilot should exchange alright hand signal with guard/ station staff after confirming the correct signal aspect by him.

4. Loco pilot must not start his train from a station without proper authority. Before starting the trains he must identify the correct signal of his line in OFF condition and where necessary hand signal are given & the line before him clear of visible obstruction and the guard has given the signal to start.
5. Do not insert/ operate reverser handle till the signal is taken OFF.
6. Accelerate gradually for smooth starting of your train.
7. Obey the correct aspect of your signal and immediately act on it.

IV. After Starting:

1.Loco pilot must conduct brake feel test immediately after starting preferably at a speed of 20kmph but not later than achieving a speed of 30kmph. This shall be done in the very first section after starting.
2. If brake power is unsatisfactory then clear the block section cautiously with restricted speed and ask for TXR at the next station.
3. Loco pilot and ALP must call out the correct aspect of signal with its proper identity loudly.
4. Always keep your train under perfect control and keep a sharp look out for correct signals pertaining to your line and reduce speed proportionately accordingly to signal aspects. Do not assume the aspect of the signal before seeing it.
5. If the signal aspect is 'Red' bring the train to dead stop before the 'Red' signal, except where EMU Halt board or Engine Halt Board is close to signal when the signal is 'ON'. Train shall start with proper written authority or permissive board on signal.
6. Observe the signal aspect until the train has passed.
7. Observe all permanent & temporary speed restriction rigidly.
8. Avoid over speeding & over confidence.
9. LP & ALP never use mobile phone during run and must obey the alcohol policy. **STAY AWAY FROM THE ALCOHOL.**
10. LP & ALP control the speed while negotiating speed sensing device avoid catch siding.
11. Do not leave the locomotive unmanned after taking overcharge **(GR-4.61).**

12. Proper procedure to be adopted for changing of locomotive cab in a yard line/stabling siding shall be ensured.
13. ALP's must apply emergency brakes by opening RS valve quickly in case they find lack of alertness on the part of loco pilot while approaching signals.

15. In case of failure of locomotive on gradient section the train protection as per GR & SR must be ensured.

V. <u>Precautions to avoid platform overshooting:</u>

1. Loco pilots/ motorman should ensure the availability of prescribed brake power Percentage in their train.
2. Always keep working time table open & ensure the proper stoppage of train at every halts as per WTT.
3. Motorman should conduct brake feel test and also loco pilots test at first opportunity.
4. Keep in mind the load of your train for controlling the speed and making appropriate halts.
5. Ensure the train is not in fully released condition while approaching EMU halt board/ engine halt board, but always keep your train in braked condition with the help of brake controller LAP position.

6. While rolling into platform always keep your train under your perfect control for stopping without jerk.
7. Keep a sharp look for EMU halt board /engine halt board.

7. Critical location of the signal (ASN, HWH & SDAH div.):

ASN Division:

Due to poor visibility of Signals, owing to curvature & obstruction by OHE, PF/shed, and Digital Clock etc. There is a possibility of signal passing at Danger during run. Details of Signals are given as follows:

S.N	Signal.	Station/Line.	Reason for visibility obstruction.
ASN - BWN			
1	KPK Str/Sig.	KPK DN ML-II	Obstructed by branches of Tree & Sharp curve.
2	NMC H/Signal.	NMC DN ML-I	Obstructed by OHE mast.
3	RNG H/Signal.	RNG DN/ML-I	When other Train blocking DN ML-II.
4	DGR Str/Signal	DGR DN ML-II	Due to Sharpe Curve.
5	DGR Str/Signal	DGR DN ML-I	By Platform Shed.
6	PAN Str Signal	PAN DN ML-II	Due to Sharpe Curve.
7	MNAE Str/Sig.	MNAE DN ML-II	Due to Sharpe Curve.
8	MNAE Str/Sig	MNAE DN ML-I	By Platform Shed.
9	KAN Str/Sig.	KAN DN ML-I.	When other Train blocking DN ML-II.
10	BWN H/Sig.	BWN DN ML-I	When other Train blocking DN ML-II.
BWN - ASN			
11	BWN Inter mediate Str/ Sig (No-S 23).	Obstruction due to sharp curvature	When other Train blocking UP ML-II.
12	GLI Inner distant Signal.	GLI UP ML-I.	When other Train blocking UP ML-II.
13	MNAE UP ML-II S/Sig.	MNAE UP ML-II	Obstruction due to curvature
14	RNG Str/Signal	RNG UP ML-II.	By platform shed & PF numbering boards.
STN-JAJ-STN			
15	CRJ Home Signal.	CRJ UP ML	Obstruction due to sharp curvature
16	MUW Str/Sig	MUW UP ML.	Obstruction due to sharp curvature.
17	JSME Loop Str.Sig	JSME DN Loop	Obstruction due to curvature & PF Shed.
18	JMT Loop Str.Sig.	JMT DN Loop.	Obstruction by PF Shed.
19	SLS Home Sig.	SLS DN ML.	Obstruction due to sharp curvature.
20	STN EOC/H-Sig of UP ML-1.	STN EOC. of UP ML-1.	Obstructions due to OHE counter weight.
21	Top light of KEE cabin was coinciding with up ML H/Sig of KEE.	At KEE Station.	Conceding due to Halogen Lamp use.
STN-GMO-ASN			
22	BRR UP ML Str Sig.	BRR UP ML.	Situated at curve
23	MMU UP ML Home Sig.	MMU UP ML.	Situated at curve
24	KAO UP ML Home Sig.	KAO UP ML.	Situated at curve
25	CAM UP ML Home Sig.	CAM UP ML.	Situated at curve
26	PKA UP ML Home Sig.	PKA UP ML.	Situated at curve
27	DBH UP ML Home Sig.	DBH UP ML.	Situated at curve

28	MRQ UP ML Home Sig	MRQ UP ML.	Situated at curve
29	NPJE DN ML Home Sig.	NPJE DN ML.	Situated at curve
30	DBH DN ML Home Sig.	DBH DN ML.	Situated at curve
31	PKA DN ML Home Sig.	PKA DN ML.	Situated at curve
32	KAO DN ML Home Sig	KAO DN ML.	Situated at curve
UDL-ANR-UDL			
33	KPK Link Home Sig.	UP KPK LINK ML	Situated at Sharp curvature.
34	DMA UP ML Home Sig.	DMA UP ML	Situated at Sharp curvature.
35	MDF UP ML Home Sig.	MDF UP ML.	Situated at curvature.
36	JOC Gate Signal.	JOC UP ML.	Situated at curvature.
37	Gate No-2.	Gate Signal No-2G.	Situated at curvature.
UDL-PAW-UDL			
38	UDL/Jn.Cabin H/Sig	DN West Line.	Situated at curvature.
STN- JAJ-STN			
39	CRJ UP ML Home Signal.	CRJ UP ML.	Situated at Sharp curvature

Signal placed on right hand side of track (ASN Division)

NO	STATION	Signal placed on right hand side of track	S.NO	STATION	Signal placed on right hand side of track
1	GLI	UP L-1 Distt.Signal	21	KAO	UP Main Line Home Signal
2		UP L-1 Str Signal	22		UP loop line Starter sign
3	PAJ	UP L-1 Distt.Sigal	23	CAM	UP Main Line Home Signal
4		UP L-1 Inner Distt.Sigal	24		DN Main line Str Indicator
5	RBH	UP L-1 InnerDistt.Sigal	25	STN/RRI	UP L-1 Home Signal
6	LC 18/SPL/T (DCOP-OYR)	UP L-1 Gate Home signal	25A		Dn Str Signal on L No-7(PF5) signal no-20
7	POL	DN L-1 Str signal	26	SLS	Dn Str signal on Damaguria line
8	UDL/RRI	Branch Line Dn Home Signal	27		Dn Main line Starter signal
9		Dn L-1 Intermediate Starter Signal	28	JMT	UP Starter signal on Dn Main line
10	KPK	UP L-1 Home signal	29		DN Starter signal on Dn Main line
11	ASN/RRI	UP L-1 Home signal	30	UDL/JN	Dn Intermediate Home Signal
12		Dn L-1 Home signal	31	TOP	Signal No 38/39(Semaphore

					signal)
13		Dn Str SIgnal of Line no.-5	32		Signal No-8/9/10 (Semaphore signal)
14	STN/GC	UP GC Str Signal	33		Signal No.-13/14
15	KMME	UP Main Line Starter Signal	34	BBI	Signal No-28 (Semaphore signal)
16	MMU	Dn Main Line Starter Signal	35		Signal No-29 (Semaphore signal)
17	Auto Section (STN-CAM)	Automatic Signal A-11	36 36		Signal No-30 (Semaphore signal)
18		Automatic Signal A-17	37		Signal No-14/15 (Semaphore signal
19		UP Home Signal			
20	TNW	UP Starter Signal			

Right Hand Side Of HWH division.
Section- HWH-BDC (Main Line)

Sl. N.	Station	Name/No. of Approach Signal	Name /No.of Departure Signal	Total No. of Signal in R/Side
1	HWH	AR 3,SA 24,Up Rev. Line	Sig. No. 1	4
2	LLH		Str signal No. 14 (DN),Up Rev. Str. Signal No.21	2
3	BEQ	Up Home Signal No. SA 6A/B	Up Rev. Str Signal No.11	2
4	BLY		DN. Rev. Str. Signal No.5	1
5	UPA		Up Rev. Str. Signal No.8. Sig.No.AR13 and AR15	3
6	KOG		Str. Signal No.8AB	1
7	RIS		Str.Signal No.13 AB	1
8	SRP	Sig.No. AR7 (Ext- Right)	UP Rev. Str Sig No.12	2
9	SHE	Up Rev. Home Sig. No. 7AB, S-15	DN. Str Sig .No. SA10.Up Rev. Str. Sig.No. 21 and AR31	5
10	CGR	DN. Rev. Home Sig.No.10.	DN. Rev. Str Sig No.12	2
11	CNS		DN. Rev.Str Sig. No.13 and Sig. No. AR40.	2
14	BDC	UP Rev. Home Sig No.35.	DN. Str Sig.No.14 (PF_2). DN Str Sig. No.8 (PF-4). DN.Str SigNo.18. (PF5).	4
15	BHR		Up Rev. Str Sig.No.23AB.	1

Section- HWH-BWN (HBC)				
16	DKAE		Up Str Sig no .21,21A	2
17	JOX	Up Rev. Dist/Gate Sig. No. 12C Up Rev .Inner Dist. And Up Rev. Home Sig.		2
18	BRPA	Up Rev. Dist./ Inn.Dist Up Rev. Home Sig No. 3A/B/C. UpRev. nn. Dist of GateNo.24C.Up Rev. Gate Sig No.3 of GateNo.24C	Up Rev. Adv. Str Sig.No.11.	5
19	KQU	Up Rev. Home SigNo.3	Up Rev. Str Sig. No.7AB.	2
20	CDAE	Up Rev. Dist., Inn.Dist, and Up Rev.Home Sig.	Up Rev. Str Sig. No.21,Up Rev. Adv. Str Sig.No.15.	5
21	BMAE	Up Rev. Home Sig.No.3,Rev. Dist,Inn.Dist.	Up Rev. Str Sig No. 5AB. Up Rev. Asv. Str Sig.No.11.	5
22	CRAE	UP Rev. Dist.,InnDist, and H/SigNo.1.	Up Rev. Str Sig. and Up Rev. Adv. Str Sig. No.14.	5
23	GRAE	UP Rev. Dist., InnDist,and Home Sig.	Up Rev. Str and Adv. Str	5
24	JRAE	Up Rev.Dist, Inn. Dist and Home Sig.	Up Rev. Adv. Str.	4
25	MSAE	Up Rev. Dist. And Inn.Dist	Up Rev. Str and Adv. Str	4
26	PRAE	Up Rev. Dist. Inn.Dist and Home Sig.		3
27	BWN	Dn R/ H/S -10A/B(For Dn L/2), Dn R/H/S- !2A/B (For Dn L/1)	UpStrno,11(PF-2) UpStr-1(Up +Dn recving line,) Up Str no.3(PF-6)Dn/Str no8/11 pf-3 Dn Str 7E (End of PF-3) Dn Str .9/10(Pf-5) Dn Str no 9A/10A (Pf-6)	10

Extreme Left Hand Side

28	BWN	Up/In/st rno. 23A /B (up l-1) Up/In/str no-25 (UP L-2) , Dn Dist+ In. Dist +Dn /H/S- 22/A/B/C,(For L-1),Dn Dist+Dn In.Dist+ Dn /R/H/S-24/A/B/C	8
29	TIT	UP Dist,+InDist+G/H/sw=3/D-3 Of L/cGateno 55(for L-1) Up Dist+IN.Dist +G/h/Sw-1/D-1)(For L/2 Of L/C/G- 55)	6
30	KAN	Up Dist (D-2)+ InDIst(D-1/SW-3),+G/H/S(D-1/SW-3/SW(3),L/C/G-no. 58/B UP M/L /G/H/S D-1/SW-3D Up Dist(D-2/Sw-(5)+In.Dist+G/H(D-1/Sw-5/Sw(5) of L/C Gate no.58/B Up G/H/S-D-1/Sw-5 of L/C Gate no.59/B	8

संरक्षा के प्रति जागरुकता से जीवन की रक्षा होती है.

Critical Location of Signal in SDAH division:

Section- SDAH-NH(Main Line) UP			
Station Section Signal	**KM/No.**	**Location**	**Remarks**
KGK-BNXR AD-13	2/33Q	Above OHE	Above OHE
BNXR-DDJ AD-15	3/35Q	R/Hand	Right Hand Side
PTF Gate LC-19	25/11 Q	R/Hand	Right Hand Side
KNR I /Home (S13)	34/21Q	Left	Obstructed by Old Cabin
NH Distant	35/13Q	R/Hand	Right Hand Side
NH Home (S3)	36/13Q	R/Hand	Right Hand Side
Section- -NH – SDAH (Main Line) DN			
KNR I (Str (S8)	34/24Q	Left	'Y' Yellow aspect diversion to M/L. No route indicator
IP Gate LC-18	25/4Q	Left	Curvature
IP Gate LC-17	24/8Q	Left	Curve and obstructed by OHE mast
IP Gate LC-16	23/30Q	Left	Curvature
SEP Home (S6)	15/30Q	Left	Curve and obstructed by OHE mast
DDJ-BNXR AD-18	4/28Q	Above OHE	Above OHE
SDAH Home (S87)	1/4Q	R/Hand	Right Hand Side
Section- SDAH-NH (Suburban) UP			
KGK-BNXR AD-1	2/33	Above OHE	Above OHE
BNXR-DDJ AD-5	4/3	R/Hand	Right Hand Side
BNXR-DDJ AD-7	4/25	Above OHE	Above OHE
BNXR-DDJ AD-9	5/13	Left	Curvature
IP Home (S1)	26/3	Left	Obstructed by OHE mast 26/3
KNR /Home (S3)	33/9	Left	Curvature
Section- -NH – SDAH (Suburban) DN			
BP Home (S14)	23/16	Left and curve	Curvature
SEP Gate LC-5(AG54)	14/8	Left	Obstructed by OHE mast 14/8
DDJ-BNXR AD-8	4/28	Above OHE	Above OHE
BNXR-KGK AD-2	2/36	Above OHE	Above OHE
Section- DDJ-DKAE UP			
DDJ ADK-3	12/12	Left & Curve	Curvature
BARN Str	4/33	Left	Obstructed by BARN PF Shed
ADK-13	9/11	Left	Obstructed by OHE mast
Section- DKAE-DDJ DN			
CCL Home	12/12	Left and curve	Curvature
CCL Str	11/8	Left and curve	Curvature
CCL Adv Str	10/12	Left and curve	Obstructed by RCD PF Shed.

आज ही नही बल्कि कभी भी असंरक्षित कार्य न करें.

8. Quick Bits in 3 Phase Loco: for faster ways of trouble shooting/fault isolation on line

Abbreviations used –

CODE	ABBRIVIATION	CODE	ABBRIVIATION
DDS	Diagnostic Data Set	SB-1&2	Low Tension control MCB Panel 1&2
VCD	Vigilance Control Device	BUR	Auxiliary Converter
MCB	Miniature Circuit Breaker	HB-1&2	High Tension control MCB Panel 1&2
BPFA	Push Button switch for Fault Acknowledgement	OCR	Over Current Relay (in SB-1)
BPPB	Push Button switch for Parking Brake	FDU	Fault Display Unit
PSA	Pedal Switch for sander	ZTEL	Traction Limit Switch

(1) DJ Tripping:

DJ should be immediately closed once again if it trips on run after reading and acknowledging the fault/disturbance message on DDS. If the DJ trip again on converter disturbance and no automatic bogie isolation is observed, manual isolation of the culprit bogie can be done in running condition without switching OFF/ON electronics and loss of time.

(2) Pressure Drop/Slow creation:

(i) Slow creation of pressure could be because of leakage from Air Dryer. In such a scenario, the air drier be isolated immediately.

(ii) Pressure drop may also occur due to VCD getting activated due to being defective. Isolate the VCD and look for reason for malfunctioning at the next stop station to avoid further detention in the block section. VCD isolation can be done using switch 237.1.

(3) Loss of Traction:

In case angle transmitter going defective, immediately switch over to manual mode using switch 152 in running condition. There is no need to stop.

(4) Harmonic Filter:

(i) In case of Harmonic filter isolation and speed reduction to 40 KMPH, isolate SR-I using switch - 154 and work with one bogie. If the problem persists, clear block- section at 40 KMPH.

(ii) MCB- 127.7 in SB-2 needs to be checked first during brake electronics failure.

(iii) Application/Release of Parking Brakes through pneumatic panel, BPPB, release spindle at the time of starting or engine on train.

(iv) Regulated use of sander (PSA) instead of continuous use is recommended. Continuous use of sander is not only ineffective but could also lead to MR drop.

(5) Auxiliary Converter/ BUR failure:

In case of Main Power getting OFF due to BURs isolation, LP should switch "ON/OFF" the electronics. If got success then continue otherwise fail the locomotive and demand fresh power. However, the loco can continue to work with one BUR isolated.

(6) BA voltage low/MCB-100 tripped:

Give timely attention to fault message of priority-2 so that loco does not shut down with fault Message of priority-1 later on. Tripping of Battery Charger MCB- 100 invariably leads to P-2 battery message. Switching ON MCB 100 has to be done with DJ in OFF condition.

(7) General Delicacy:

(i) Any fault message in DDS should not be acknowledged without reading and follow up as suggested. Once acknowledged, the message gets lost.

(ii) Any such messages requiring train to stop, effort should be made to clear the block section in coasting and then attention to the message.

(iii) Three phase tripped MCB in HB-1/HB-2 can be put in ON once to restore an equipment. Two different mechanisms to put ON a tripped MCB are available for ABB and MG make MCBs, which should be clearly understood. Restoring the MCB does not require switching OFF/ ON of the electronics system.

(iv) P-1 messages have to be immediately acted upon and course of action is also available in DDS. P-2 messages need not be acted immediately except for BA voltage low/MCB-100 tripped. P-1 messages come with a red flashing of LSFI in addition to BPFA.

(v) Configuration switch 160 restricts loco speed to 15 KMPH and can be corrected without switching electronics "OFF/ON" in much lesser time. However, the loco has to be dead stopped before operating switch – 160.

Issued by CELE/NR vide letter no. 147-Elect/TRS/6/2/Vol.XXIV dated 30.01.12

Relevant content of subject "Increase in operational failures affected Punctaulity performance during 2014-15 (up to Jan) in the RB letter no- 2014/Elect(TRS)/155/1 New Delhi dated 26.02.15
Point-5.

A special counseling drive to be completed in one month covering all running staff for following objectives:

(i) Counseling regarding action to be taken by crew for fire prevention in 3-phase locos e.g. reporting of oil leakage near traction converters, fully understanding purpose of mechanical locking of OCR-78 & significance of FDU,TM temperature high, oil pressure not ok etc. message on DDS.

(ii) Counseling regarding checking of abnormal high temperature of axle boxes and intactness of all safety items in loco under frame e.g. brake rigging, traction bars, axle guide links, damper & springs, compressors & availability of safety slings by crew.

Some additional suggestions for Loco Pilot in 3-phase loco:

(i) It has come to notice that some times Fire Detection Unit is activated from the out side smoke (burning of grass, bushes and burning material near by the track) or smoking of cigarette etc. In that case fault F- 1502P2 SS15: Fire detection Warning appears on the screen and BPFA glows. LP is advised to trouble shoot as per TSD of 3-phase loco.-

(ii) If TE does not increase beyond 300KN in WAG-9//WAP-7 & 150 KN in WAP-5 then LP should check ZTEL switch on "A" panel whether it is 'ON" or "OFF", ZTEL should be kept "OFF".

The percentage (% tractive/braking) of effort is indicated on the two-tractive/braking meters on panel A.

Hindi

थ्री फ़ेज लोको के शीघ्र अंश (नुस्खे): लाईन में द्रुत तरीके से दोष-निवारण तथा दोषी उपकरण को काम से अलग करना.

1. DJ की ट्रिपिंग

चलायमान स्थिति में यदि DJ ट्रिप करे तो DDS में फॉल्ट/डिस्टर्बैन्स मेसेज को पढ़ने तथा एकनॉलेजमेंट करने के बाद इसे पुनः एक बार बंद करे। यदि कंवर्टर में डिस्टर्बैन्स मेसेज के साथ DJ ट्रिप करें तथा स्वतः बागी का आइसोलेशन न हो, तो इलेक्ट्रॉनिक्स को बिना ऑफ/ऑन किए तथा बिना समय हानि के दोषी बॉगी को मैनुअली आइसोलेट किया जा सकता है।

2. प्रेशर का गिरना/मंद गति से बनना:

(i) एअर ड्रॉयर में लीकेज के कारण प्रेशर मंद गति से बन सकता है। ऐसी स्थिति में एअर ड्रायर को तुरंत आइसोलेट करना चाहिए।

(ii) VCD में खराबी के कारण इसके सक्रिय होने से भी प्रेशर गिर सकता है। ब्लॉक सेक्शन में VCD को अइसोलेट करें तथा अगले स्टेशन स्टॉप पर इसके खराबी के कारण की जाँच करें जिससे ब्लॉक सेक्शन में विलंब से बचा जा सके। VCD का आइसोलेशन, स्विच 237.1 के माध्यम से किया जा सकता है।

3. ट्रेक्शन हानि:

एंगिल ट्रांसमीटर फेल होने पर स्विच-152 की सहायता से रनिंग अवस्था में मैनुअल मोड में चला जाना चाहिए। गाड़ी को खड़ी करने की आवश्यकता नहीं है।

4. हार्मोनिक फील्टर:

(i) हार्मेनिक फील्टर आइसोलेट होने तथा स्पीड 40 KMPH हो जाने पर स्विच 154 की सहायता से SR-1 को आईसोलेट करें तथा एक बागी से कार्य करें। यदि समस्या जारी रहती है, तो 40 KMPH से ब्लॉक-सेक्शन क्लीयर करें।

(ii) ब्रेक इलेक्ट्रॉनिक्स फेल होने पर सर्वप्रथम SB-2 में लगे MCB-127.7 की जाँच करें।

(iii) स्टार्ट करने के पहले या ट्रेन पर इंजन होने पर पार्किंग ब्रेक को लगाना/रिलीज करना न्युमेटीक पैनल, BPPB रिलीज स्पिंडल से करें।

(iv) यह सिफारिश किया हुआ है कि सैंडर (PSA) का प्रयोग नियमतः करना चाहिए न कि सतत्।

5. <u>आक्जीलियरी कंवर्टर/बर(BUR) फेलः</u>

बर के आईसोलेट होने के कारण मेन पावर ऑफ होने पर लोको पॉयलट को इलेक्ट्रानिक्स को ऑफ/ऑन करना चाहीए। यदि सफलता मिले तो कार्य करना चाहिए अन्यथा लोको फेल करके नए पावर की माँग करनी चाहिए।

6. **<u>बैट्री वोल्टेज कम/</u>**MCB-100 **<u>ट्रिप</u>**:

प्रायरिटी-2 के फाल्ट मेसेज पर समय पर घ्यान देना चाहिए ताकि बाद में प्रायरिटी-1 से फाल्ट मेसेज के साथ लोको शट डाउन न हो। बैट्री MCB-100 की ट्रिपिंग से प्रायरिटी-2 का बैट्री फाल्ट अग्रसारित होता है। MCB-100 का स्विच ऑन DJ की ऑफ अवस्था में करना चाहिए।

7. <u>सामान्यः</u>

(i) DDS के फाल्ट मेसेज को बिना पढ़े तथा सुझावित कार्य को किए वगैर उसे एकनॉलेज नहीं करना चाहिए.एक बार एकनॉलेज कर देने पर मेसेज खत्म हो जाता है.

(ii) ऎसा मेसेज जिसके कारण ट्रेन को खडी करने की जरुरत हो , तो कोशिश करनी चहिए कि कास्टिंग में ही ब्लॉक सेक्शन साफ हो जाए तब मेसेज पर ध्यान दिया जाए.

(iii) HB-1/HB-2 के थ्री फेज MCB ट्रिप होने पर उपकरण को पुन: कार्यरत करने के लिए एक बार री-सेट किया जा सकता है. ट्रिप्ड MCB को री-सेट करने के लिए दो कंपनियों ABB तथा MG की भिन्न पद्धतियों को समझना जरुरी होता है. MCB को री-सेट करने के लिए ईलेक्ट्रॉनिक्स को ऑफ/ऑन करने की जरुरत नहीं होती है.

(iv) P-1 फॉल्ट मेसेज पर तुरंत कार्यवाई जरुरी होती है, जिसके बारे में DDS मेसेज में जानकारी उप्लब्ध हो जाती है. BA- वोल्टेज लो/MCB -100 ट्रिप्ड के P-2 मेसेज को छोड कर P-2 के अन्य फॉल्ट मेसेज पर तुरंत कार्यवाई की जरुरत नहीं होती है. P-1 का फॉल्ट मेसेज होने पर BPFA के जलने के अलावा LSFI की बत्ती फ्लैश करती है.

(v) कंफिग्युरेशन स्विच – 160 लोको की गति को 15 KMPH तक प्रतिबंधित करता है तथा इसका सामान्यीकरण ईलेक्ट्रॉनिक्स को बिना ऑफ/ऑन किए किया जा सकता है.

"Increase in operational failures affected Punctaulity performance during 2014-15 (up to Jan) in the RB letter no- 2014/Elect(TRS)/155/1 New Delhi dated 26.02.15 से संबंधित विषय पर प्वाईंट-5 में चालक के लिए सुझाव-

<u>एक महीने क अन्दर निम्नलिखित उदेश्य के लिए सभी रनिंग स्टाफ को विशेष परामर्श-</u>

(i) थ्री फेज लोको में आग से बचाव के लिए की जाने वाली कार्यवाई के बारे में क्रू को परामर्श- जैसे- ट्रैक्शन कंवर्टर के समीप तेल का लीकेज के बारे में सूचित करना, **OCR-78** के मेकानिकल लॉकिंग के बारे में पूर्ण समझदारी, **FDU** का महत्व - **TM** तापमान का उच्च होना, ऑयल प्रेसर का **O.K** न होना आदि.

(ii) एक्सल बॉक्स के असामान्य उच्च तापमान की जॉच तथा लोको अंडर फ्रेम में सभी सेफ्टी ऑयटम जैसे- ब्रेक रीगींग, ट्रैक्शन बार,एक्सल गाईड लिंक, डैंपर & स्प्रिंग, कंप्रेसर तथा सेफ्टी स्लिंग के बारे में जॉच के बारे में क्रू को परामर्श करना.

<u>थ्री फेज लोको के लिए कुछ अतिरिक्त सुझाव:</u>

(1) यह देखा गया है कि कभी-कभी बाहरी धुआँ (रेलवे ट्रैक के नज़दीक घास जलने, झाड़ी या ज्वलनशील पदार्थ) या सिगरेट के धुआँ के कारण भी फॉयर डीटेक्शन युनिट सक्रिय हो जाता है. इस परिस्थिति में स्क्रीन पर **F- 1502P2 SS15: Fire detection Warning का मेसेज आएगा तथा** BPFA जल जाएगा. लोको पॉयलट को सुझाव दिया जाता है कि वे थ्री फेज लोको के TSD के अनुसार दोष निवारण करें.

(2) यदि WAG-9//WAP-7 लोको मे ट्रैक्टीव ईफोर्ट (TE) 300KN तथा WAP-5 लोको में 150 KN से ज्यादा न मिले तो पैनल- A पर लगे स्विच- ZTEL की जॉच करें कि यह 'ON" में है कि "OFF" में इसे "OFF" में होना चहिए.

<u>परसेंटेज ओफ ट्रैक्टीव/ब्रेकींग की जानकारी</u> पैनल- A में लगे दो मीटर- ***tractive/braking*** से मिलती है.

9. Crew Management System (CMS)

Introduction:

CMS (Crew Management System) was launched in December 2007 and Developed by Centre for Railway Information Systems (CRIS). Over 100,000 train loco pilots/Assistant loco pilot/Guard which use CMS. They functioning basic team responsible for train operation over entire Indian Railways. CMS at present has a database covering 89,000 crew members and over 30000 crew members are being booked daily through the system. CMS has been developed to bring in transparency and greater accuracy of information.

Objective:

- Optimum and effective utilization of crew.
- Effective scheduling and assignment of train of crew.
- Schedule rest.
- Paperless lobby.
- To generate computerized mileage report and payroll.

Benefits of CMS:

- On line details available for crew including mileage earn, night unit, last taken 30 hrs rest, last trip night duty, non-run status training, and many more.
- Crew get SMS alert for 30 hrs rest, leave, training and many more
- All crewing information is readily available through a common data platform.
- All offices are synchronized at all times.

- Graphical User Interface for planning as well as for running daily operations with full checking mechanism.
- Time saving: crewing and payroll data need only be entered once.
- A combined system for crewing and payroll saves time and money.
- Balanced scheduling efforts more efficiently by offering managers clear, real-time insight into the skill sets and locations of employees
- Automated employee assignments, avoiding staffing shortages and overtime expenditures even if employees are late to work or absent
- Encouraged increased public safety by controlling rail access with biometric login systems and by controlling shift lengths to prevent overworking staff
- Crew can see various type of report after open site and login on mention below through mobile and computer:
  Login to this site: www.cms.indianrail.gov.in/cms report

CMS REPORT LOGIN	
○	MOBILE/REPORTED USER
○	LOBBY/DIVISION/ZONE USER
◉	KOISK CREW LOGIN
USER ID	Enter your cms id As asn1234
PASSWORD	Enter your cms id password As 123

Select KOISK

Resolution: 480X800

Login

SMS feature

The Crew Management System software has a unique feature of booking the crew through SMS. It is sent to the crew through the central database to serve it a call. If the crew acknowledges the call by sending back an acknowledgment through SMS, the crew is booked. This is done for those crews who reside farther than 7–8 km from the crew booking location, else a call boy is sent for the same. Thus the software facilitates faster crew booking.System generated alerts are also sent to the required personnel in the following manner:-

1. The crew can have his personnel information like turn of crew booking, Status, PME, Mileage and other Training due dates on his Mobile.
2. Congratulations on birthdays to crew members of whom date of birth are with the database.

Biometrics sign on/off feature

With the help of the Crew Management System software, sign on/sign off of crew members has become extremely easy. At the lobby, they are provided with Kiosks, where they use their thumb impression to sign on/sign off. This has removed the need of their signing in registers or remembering passwords. It is very user friendly and easily adaptable by the crew. Also, it has increased security and authentication as it eliminates the possibility of Proxy reporting. It is legally binding. Now BA (Breathalyzer) capabilities are being added to Kiosks. It is very

important from the point of view of safety running of the train. Herein, the crew blows from his mouth into the device, and if there is any alcohol content found, a thorough check is done.

Procedures to be followed by the running staff at the time of Sign "ON" and sign "OFF" duty

The conventional method of 'Signing-on' and 'Signing-off' in Departure and Arrival register is now being replaced by signing on and signing off in computerized system named "Crew Management System." For signing On/Off in the system following steps to be taken:

Step -1

Language selection:

Crew will select the language Hindi or English.

Step-2

Crew Identification:

Crew is be identified by entering crew ID and password on the screen.

Step -3

Crew/Inspector Selection

Based on the ID the system recognizes the crew is for a LI or Crew (Loco Pilot/Guard)

Step -4

Crew activity options:

After the crew identification activity a screen with the following option will appear

a) Sign On/Sign Off; b) Quick ; c) Crew Self Service; d) Circulars; e) Change password.

Step -5

Information related to the Crew and Train to be confirmed – The brief information of the crew (bio particulars) along with train information will be displayed in brief by the CMS system. Crew will see it and if the information regarding the crew particulars is not correct then the crew may try to sign on again using crew ID and password. If still it is not allowed then the crew has to approach the supervisor for further corrective action.

Step -6

Sign-ON:

While signing ON the crew shall be offered the following interactive options which have to be entered through check boxes.

a) In case the crew is using spectacles then confirmation whether the crew is carrying two sets of spectacles.

b) If crew has not read the latest circulars then he is flashed message that "you have not read the latest available circulars please read them."

c) Confirmation that the bio particulars displayed by the CMS system are correct.

Step -7

Caution order:

The crew is offered the caution order of the section on which the crew has been booked. The crew has to essentially see the caution order before proceeding further.

Step -8

Sign-ON Completion:

Crew will click 'Sign On' to complete the sign-on activity. He will be presented with the success message and will be greeted for the journey.

Approval by supervisor:

Supervisor will approve/disapprove that the crew has met all the mandatory requirements including the BA rest. In no case the crew shall be able to sign OFF at the destination lobby unless the supervisor at the base station has given the Sign On approval.

Crew Sign Off:

Crew has to Sign Off after completing his running duty. Sign Off activity is carried out at the lobbies in the presence of the Supervisors ATFR/CCNL. They shall accord Sign Off approvals for completing the journey.

Sign Off screen:

The crew once Signed On shall always be offered the screen to Sign Off. Unless he Signs Off and is approved by the supervisor he shall not become available for next crew booking. Based on whether the Sign Off is at HQ or outstation the different rest particulars are asked from the crew. Crew shall select the rest option and Sign Off.

Your valuable Feedback is significant for us.

Notes

Notes

विद्युत परिचालन आसनसोल

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ELECTRIC OPERATION ASANSOL