

**EAST COAST RAILWAY  
SAMBALPUR DIVISION**

Sl. No. SWR/JRPD/22

**STATION WORKING RULES OF JARAPADA STATION (CODE: JRPD)**

BG/MG/NG: Broad Gauge

Date of issue:-

Date brought into force -

**NOTE:** - The Station Working Rule (SWR) must be read in conjunction with General and Subsidiary Rules and Block Working Manual. These rules do not in any way supersede any rule in the above books.

**1. STATION WORKING RULE; -**

1.1 **STATION WORKING RULE DIAGRAM NO.** S.I / WRD –22089. ALT-A

1.2 **SIGNAL INTERLOCKING PLAN NO.:** - S.I– 22089, ALT-B.

The Station Working Rule diagram and Signal Interlocking Plan shows the complete lay out of the yard, siding, normal position of points, the Signalling and Interlocking arrangements, Gradients and Level Crossings within the station limits. This must be referred to for giving details of the point numbers and signals when reporting accidents.

**2. DESCRIPTION OF STATION: -**

JARAPADA is a three-line station situated in Sambalpur-Talcher section at KM. 132.712 from Sambalpur. It is Standard – II (R) interlocked, Class ‘ B ’ station with central panel and absolute block system of working. LVCD axle counters at either end are provided at the station for last vehicle check.

**2.1 GENERAL LOCATION: -**

2.1.1 **NAME OF STATION:** - **JARAPADA (JRPD)**

2.1.2 **CLASSIFICATION OF STATION:** - ‘B’ class

2.1.3 **NAME OF THE SECTION:** - Sambalpur-Talcher, Single Line, Non-RE, BG section

2.1.4 **ROUTE:** - D Spl.

2.1.5 **LOCATION:** - KM.132.712 From Sambalpur & Km 695.712 from HWH (via JSG-SBP).

**2.2 BLOCK STATIONS, IBH, IBS ON EITHER SIDE & THEIR DISTANCE & OUTLYING SIDINGS: -**

- i) Sambalpur end - BOINDA (Code: BONA) inter distance 15.147 K.M.
- ii) Talcher end - KEREJANGA (Code: KPJG) inter distance 9.990 K.M.
- iii) Passenger halt: - Nil
- iv) Flag station: - Nil
- v) Outlying siding: - Nil
- vi) D.K. station: - Nil.
- vii) IBH: - Nil
- viii) IBS: - Nil

2.3 **BLOCK SECTION LIMITS: -**

Between stations	The point from which 'Block section' commences.	The point at which 'Block section' ends.
Between JRPD- BONA	DN Advanced starter signal No.5 of JARAPADA	UP advanced starter signal of BONA.
Between JRPD - KPJG	UP Advanced starter signal No.14 of JARAPADA	DN advanced starter signal of KPJG.

2.3.1 **STATION SECTION:**

The station section is between the UP and DN Advanced starter signals of the station.

2.3.2 **STATION LIMIT:**

The portion of line between UP and DN Distant signals of JARAPADA station is the station limit of the station.

2.4: **GRADIENT: -**

(a) From the centre of the station building towards BOINDA.

Chainage in Metre		Inter-Distance	Gradient
From	To		
0 m	600 m	600 m	1 in 1200 R
600 m	1645 m	1045 m	1 in 150 R
1645 m	2430 m	785 m	Level
2430 m	5580 m	3150 m	1 in 150 R
5580 m	Block Section	---	Level

(b) From the centre of station building towards KEREJANGA

Chainage in Metre		Inter distance	Gradient
From	To		
0 m	600 m	600 m	1 in 1200 F
600 m	2850 m	2250 m	1 in 150 F
2850 m	3100m	250m	Level
3100m	Block Section	----	1 in 150 F

2.5 **LAY OUT: -**

- i) No. of running lines :- 3 ( Three )
- ii) No. of sidings :- Nil
- iii) No. of Passenger platform :- 1 (One High level Passenger Platform beside line No-1,( 400 x 9.44 m)
- iv) No. of goods shed platform :- Nil.

2.5.1 **RUNNING LINES, DIRECTION OF MOVEMENTS AND HOLDING CAPACITY IN CSL: -**

(i):

Line No.	Description	CSL	Isolation Provided	
			TLHR end	SBP end
Line No. 1	1 <sup>st</sup> loop line	728.1 M (STR-STR)	ORL	ORL
Line No.2	Main line	720.2 M (STR-STR)	-	-
Line No.3	2 <sup>nd</sup> loop line	730.2 M (STR-STR)	ORL	ORL

(ii) **DIRECTIONS OF MOVEMENT: -**

Trains arriving from BOINDA end are UP trains.

Trains arriving from KEREJANGA end are DN trains.

2.5.2 **NON RUNNING LINES AND THEIR CAPACITY : Nil**2.5.3 **ANY ABNORMAL FEATURE IN THE LAY OUT:**

There is falling gradient of 1 in 150 towards KPJG end.

2.6 **i) LEVEL CROSSINGS: (STATION SECTION):- Nil****ii) LEVEL CROSSING: (IN BLOCK SECTION)**

Sl. No.	Location	No.	K.M.	Normal Position	Class	Type	Operation	Communication
1.	Between JRPD-KPJG	ST-88	137/2-3 (137.212)	Closed to road traffic	'C'	Non-Interlocked	Winch Operated Lifting barrier	Telephone connection with SM/JRPD
2.	Between JRPD-KPJG	ST-86	134/7-8 (134.739)	Open to road traffic	'C'	Non-Interlocked	Winch Operated Lifting barrier	Telephone connection with SM/JRPD

3.0 **SYSTEM AND MEANS OF WORKING:**

(Rule No. Chapter XIV of GR & SR, Chapter III & IV, Part-I of BWM)

i) **System of working:** Absolute block system on single line:

Trains are worked under Absolute block system in accordance with GR 7.01(1) (a), 8.01(1) (a) &(c), 8.01 (2) (b), 8.03 (2) (a), (b), (c) (ii), 14.01 to 14.07, 14.08(b) (iv), 14.09 to 14.13 and BWM chapter-IV part I.

ii) **Block instruments:**

Token less Block Instrument (DIADO) for JRPD-KPJG & JRPD-BONA Block sections have been provided and the 'OFF' aspect of the last stop signal is the authority for the Loco Pilots of all trains to enter into the block section vide GR 14.08 (b) (iv).

SM on duty is responsible for operation of Block instruments and the keys of the instruments must be under personal custody of the SM on duty vide GR 5.01(4), 14.12(1) and GR 5.08.

iii) Co-operative/Non Co-operative: Co-operative.

iv) Provision of block telephone: Telephone attached to Block instrument connecting to the adjacent block stations concerned.

v) Custody of keys of block instrument: Block instrument is provided with double locking. One key will be with SM & other key will be with S&T maintainer.

4.0 **SYSTEM OF SIGNALLING AND INTERLOCKING:**4.1.1 **STANDARD OF INTERLOCKING AND TYPE OF SIGNALLING:**(i) **INTERLOCKING:**

The station is provided with Standard II (R) interlocking, central panel with Multiple Aspect Colour Light Signalling and Axle counter for last vehicle check. All the points are centrally operated from central panel by on duty Station Master. The Home signals and Adv. Starter

signals are interlocked with respective single line token less block instruments. GR 3.08(4) (c) governs the aspect and indications of the signals. The station has no end cabins.

(ii) **MINIMUM EQUIPMENT OF SIGNALS:–**

Distant, Home, Calling on, Starter, Shunt and advanced starter signals in either direction.

(iii) **AXLE COUNTER:**

Both side block section is monitored by axle counter system, Digital axle counter in JRPD-KPJG section and Analog Axle counter in JRPD-BONA section have been provided. A pair of digital axle counter is provided between JARAPADA and KEREJANGA, one beyond UP advanced starter signal of JARAPADA station and the other just before the DN advanced starter of KEREJANGA station, for counting the axle 'IN' and 'OUT' to indicate whether the block section is clear of train as well as to verify the last vehicle of the incoming train. Similarly, a pair of Analog axle counter is provided between JARAPADA and BOINDA, one just beyond DN advanced starter signal of JARAPADA and the other just before the UP advanced starter signal of BOINDA station for counting the axles 'IN' and 'OUT' to indicate whether the block section is clear of trains as well as to verify the last vehicle of the last in coming train.

The position of block section i.e. clear/occupied is reflected in the illuminated panel diagram provided in the Station Master's office which shows 'GREEN' when the block section is clear and 'RED' when the block section is occupied.

Whenever a train enters into the block section, block section clear indication 'GREEN' disappears and occupied indication 'RED' appears. If after the complete arrival of the train, 'RED' indication does not change to 'GREEN', SM shall resort to resetting of axle counter. It should also be assumed as block instrument failure and necessary action as per GR 14.13 to be followed. The axle counter is interlocked with the token less block instrument (Diado). (Refer para No.28.1 of Appendix-B for resetting operation).

iv) **SEALING OF EMERGENCY OPERATION BUTTONS/KEYS:** All 'emergency operation buttons' on the Station Master's control panel shall be kept sealed in normal condition by S&T staff. Whenever any emergency operation is initiated, SM on duty shall break open the seal of the concerned button to make the button operative. Immediately after completion of emergency operation SS/SM on duty shall inform concerned S&T staff for sealing of the concerned button

v) **TRACK CIRCUIT:** All the lines including point zone between UP and DN Home signal is track circuited. Normally the panel is dark except for point and block section indication. The position of the running lines is indicated in the illuminated diagram at the Station Master's office. It shows 'RED' when the line is occupied and 'WHITE' when the route is set and signal is taken OFF. The position of points at either end is also indicated in the illuminated panel diagram. Whenever a signal is taken OFF, the route set indication "WHITE" appears for the particular route set. As the Train occupies the track circuit the "WHITE" indication disappears and "RED" indication appears.

vi) **STATION MASTER'S CONTROL:** A push button type electric control apparatus is provided in the Station Master's office to operate electrically the UP and DOWN signals and points. The control apparatus is provided with a lock up key, which shall always remain in the personal custody of the Station Master on duty in terms of BWM 6.14 (3) (d). The position of all points, signals and running lines are available in the Station Master's illuminated panel diagram. Reminder block collars are provided for use on push buttons which will be placed on point button to prevent operation of the button, in case, the concerned line is blocked.

- 4.1.2 **POSITION AND OPERATION OF POINTS:** The position of all points is shown in station Working Rule Diagram and also on operating panel. All points are power operated through Station Master's control panel apparatus. All cross over points on running line are independently worked by electric point machine and have built in locking and detection arrangement
- 4.1.3 **ROTARY KEY TRANSMITTER (RKT):** RKTs with crank handle keys have been provided at both end locations for the operation of points in case of failure of motors. The keys for the crank handles are transmitted electrically to the crank handle locations for operating the points by crank handles..
- 4.1.4 **IBS:- NIL**
- 4.1.5 **POINT AND TRAP INDICATOR:- NIL**
- 4.1.6 **REPEATING SIGNAL(BANNER TYPE):- NIL**
- 4.1.7 **CALLING ON SIGNALS:-** Calling-on signals are provided below Home signals (i.e. in both Up & Down directions) as per GR.3.13 (1) (b), (2) (3) (4) & (6) (b). It shows no light when 'ON' and 'YELLOW' light when taken off.
- 4.1.8 **SHUNT SIGNALS: -** Position light shunt signals ( SH 19 & SH10) have been provided at either end of the yard ahead of top point Nos.7 & 8 for back shunting in the yard and to be used whenever necessary. Forward shunting movement may be carried out with starter signals in addition to traffic signals.
- 4.1.9 **ANTI COLLISION DEVICE: - NIL**
- 4.2 **CUSTODY OF RELAY ROOM KEY AND PROCEDURE FOR ITS HANDING OVER AND TAKING OVER BETWEEN STATION MASTER AND S&T MAINTENANCE STAFF:** - As per JPO/02/2012 of 29.08.2012, the following procedure shall be adopted for opening of Relay Room:-  
The Relay room of station shall have double locking system of operating and S&T Locks. One Godrej Lock shall be provided on the door of Relay Room by the Station Master. This lock is named as operating lock. The key shall be kept in the safe custody in the key- box with the SM on duty. Likewise, one Godrej lock shall be provided on the door of Relay Room by the Signal Maintainer/ Signal Supervisor of the Station /Section.

Names of the S&T staff authorized for opening of Relay Room is to be entered in the first page of Relay Room Key Register and jointly certified by SSE /Signal In-Charge and TI In- Charge of the Section. In emergency, if any S&T staff other than authorized wants to open Relay room, he must inform DSTE through Signal Fault Control. Signal Fault Control shall convey the permission of DSTE to SS/SM by giving Signal Fault Control order number.

Whenever relay room is to be opened either for scheduled maintenance or during failures or for other maintenance activities/construction works. The concerned Maintainer/Signal Supervisor will inform SM on duty for opening of Relay Room with reason.SM on duty will verify his identity from the list of authorized S & T Staff recorded in the first page of Relay Room Key register or as advised by Signal Fault Control in emergency. SM shall give the key of operating lock to S&T staff, after the entry is made in the Relay Room and also with Red Ink in TSR. Relay Room key shall not be handed over by SM on duty to any Group D staff of S&T department. On completion of work, the concerned Signal Maintainer/ Signal Supervisor shall properly close Relay Room door and lock it with both the locks and then return the key of operating lock to the SM on duty making the entry in the relay room register.

When the key of Operating Lock is returned by S& T staff to SM on duty, he shall first verify the Relay Room for proper locking and then keep the key in safe custody and acknowledge it on the Relay-Room key register. If the relay room key is handed over to the Signal staff regarding the interference in safety gears the train shall be piloted in and out.

For attending Failures of S& T gears within relay Rooms, the following steps shall be taken :  
Entry to be made in S& T failure register by SM on duty and failure Memo has to be issued to S& T staff. S& T staff shall not take the Relay Room Key for attending failures and open the Relay Room unless the failure is recorded in Signal failure register. If disconnection is required, Disconnection Memo has to be given by S& T staff to SM on duty. Failure Memo should be acknowledged and entry in relay room key register to be made by S& T staff before obtaining Station Master's key. Relay Room key for Schedule maintenance shall be taken once in a calendar Month during monthly inspection by Sectional Supervisor. Relay room can be opened by following above procedure for special maintenance activities like cable insulation testing, block/ disconnection memos, selection/ locking table testing, maintenance work inside relay room by Electrical and Engineering staff, during failures, data logger resetting and inspection by Divisional and Headquarter officials, Track Circuit adjustments & voltage monitoring during monsoon and whenever required during rains. Works required by S& T Construction & open line staff for preparatory works and during commissioning. In each such case, the Construction Staff Shall follow the detailed guidelines issued regarding working on signaling gears under the charge of open line.

In case of emergencies such as fire, flood, earthquake etc., Open Line Section Engineer (Signal) / Signal Maintainer & SS/SM shall jointly decide the need for opening the Relay Room. Section Engineer Signal HQ at Divisional Control Office and Section controller shall be advised respectively. In case of communication failure during such emergencies, Open Line Signal Maintainers/ Supervisors and SS/SM on duty shall jointly decide the need for opening the Relay Room and communicate later on to respective controls. In case key is lost /misplaced, it shall be reported to S&T control as well as section control for either lock. In normal course the spare key with respective custodians shall be used. In emergency situation, lock may be broken under advice to Section Control as well as S&T control. New lock shall be procured and provided.

In case SS/SM on duty comes to know of relay Room opening by unauthorized means or by unauthorized person or by any Group-D' Staff, the signaling system shall be suspended by him and matter immediately reported to Section Controller for necessary action. Senior section Engineer/ Signal & TI of the respective section will check the station records of relay room opening during their inspections and cross check it with data logger/counter reading if provided. Discrepancy, if any, shall be immediately inquired into and advised to Sr DSTE & Sr DOM by numbered control message from the station immediately for further action.

4.3 **POWER SUPPLY:** - Normally for signaling and interlocking installation power supply is drawn from State Electricity Board (230V, 50Hz) but when this source fails, DG set for standby is installed at the station to feed the S&T equipments. All controls are provided with battery back up.

5.0 **TELECOMMUNICATION FACILITIES:** -

- (i) Telephones attached with single line token less Block Instrument for either side Block Section
- (ii) Station to Station fixed telephone (hot line) is provided
- (iii) Station is provided with auto telephone connected with Railway Exchange
- (iv) BSNL telephone is provided.
- (v) The station is connected to Sambalpur – Talcher control circuit by a control telephone
- (vi) Station to station 25 Watt VHF communication is provided.

- (vii) Telephone is provided between Station and both end crank handle locations.
- (viii) Telephone connection is provided with Station and Engg.LC Gates at Km.137.212 and KM134/7-8.

- Note:
- (i) For obtaining line clear, VHF should be used as a last alternative and not as a sole means of communication.
  - (ii) VHF and Walkie Talkie sets should not be used for unnecessary discussions with Drivers, Guards or any other staff.
  - (iii) The on duty SM shall use the above electrical communication instruments stated in Para-5.0 from item No. (I) to (VI) strictly in order of preference for obtaining/granting line clear vide SR 14.01.01. In case of failure of any of the above means of communication the SM on duty shall work vide SR 6.02.06.

**(For details refer Appendix 'B')**

#### 6.0 **SYSTEM OF TRAIN WORKING:** -

The movement of trains is controlled by Section Controller on duty whose orders shall be complied with, provided they do not contravene any General Rules, Subsidiary Rules, Station Working Rules, Block Working Manual and other safe working instructions issued from time to time. In the event of suspension of control working, the Station Master on duty shall work independently in conjunction with the Station Masters of adjoining block stations and shall be responsible to ensure that there is no undue delay to train operation in general.

#### 6.1 **DUTIES OF TRAIN WORKING STAFF:** -

Details of duties of operating staff are mentioned in Appendix 'D' of the SWR.

#### 6.1.1 **TRAIN WORKING STAFF:** -

The following are the complement of train working and operating staff provided at this station to work in each shift.

SL No.	Designation	Roster	No. of staff in each shift	Hrs. of Duty
1.	Station Superintendent (In-charge)-----	Continuous	01	08 hrs.
	SM/ASM-----	Continuous		08 hrs.
2.	TP/Sr.TP/TPM-B/ TPM-A	Continuous	01	08 hrs

The above staff shall work as per the rosters issued by DPO/SBP from time to time and these rosters shall be displayed in the SM office.

#### 6.1.2 **RESPONSIBILITY OF ASCERTAINING CLEARANCE OF THE LINE AND ZONES OF RESPONSIBILITY:** -

The SM on duty is responsible to ascertain the clearance of the nominated line between outer most facing points of concerned line as per GR 14.10.

#### 6.1.3 **ASSURANCE OF STAFF IN ASSURANCE REGISTER:** - All staff before taking up independent charge of their duties at this station shall make a written declaration in the assurance register that they have read and thoroughly understood the system in force and must sign such declaration.

No Railway servant shall be entrusted with any duty involving safety of the public unless the station in-charge is satisfied that the concerned staff is competent for the post.

No Railway servant unless duly examined and certified shall be allowed to work the points and signals. The SS is responsible to see that all the staff are conversant with the Station Working Rules and their signature obtained in the Assurance register after he is satisfied that they have thoroughly understood the working rules of the station. In case of Group 'D' staff, their signature/thumb impression must be obtained after explaining fully about their duties and responsibilities.

The Station superintendent is responsible personally for maintaining the Assurance Register and for obtaining declaration of the staff working under him. The Assurance Register must be maintained in two parts, one for Group 'C' and the other for Group 'D' staff. A duplicate copy of the Assurance Register must be maintained and kept in personal custody of the Station Superintendent.

The declaration shall be renewed in the following cases: -

- (i) Whenever there is a change in the Station Working Rules.
- (ii) For any staff who have not worked at the station or were away from the station for a period of 15 days or more.

6.2 (A) **CONDITIONS FOR GRANTING LINE CLEAR:** -The conditions laid down in GR 8.01 (1) (a) & (c), 8.01 (2) (b), 8.03 (2) (a)(b)(c)(II), BWM 2.07 (3) & (4) shall be complied with by the Station Master on duty before granting line clear. The line shall not be considered clear and line clear shall not be given unless.

- (i) The whole of the last proceeding train has arrived complete.
- (ii) All the necessary signals are put back to 'ON' behind the said train.
- (iii) Block section is clear of trains running in the direction towards the block section for which such line clear is being given.
- (iv) The line is clear up to the advanced starter of station nearest to expected train i.e. (UP Adv. starter signal No 14 for a DN train and DN Adv starter signal No.5 for an UP train.).

**NOTE:** if the light of the reception signal is fused/ not burning, 'Line Clear' shall not be granted for a train till such time it is ensured that the concerned driver is notified of the fact in writing by the SS/SM on duty of the station to which such line clear is granted.

(B) **OUTLYING SIDING:** - NIL.

6.2.1 **ANY SPECIAL CONDITION TO BE OBSERVED WHILE RECEIVING OR DESPATCHING A TRAIN:** - The DN train with 40 BCN load with single WDG3A / WDM3A / WDG2 locomotives should run through as far as practicable and the reception signal should be taken off in advance.

6.2.1.1 **SETTING OF POINTS AGAINST BLOCKED LINE:** - All Points shall normally be set for the straight except when otherwise authorised by special instruction. When a running line is blocked by stable load, wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after arrival of a train at the station, the points at either end should immediately be set against the blocked line except when shunting or for any other movement towards the blocked line is required to be done vide 3.51.06(a). If all the lines at the station happen to be blocked then SR. 3.51.06 (b) will be followed.

6.2.1.2 **RECEPTION OF TRAIN ON BLOCKED LINE:** - In case of reception of a train on an obstructed line, the SM shall follow GR 5.09 & SR 5.09.01.

6.2.1.3 **RECEPTION OF TRAIN ON NON-SIGNALLED LINE:** - Not Applicable.



- 6.2.1.4 **DESPATCH OF TRAINS ON NON-SIGNALLED LINE:** - Not Applicable.
- 6.2.1.5 **DESPATCH OF TRAINS FROM LINE PROVIDED WITH COMMON STARTER SIGNAL:-** Not Applicable.
- 6.2.1.6 **SPECIAL RESTRICTIONS** –
- (i) The over run line shall not be obstructed for stabling vehicles or harbouring engine, If it is obstructed through any accident or for any cause, it ceases to be substitute for the adequate distance.
  - (ii) Hand /Fly shunting is prohibited.
  - (iii) In case of crossing, UP loaded goods train shall be admitted first or if DN goods train is admitted first, it is to be admitted on loop line by setting over run line.
  - (iv) Shunting shall not be permitted at both ends of the yard unless the engine is leading towards the falling gradient.
  - (v) For shunting up to UP Advanced starter signal No-14, an engine is to be attached towards falling side of the gradient vide GR5.20 (b).
  - (vi) Speed is raised to 30 KMPH on first loop lines on either side of main line and over its turnouts. However, no train shall be allowed to negotiate at a speed more than 15 KMPH if it involves negotiating more than one crossover at a time.
- 6.2.1.7 **SPECIAL INSTRUCTIONS** -
- (i) Reception signals for DN loaded goods train should be taken off well in advance.
  - (ii) DN Goods train with 40 BCN load with single WDG3A/WDM3A/WDG2 locomotives should be run through as far as practicable.
- 6.3 **CONDITIONS FOR TAKING 'OFF' APPROACH SIGNAL:** -
- A. Reception of trains is governed by General Rule 3.36, 3.38, 3.40, 4.17, Subsidiary Rule 3.36.02, 3.36.04, 3.42.02 (a)(iv), 3.42.03 and other relevant provisions of General and Subsidiary Rules, Block Working Manual and Station Working Rules of the station.
  - B. Adequate distance to be kept clear vide General Rule 3.40. (1)(b). (CRS, SE Circle's dispensation No-978 of dated 04.11.2011.

LINE No.	CLEARANCE OF ADEQUATE DISTANCE			
	DN TRAINS		UP TRAINS	
	FROM	TO	FROM	TO
Loop line (L-1)	DN Starter Signal No. 2	The end of Over run line or DN Adv. Starter Signal No.5	UP Starter Signal No.16	The end of Over run line or UP Adv. Starter signal No. 14
Main Line (L-2)	DN Starter Signal No. 4	DN Adv. Starter Signal No.5	UP starter signal No. 17	Up. Adv. Starter signal No.14
Loop line (L-3)	DN starter Signal No.3	The end of Over run line or /DN Adv. Starter Signal No.5.	UP Starter Signal No.15.	The end of Over run line or UP Adv. Starter signal No.14.

Before admitting a train on any line, it must be ensured that the route indication for the respective line shows 'WHITE' indication in the illuminated panel diagram. To receive a train, for which line clear is given, the Station Master on duty shall nominate a clear line in consultation with the Section Controller on duty. He shall personally satisfy himself that the nominated line is clear and free from all obstructions by seeing the track circuit indication or by physical verification of the nominated route in case of failure of track circuit. He shall suspend all non-isolated shunting and thereafter set the points of the nominated route by means of push

button switch provided on the control panel. He shall then verify from the visual indication available in the panel that points are set to the desired route.

Unless the track circuit indication for the concerned line is 'Clear' even with other conditions satisfied, the operation of panel control button by the station Master on duty will not permit the concerned home signal to be taken off. However, reception of trains will be possible in such case with "Calling on signal" provided below home signal unless the first track circuit in advance of home signal does not show 'RED' indication.

The Station Master on duty shall then operate the concerned push button on control panel for taking off the reception signal. He shall then verify on the panel that the correct reception signal is taken off.

If for any reason after taking off signals, it is required to put back the signal and alter the route, in terms of Subsidiary Rule 3.36.02, a time delay of 2 minutes shall be observed before the points can be altered.

Miniature colour light calling on signal is provided below the home signals in terms of GR 3.13 (6) (b). A calling-on signal shows no light in the 'ON' position. A calling-on signal is taken 'OFF' for reception of a train when the home signal above can not be taken 'OFF' due to failure or any other reason or for admission train on blocked line.

**C. TAKING OFF CALLING ON SIGNAL:** To take off calling on signal, the train must come to a stop at the foot of the Home signal, occupying track circuit in rear of the signal. When train occupies the track circuit, RED light strip will appear on the panel. The particular route on which the train is intended to be received shall be set by individual point operation by operating point button & point group buttons or by setting route by pressing route button & signal button or by crank handling in the event of failure of operation of point through panel. After the route is set, the calling-on signal button 'C1' / 'C18' (Red with white dot), as the case may be, shall be pressed simultaneously along with concerned route button for 2-3 seconds and released. After a lapse of 120 sec. the calling-on signal clears and a white light indication appears on the panel for the concerned calling-on signal. SM shall ensure that no train is made through by taking off the calling on signal.

**6.3.1 RESPONSIBILITY OF STATION MASTER FOR RESTORATION OF SIGNALS TO 'ON':** - If for any reason after taking off signals, it is required to put back the signal and alter the route, in terms of Subsidiary Rules 3.36.02, a time delay of 2 minutes shall be observed before the points can be altered.

**6.4 SIMULTANEOUS RECEPTION, DESPATCH, CROSSING & PRECEDENCE OF TRAINS:** - According to the existing interlocking & lay out at this station, the simultaneous reception and despatch of trains are permitted as stipulated below (GR 3.47).

(a)	Reception of an UP train on line No.1 by setting over run line.	(a)	Reception of a DN train on line No. 3 by setting over run line or despatch of an UP train from line No. 2 or 3.
(b)	Reception of an UP train on line No.3 by setting over run line.	(b)	Reception of a DN train on line No. 1 by setting over run line or despatch of an UP train from line No. 1 or 2.
(c)	Reception of a DN train on line No.1 by setting over run line.	(a)	Reception of an UP train on line No. 3 by setting over run line or despatch of a DN train from line No. 2 or 3.

(d)	Reception of a DN train on line No.3 by setting over run line.	(b)	Reception of an UP train on line No. 1 by setting over run line or dispatch of a DN train from line No. 1 or 2.
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- 6.4.1 Setting of points during crossing of trains shall be done as per relevant provisions in SR 3.47.01,(a, b, c & e) . Rules laid down in SR 3.47.02 shall be followed for berthing and crossing of passenger and goods trains as the station having single platform.
- 6.5 **COMPLETE ARRIVAL OF TRAIN:** - (Rule no. GR 4.16 & SR 4.17.01,SR4.17.02, GR 14.10)
- a) **STAFF RESPONSIBLE TO VERIFY COMPLETE ARRIVAL:** - SM on duty.
- b) **MODE OF VERIFICATION:** Through AXLE COUNTER or through physical verification, when Axle counter fails.
- 6.5.1 **L.V. VERIFICATION THROUGH AXLE COUNTER:** - Block sections at both sides of the station is monitored by axle counter system and the position of block section whether clear or occupied is indicated in the panel. As soon as a train enters in to the block section, the 'RED' indication appears in the panel. After the whole train clears the block section, 'GREEN' indication appears on the panel. This confirms the complete arrival of train and the SM on duty shall give train out of block section report on seeing the section clear (GREEN) indication at the panel.
- 6.5.2 **L.V. VERIFICATION WHEN AXLE COUNTER FAILS:** - In case of failure of axle counter, the Station Master on duty shall obtain complete arrival certificate from the Guard of the train in the complete arrival register (T/1410) maintained at the station for stopping train. For through passing train the station master on duty shall satisfy himself about complete arrival of train by verification of the last vehicle indicator vide Subsidiary Rule 4.16.05 that the train is complete. In case a train arrives/passes incomplete, action shall be taken as per Subsidiary Rules 4.17.02. 'The train out of block section signal' shall be withheld to the station in rear until complete arrival certificate is received from the station in advance supported by a Private Number.
- 6.5.3 **L.V. VERIFICATION WHEN MOTOR TROLLEY FOLLOWING:-** On occasions when motor trolley follows a train, the points shall not be altered until the following motor trolley is admitted on the same line. In the event of motor trolley is delayed in the section, the Station Master on duty shall take action in terms of Subsidiary Rule 15.25.03 (b) (vi).
- 6.5.4 **RECEPTION OF TRAIN ON BLOCKED LINE:** - For admission of a train on a blocked line the SM on duty shall comply with the instructions laid down in GR 5.09 and SRs thereto.
- 6.6 **DESPATCH OF TRAINS:** - Dispatch of trains are governed by General Rules 3.36, 3.38, 3.39, 3.42, 5.11 & 8.01 Subsidiary Rule 3.36.04(b), 3.42.04 and Block Working Manual 2.07(5)(a)(b) and other provisions of General Rules, Subsidiary Rules, Block Working Manual and Station Working Rules of the station.

To dispatch a train, the Station Master on duty, having obtained line clear for that train, shall set the route for the out going train correctly and satisfy himself by observing the visual indication on the panel board. He shall then suspend all non-isolated shunting. Station Master on duty shall ensure that the Level Crossing gates in the section i.e.at KM 134/7-8 & KM 137/2-3 in JRPD –KPJG section are closed against road traffic and he shall then take off the concerned route starter and advanced starter signals. After observing the off aspect OFF the route starter and advanced starter the Loco Pilot shall start his train.

The Station Master on duty shall watch the safe passage of the train with its last vehicle indicator. After the train passes the Advanced starter complete, he shall send the train entering block section signal to the station in advance.

If a train is worked without Guard or Brake Van, the instruction laid down in Subsidiary Rules 4.23.02 and 4.25.02 shall be followed

- 6.6.1 **PUTTING BACK SIGNALS TO 'ON' IN CASE OF EMERGENCY:** -If a signal once taken 'Off' for reception/despatch of a train has to be, in an emergency, put back to 'ON', the procedure laid down in General Rules 3.36.02 shall be followed. In case of reception of train, route shall not be altered until the train has come to a stand outside Home signal. In case of departure signal before changing route, the line clear authority is to be withdrawn from the Loco Pilot with a memo, taking his acknowledgement thereof.
- 6.7 **TRAINS RUNNING THROUGH:** - The procedure detailed in Para 6.3, 6.6 above and General Rules 4.17, 4.42 and Subsidiary Rules 3.36.04(b) (i) 3.42.02(a)(iv), shall be observed.

The SM is responsible to observe/watch the condition of the vehicles on a train and shall wave green hand signal horizontally as per Subsidiary Rule 4.42.02 until anything wrong is noticed on train. For this purpose the SM on duty shall stand in such a position that a clear view of the passing train is seen by him and that his hand signals can clearly be seen by the Driver and Guard of the train. He shall depute his points man with hand signal to the other side of the passing train who shall exhibit danger hand signal to draw the attention of the guard/driver of the train in case of observing any unsafe condition(s)/abnormalities in the train. He shall also report to the SM on duty for taking further suitable action in terms of SR 4.42.02 (d).

The Station Master on duty is responsible to see that a train passes complete with its last vehicle indicator i.e. tail board & tail lamp. If a train passes without last vehicle indicator or its authorized substitute, action shall be taken as per General Rules 4.17 and Subsidiary Rules 4.17.02.

- 6.8 **WORKING IN CASE OF FAILURE:** - In case of failure of S&T equipments, on duty Station Master shall work in accordance to GR 3.68, 3.69 and 3.70 and SRs thereto.
- 6.8.1 **PROCEDURE TO BE FOLLOWED INCASE OF FAILURE OF A SIGNAL & INTERLOCKING INSTALLATION:** -Whenever there is a failure of points, signals, track circuits or any other interlocking gear at the station that includes level crossing gate (s). if any etc. the SM on duty shall follow the procedure detailed in GR 3.68, 3.72, 3.74 and SR thereto. In case of defective approach signals, the trains will be piloted in vide SR 3.69.02, 3.69.03 & 3.69.05. In case of defective departure signals, trains will be piloted out vide GR 3.70 & SR 3.70.01. & 3.70.02.
- 6.8.2 **TRACK CIRCUIT**  
In the event of failure of track circuit in the yard trains shall be admitted in to yard after piloting 'IN' before piloting a train in to the yard the clearance of the track must be ensured by physical verification
- 6.8.3 **AXLE COUNTER**  
In the event of failure of axle counter, Block instrument of concerned Block section will be suspended and all trains will be worked on PLCT till rectification.
- 6.8.4 **DEFECTIVE SIGNALS:**  
When signals become defective, the procedure laid down in GR & SR shall be followed. A signal in the OFF position is the final indication that the points are correctly set for the route for

which it applies and if it is found impossible to take OFF a signal, the setting of points on the route to which it applies shall be inspected by the Station Master on duty before the signal is declared as defective irrespective of what is indicated by the position of the route, [Refer GR 3.68 to 3.46, 3.52 to 3.56, 3.71, 3.80 and SR 3.68.01 (c)].

In case of disconnection of signal and interlocking for repairs and maintenance, procedure laid down in GR and relevant SRs shall be followed. In the event of signal showing no lights, Station

Master on duty shall before giving line clear, initiate action in accordance with the procedure prescribed in GR and the relevant SRs. [Refer GR 3.51, 3.69, 3.49 (4), 3.68 to 3.77]

#### **6.8.5 BLOCK INSTRUMENT**

In the event of partial/total failure of Block Instrument the concerned block instrument shall be suspended till its rectification, trains shall be worked as per SR 6.02.06 & Chapter –III Part of BWM.

Both UP and DN Advanced Starter Signals are electrically interlocked with respective block instruments so that the same cannot be taken off unless the concerned block instrument is in line clear position (TGT). When the block instrument is suspended in 'Line clear' position, the concerned advanced Starter must also be treated as suspended. When the block instrument is under suspension, the authority to proceed will be paper line clear ticket.

UP and DN Home signals are electrically interlocked with respective block instrument can be normalised from 'TRAIN ON LINE' to 'LINE CLOSED' position, when the corresponding Home signals are in the 'ON position. However, the Home signals can be taken off in case of failure of the block instruments.

#### **6.8.6 DEFFECTIVE INTERLOCKING**

In the event of interlocking becoming defective, the points will be treated as defective. The SM on duty on receipt of this information will immediately introduce non-interlocking system of working at the station. Trains will be Piloted In or Out as the case may be. The SM on duty shall be responsible for correct setting, clamping and padlocking of points for admission of train.

#### **6.8.7 DEFFECTIVE/DAMAGED POINTS**

When any point fails to operate normally by the route setting operation through panel it is inevitable to operate the points with crank handle. The SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the route. Crank handles are interlocked with signals and interlocking system. When points become defective, the signals controlling these points shall be considered defective and vice-versa and the procedure for use of crank handle for motor operated points shall be followed as per operating manual para-20.06.

The responsibility of correct setting of points, clamping and padlocking the points for reception and despatch of trains at the station, rests with SM on duty himself.

#### **6.8.8 RECEPTION OF A TRAIN ON BLOCKED LINE**

Whenever trains are to be admitted on an obstructed line the Calling-on signal may be taken – off. If calling-on signal failed then the SM on duty shall authorize the on duty TPM with form T/509 indicating the reason for such admission the line number and the nature of obstruction on that line.

Before handing over the authority the SM on duty shall ensure the correct setting clamping and padlocking of both facing and trailing end of the concerned route vide SR 3.69.03.

A stop hand signal shall be exhibited by the SM on duty at a distance of not less 45mts. from the point of obstruction to indicate to the Driver as to where the train shall be brought to a stand.

**6.8.9 INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:**

However, before declaring a signal is defective, the setting of the point on the route to which it applies shall be inspected by the Station Superintendent/Station Master irrespective of the position of the switches point laid down in GR with relevant SRs shall be followed. [Refer GR 3.68, 3.70 & SR 3.77.01(b)]. Initiate action in accordance with the procedure prescribed in GR and relevant Subsidiary Rules there to. [Refer GR 3.49(4) and 3.68, 3.77].

**6.8.10. ISSUE OF CAUTION ORDER:** - Whenever in consequence of the line being under repair or for any other reason special precautions are necessary, a caution order detailing the kilometers and speed at which a train shall travel and the reasons for taking such precautions shall be handed over to the Loco Pilot in terms of GR 4.09 and SR thereto.

**6.9 WORKING OF MOTOR TROLLEY, MATERIAL LORRIES ETC: -**

Motor trolleys are to run in accordance with rules laid down in SRs. Material Lorries will work in accordance with SR. [Rules laid down in BWM. Refer SR 15.25.03 to 15.25.07, 5.11(2), 5.12, 5.13 of BWM]

- i) Trolleys, Motor Trolleys, Lorries which are not insulated shall not be allowed to run except on Line clear.
- ii) Motor Trolleys/Tower Wagon/material Lorries are not likely to actuate the Axle Counter correctly.
- iii) In all other respects the Working of a light motor trolley shall conform to the rules laid down for ordinary trolleys while running without block protection and to those laid down for motor trolleys while running under block protection or following another light motor trolley.

**Note:** Trolleys which are to be run on track circuit area shall be insulated as per SR 15.20.02.

**7.0 BLOCKING OF LINES:** - Whenever a running line is blocked either by loose vehicles or by stabling train or by a train which is to cross or give precedence to another train, the points at either end should immediately be set against the blocked line except during shunting movement and reminder collars shall be placed on the concerned point push button and route button(s) for the blocked lines. A clear remark in 'RED' ink shall be made immediately in the Train signal register and a record shall be made in the Station Master's diary also. Stable load register is also to be maintained. The stable load or loose vehicles are to be secured as per General Rules 5.23 and Subsidiary Rules 5.23.01 to prevent rolling down of vehicles. A record thereof shall be made in the Station Diary vide SR 5.23.01 (a) (c) & (d).

**7.1 USE OF REMINDER COLLARS:**- Whenever a running line is blocked either by loose vehicles or by stabled train or by a train which is to cross or give precedence to another train even for a short while or during shunting operations, the reminder collars must be placed on concerned point push button, signal and route button(s) for the blocked lines on the operating panel by SM on duty.

**7.2 SECURING OF VEHICLES :-** As far as practicable loose vehicles shall not be allowed to stand on the running line. However, under unavoidable circumstances, if it is necessary to detach vehicles from a train or to stable a train and leave them standing on running line, the SM on duty shall be responsible to secure vehicles/stable loads in accordance with GR 5.23 and SR 5.23.01 to prevent rolling down of vehicles and arrest obstruction of fouling.

**NOTE:** Special care shall be taken to secure special type vehicles fitted with roller bearings while standing in siding or on running lines A stabled load register to be maintained shift wise as per FORMAT given in operating manual.

### 7.3 **ALTERING OF POINTS TO A CLEAR LINE WHEN RUNNING LINE IS BLOCKED:-**

- a) When a running line is blocked by a stable load e.g., wagons, vehicles or by a train which is to cross or give precedence to another train or immediately after arrival of a train at the station etc. the points at either end should immediately be set against the blocked line except when shunting or any other movement is required to be performed in that direction on the same line.
- b) If all the lines at a station happens to be blocked when line clear has been granted to a train, the points should be set for the line occupied by a stable load or a goods train in that order so that in case of a mishap, the chances of casualties are minimized.
- c) In case all the lines are occupied by passenger carrying trains, points should be set for a loop line, to negotiate which the speed of the incoming train would be reduced, which in turn would minimize the consequences of casualties. While doing so, points shall be set for a loop, occupied by a train, if any, whose engine is facing the direction of approach of the incoming train rather than a loop line, occupied by a train whose passenger coach will receive the impact in case of a collision.

### 7.4 **LOADING AND UNLOADING OF VEHICLES ON RUNNING LINE:-**

Loading and unloading from vehicles on running line is prohibited unless permitted by Sr. DOM / SBP vide SR 5.19.01.

At stations where loading and unloading of goods is permitted whether full rake or part thereof, the station master shall ensure that no goods are left fouling any line before and after clearance of the rake from the line. The railway servant supervising loading and unloading shall also ensure that consignment does not foul any line vide SR 5.19.001: (a).

If the stations are on gradients, the rake should be properly secured as detailed in SR 5.23.01.

During the time of loading / unloading, the station master shall ensure isolation of the lines(s) as detailed in SR 3.51.06.

## 8.0 **SHUNTING**

### 8.1 **GENERAL PRECAUTIONS.**

Shunting shall be performed in terms of General Rules 3.46, 3.52 to 3.56, 5.13, 5.14, 5.16, 5.17, 5.19, 5.20 to 5.23, 8.09, 8.14, 8.15 and Subsidiary Rules thereto. The Guard/Asst. Guard/SS/SM/ASM/TPM on duty is authorized to supervise shunting operation. The staff supervising shunting shall ensure correct setting of points, clamping and pad locking of points both in facing and trailing direction for non signal movement. Normally, back shunt signals and starter signals shall be used for shunting operation.

#### **NOTE**

For any non signaled movement physical verification of the clearance of the crossover points, clamping & padlocking of both facing and trailing points shall be ensured by the Guard/SM/TPM on duty for supervising shunting operations.

### 8.2 **SHUNTING IN FACE OF AN APPROACHING TRAIN:**

Shunting in the face of an approach train is strictly prohibited vide GR 8.09 & SR therto.

### 8.3 **PROHIBITION OF SHUNTING ANY SPECIAL FEATURES IF ANY:**

- (i) Hand shunting is prohibited at both ends of the yard vide GR 5.20.
- (ii) Fly & loose shunting is prohibited at both ends of the yard vide SR 5.21.01 (c).
- (iii) For shunting up to UP Advanced starter signal No-14, an engine is to be attached towards falling side of the gradient vide GR5.20 (b).

### 8.4 **SHUNTING ON SINGLE LINE:**

- (i) If the necessary signals are kept at 'ON' shunting may be carried on within the station section provided the block section is clear of approaching train.

(ii) The line outside the station section and upto the Home Signal shall not be obstructed unless a Railway Servant specially appointed on his behalf by the Station Master on duty who is the in-charge of the operations, and unless the block section into which the shunting is to take place is clear of approaching train and all relevant & necessary signals are kept at "ON" position (GR 8.12).

(iii) The line outside the first stop signal shall not be obstructed unless line has been blocked back.

**8.5 DURING FAILURE OF BLOCK INSTRUMENT: -**

The SM on duty shall ensure that there is no train in the block section and the last train has arrived complete clearing the fouling mark while conducting shunting at that end of the block section of which block instrument has been suspended and all necessary precautions have been taken as per rules laid down in G&SR.

**8.6 SHUNTING ON DOUBLE LINE:** Not Applicable.

**8.7 SHUNTING IN THE SIDING TAKING OFF FROM STATION YARD & GOODS YARD:** - N/A

**9.0 ABNORMAL CONDITION:-**

**(i) PARTIAL FAILURE: -**

In the event of suspension of Block Instrument and during partial failure of other available means of communication, the procedures detailed below shall be followed for working of trains in different situations.

- a) Failure/Suspension of Block Instrument or Track Circuit or Axle counters- Line Clear shall be obtained on the Telephone attached to the Block Instrument or station telephone exchanged ID number and supported by Private Number.
- b) Failure/Suspension of Block Instrument or Track Circuit or Axle Counters or telephone attached to the Block Instruments or station fixed telephones-'Line clear' shall be obtained on Railway auto phone or BSNL phone by exchanging Identification Number supported by a Private Number.
- c) Failure/Suspension of Block Instrument or Track Circuit or Axle counters or telephone attached to the Block Instruments or station to station fixed telephone or Railway auto phone or BSNL phone. 'Line clear' shall be obtained on control phone by exchanging Identification Number supported by a Private Number.
- d) Failure/Suspension of Block Instrument or Track Circuit or Axle counters or Telephone attached to the Block Instruments or Station to station fixed telephone or Railway auto phone or BSNL phone or control phone. 'Line Clear' shall be obtained on the VHF sets by exchanging identification Number supported by a PN. The authority to proceed for the Loco Pilot is PLCT.

**ii) THE AUTHORITY TO PROCEED IN OCCUPIED BLOCK SECTION IN CASE OF OBSTRUCTION OF LINE OR ACCIDENT.**

Rules & regulations for working trains on an obstructed line in case of obstruction or accident on the authority of block ticket (T/A-602) when communications are available shall be followed in accordance with the provision which is summarized as follows. [Refer SR 6.02.05]

After sending a train on Block ticket, a following train shall not be dispatched in the same direction unless:

- a) The previous block ticket is collected & cancelled, or
- b) Necessary endorsement is given on the previous block ticket with the advise to wait at the site for a next train to follow, or
- c) The previous train has met with an accident or has been disabled, or



- d) The block ticket has been collected from the Loco Pilot of the previous train by the official in-charge at the site & kept in the personal custody & shall be kept until the arrival of the next train & such assurance is given over the telephone installed at the site quoting the serial number of the Block Ticket so collected.
- e) SM will suspend the absolute block system of working and both SM's concerned should arrange for running of trains on the authority of Block Ticket.
- f) SM at the dispatching end will hand over to the Loco Pilot the BLOCK TICKET as the authority which shall include.
- g) Caution order: Existing speed restriction shall be indicated in the Caution Order portion. The speed restriction to 15 Kmph during clear visibility and 10 Kmph when visibility is obstructed shall be clearly indicated.
- h) An authority to pass the stop signals at 'ON' position.
- i) Before resumption of normal working a message between the SM's of the concerned station shall be exchanged with private number. [Refer SR 6.02.05(d) (VI)]  
The block ticket so issued must be collected by SM of either end with a certificate about the complete arrival of the train with its time and the section is clear of all obstructions from the Loco Pilot/Guard of the train and cancels it.

iii. **TRAINS DELAYED IN BLOCK SECTIONS**

If a train carrying passenger does not arrive within 10 minutes or if a goods train does not arrive within 20 minutes after allowing for its normal running time from the station in rear, the SM at the station in advance shall immediately advise the station in rear and the control of this fact. There after SMs at either end of the Block section shall send one Railway servant into block section to collect the whereabouts of train, condition of train and nature of assistance, if any, required. SM on duty shall collect the full particulars from railway servant so deputed and intimate the same to SM at other of block section and to the section control simultaneously for taking action according to circumstances of the case. [Refer GR 6.04 & SRs thereto]

iv. **FAILURE/PASSING OF INTERMEDIATE BLOCK STOP SIGNAL AT 'ON':** Not Applicable.

v. **FAILURE OF AXLE COUNTER BLOCK/BPAC:-** Procedure to be followed vide SR 14.13 & 14.14.

vi. **FAILURE OF MTRC:** Not applicable to this station.

b) i. **PROCEDURE FOR EMERGENCY OPERATION OF POINTS BY CRANK HANDLE.-**

The detailed Procedure for emergency operation of points by Crank Handle of motor operated points shall be followed.

Crank handle operation is interlocked with the signaling and interlocking system at this station. Key of crank handle keys normally locked inside the RKT instrument at the respective Crank Handles Locations. Crank handle keys can be taken out only when all signals leading over the points are in the Normal position and the route is not locked for whatever reasons. Crank Handle can be released by operating common 'TRANS' push button and concerned Crank handle control push button 13/14 simultaneously. When this key is taken out, no signal to the concerned point can be taken 'OFF' in the yard. This key can be electrically transmitted at both ends of the yard.

On account of the doubtful operation of any track circuit by a light vehicle including self propelled vehicle such as Motor trolley or light Diesel/electrical engine or tower wagon, indicating the occupancy of the track. It is necessary that SM on duty satisfies himself that the said vehicle has cleared point zone track circuits by observing the track indications of the track on either side of the cross over by positively checking the entrance and exit track circuits are showing occupation and clearance in accordance with the train movement.

ii. **PROCEDURE FOR EMERGENCY OPERATION OF POINTS WITH POINT ZONE AXLE COUNTER/TRACK CIRCUITS FAILURE AND EMERGENCY ROUTE RELEASE:**

Emergency point operation facility is provided to operate the point from the panel in case of failure of point controlling track circuit. A push button (Black with Red dot) for emergency point operation is provided on the top of the Panel. If such operation is necessary, the SM on duty, after ensuring that SM's point Key is 'IN' and no vehicle is standing on the concerned point zone shall press the emergency point operation button (by breaking the seal) along with relevant point button simultaneously. Then keeping point button pressed, emergency point button to be released and the point group normal button or point group reverse button is to be pressed for operating the point to 'NORMAL or REVERSE. Every emergency point operation shall be recorded in the station diary & in the register meant for this purpose. Concerned S&T staff should be advised immediately to get the emergency point operation button resealed after rectification of fault if any.

Rules regarding locking of points & damaged points vide GR 3.39 & GR 3.77 to be followed.

a) **CERTIFICATION OF CLEARANCE OF TRACK BEFORE CALLING-ON SIGNAL OPERATION IN INITIATED:-**

Before taking off Calling –On signal during failure of track circuit/axle Counter, the route and the clearance of the track over which train would pass to be verified by SM on duty.

b) **REPORTING OF FAILURE OF POINTS, TRACK CIRCUITS/AXLE COUNTER & INTERLOCKING:-**

Whenever there is a failure of points, Track circuits/axle counter or any interlocking gear at station, the failure should be reported by SM on duty to the concerned Signaling Maintenance Staff on duty responsible for attending to the failure and only after receipt of the written memo from the Signaling Maintainer for rectification of the fault, SM should restore the normal working.

The entries in failure register to be done with message to the section controller.

9.1 **TOTAL FAILURE OF COMMUNICATION:**

In the event of total interruption of communication occurring between JRPD-KPJG or JRPD-BONA stations, i.e when line clear cannot be obtained by one of the following means stated in order of preference viz

- a. Block Instruments, Track Circuits or Axle Counters.
- b. Telephone attached to the Block Instruments
- c. Station to Station fixed telephone (Hot Line).
- d. Fixed telephone such as Railway auto telephone & BSNL phone
- e. Control telephone
- f. VHF sets

and actions shall be taken as per SR 6.02.04. The train which is to be dispatched to the affected section will be stopped and the Driver and Guard of the train shall be informed about the fact.

Before dispatching the light engine /main engine/motor trolley /Tower wagon/Trolley /Cycle trolley/Moped trolley/Diesel car/rail motor car/EMU rake, the SM on duty shall hand over a Authority for opening of communication during total failure interruption of communication on Single Line Section to the driver /motorman/Guard/SM who is being sent to open communication, which includes.

- (i) An authority to proceed without "Line Clear" in the prescribed form (T/B 602).
- (ii) A Caution Order restricting to speed of the train to 15Kmph by day when the view ahead is clear and 10 Kmph during night or when view ahead is obstructed in addition to other speed restrictions in force (T/409).
- (iii) Paper Line Clear Ticket to pass the Last Stop Signal at 'ON' position.

- (iv) A "Line Clear" enquiry message (T/E602) asking "Line Clear" for the awaiting train.
- (v) A conditional "Line Clear" message for the light engine to return with or without a train attached, supported by a Private Number (T/F602).

On arrival of the engine at the next station the conditional line clear message and enquiry message shall be collected by the Station Master on duty who shall prepare a conditional line clear ticket for engine to return either light or with train attached and conditional line clear reply message for the enquiry message giving line clear for the train waiting at other station shall be handed over to the Driver of light engine. On return trip the Driver will come on booked speed subject to speed and other restrictions in force.

If there be an even flow of trains in both directions, Enquiry and Conditional line clear message for each succeeding train may be sent through the Guard of the preceding train. If the Station Master at one end has more than one train to dispatch in the same direction he may ask line clear not only for one train but also for the following trains. It must be stated that these later trains will be dispatched after the first train at an interval of 30 minutes.

When dispatching the second and subsequent train, particulars of last preceding train along with its departure time will be endorsed and a caution order restricting the speed to 25 Kmph. over straight when view ahead is clear and 10 Kmph. when the view ahead is not clear is to be issued. While adopting this procedure the Guard and Loco Pilot should be instructed to keep a 'Sharp' lookout and be prepared to stop short of any obstruction. Trains must continue to work on this system until any one of the means of communication is restored.

As soon as any one of the means of communication has been restored, the conditional line clear working of trains shall be cancelled when there is no train in the affected block section and message shall be exchanged supported by Private Number keeping Section Controller informed.

**9.2 DESPATCH OF TRAINS UNDER AUTHORITY TO PROCEED WITHOUT LINE CLEAR OR TO ASSIST THE CRIPPLED TRAIN:**

Rules & regulations for working trains on an obstructed line in case of obstruction or accident on the authority of block ticket (T/A-602) when communications are available shall be followed in accordance with the provisions which are summarized in Para 9.02 (ii). [Refer SR 6.02.05]

**9.3 TEMPORARY SINGLE LINE WORKING ON A DOUBLE LINE SECTION : - N.A.**

**10 VISIBILITY TEST OBJECT: -**

The lights of loop Line No.1 starter signals on both ends are nominated as visibility test object. SM on duty will test the visibility during thick and foggy weather and if visibility is impaired, he will work as per GR 3.61 and relevant SRs.

**11 ESSENTIAL EQUIPMENTS AT THE STATION: -**

This is mentioned in the Appendix 'E' of the SWR. Essential equipment shall be kept ready on hand in good condition with necessary relief stock.

**12 FOG SIGNAL MEN NOMINATED TO BE CALLED IN CASE OF FOG: -**

In order to indicate to the Drivers of approaching trains the location of signal during thick, foggy and tempestuous weather or during dust storm, the SM on duty shall arrange for fog signaling in terms of General Rule 3.61 and Subsidiary Rules thereto. Assurance of the staff shall be taken in the Fog Signal Register in the month of October every year as token of their having knowledge of Fog Signaling Rules and their use.

Fog signalmen shall be detailed for duty at stations being recruited partly from the station traffic staff and partly from Engineering Gang man and must not be substitutes or casual labour but regular employees of the railway.

**STATION DETONATOR REGISTER (OPT/124)**

A Register regarding detonator is maintained at the station.

**(a) INSTRUCTIONS:**

This register contains the following parts.

Part. - I: Particulars of fog signalmen posted at the station from time to time.

Part – II: Particulars of receipt and stock of detonating (fog) signals at the station to be filled in whenever detonators are used or received.

Part – III: Periods of fogs, fog signalmen on duty and details of detonators used.

Part – IV: Particulars of issue and testing of fog signals at the station.

(b) In charge of the station shall ensure that the information maintained in the register is kept upto date and is accurate in all respects.

(c) Transportation inspectors shall check the registers and also the stock of detonators on hand each time they visit the station and initial with date as an indication having done so.

**CERTIFICATE:** - NOTHING IN THESE RULES SHALL BE READ AS CANCELLING, AMENDING AND MODIFYING ANY OF THE GENERAL RULES, SUBSIDIARY RULES, BLOCK WORKING MANUAL AND OPERATING MANUAL. THESE RULES HENCEFORTH CANCEL ALL PREVIOUS STATION WORKING RULES OF JARAPADA STATION.

**APPENDICES**

APPENDIX 'A'	--	WORKING OF L.C. GATE.
APPENDIX 'B'	--	SYSTEM OF SIGNALLING AND INTERLOCKING AND COMMUNICATION ARRANGEMENTS AT THE STATION.
APPENDIX 'C'	--	ANTI COLLISION DEVICE (RAKSHA KAVACH).
APPENDIX 'D'	--	DUTIES OF TRAIN PASSING STAFF AND STAFF IN EACH SHIFT.
APPENDIX 'E'	--	ESSENTIAL EQUIPMENT OF STATION.
APPENDIX 'F'	--	RULES FOR WORKING OF DK STATIONS, HALTS, IBH, IBS AND OUTLYING SIDINGS.
APPENDIX 'G'	--	WORKING OF TRAINS IN ELECTRIFIED SECTIONS.

**APPENDIX – ‘A’**

**DETAILS OF LEVEL CROSSING GATES TOGETHER WITH INSTRUCTIONS TO THE OPERATING STAFF (INCLUDING LEVEL CROSSING GATE MEN) ABOUT THEIR NORMAL WORKING, THEIR MAINTENANCE AND THEIR WORKING INCASE OF FAILURES/ EMERGENCIES WITH SPECIAL PROVISIONS, IF ANY.**

**1.0 GATE WORKING INSTRUCTIONS OF “C” CLASS NON INTERLOCKED ENGG. MANNED LEVEL CROSSING GATE AT KM 137/2-3 (NO.ST-88) BETWEEN JRPD & KPJG STATIONS**

**1.1 GENERAL INSTRUCTIONS:**

**1.1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:**

1.	Number of Level Crossing Gate: -	ST-88.
2.	Engineering or Traffic Gate: -	Engineering.
3.	Under control of Station Master/Permanent Way Inspector: PWI.	
4.	Location KM	137/2-3
5.	At. Station: -	----
6.	In between stations: -	JRPD-KPJG.
7.	BG/MG/NG: -	BG.
8.	Single line/Double line/Multiple line: -	Single Line.
9.	Normal Position: -	Closed to road traffic.
10.	Interlocked/Non Interlocked: -	Non-interlocked.
11.	Means of interlocking: -	NIL.
12.	Provision of Gate signal at Kms.	
		i) Up line -NIL
		ii) Dn line -NIL
13.	Signaling arrangement: -	NIL.
14.	Means of Communication:	Telephone connection from Gate Goomty with SM office /JRPD.
15.	Width of level crossing Gate: -	7.5 Meters.
16.	Type of road. (NH/SH/Others): -	Others
17.	Name of Road: -	The Jamunda to Sadanandapur road.
18.	Metaled/Non Metaled:	Metaled
19.	Approach Road: -	Metaled
20.	Width of the road: -	5.5 M.
21.	Angle of road crossing (In case of the skew Gates)	90 Degree.
22.	Road gradient (If any)	
		i) North/East side- 1 in 30.
		ii) South/West side- 1 in 30.
23.	Road alignment (Straight/Curve): -	
		i) North/East side.- Straight.
		ii) South/West side. -Straight
24.	Provision of height gauges: -	Not provided
25.	Type of Barriers: -	Lifting barriers.
26.	Length of checkrails: -	9.5 Meter.
27.	Road surface in between Level Xings Gates	C.C.Block
28.	Length of speed breakers: -	7.5 Meters.
29.	Road signs: -	Available
30.	Speed breaker indication board: -	Available
31.	TVU: -	7122 on 03/2013.
32.	Census next due on: -	03/2016.
33.	Demarcation for placement of Detonators: -	Provided.

- |     |   |          |
|-----|---|----------|
| 34. | No. of Gateman working: -                             | 02.      |
| 35. | Nearest Railway Medical Assistance: -                 | TALCHER. |
| 36. | Nearest Private Medical Assistance available (if any) | JARPADA  |
| 37. | List of equipment available (Yes/No): -               | Yes.     |

1.2. **EQUIPMENT:**

<b>ITEMS</b>	<b>QUANTITY/NUMBERS</b>
1. Hand signal Lamp/ Tri Colour Torch	3(5 on Quadruple/Line or twin single line)
2. Hand signal Flag Green	1 mounted on sticks
3. Hand Signal Flag Red.	3 (6 on Quadruple/line or Twin single line and 7 in case Hexaple section mounted on sticks)
4. Banner Flag Red	3 (5 on Quadruple/Line or twin single line)
5. Posts for exhibiting red banner flag	2 (4 on Q/Twin single line and 5 on Hexaple section)
6. Spare chains with padlocks	2 with stop mark
7. Detonators	10 in tin case
8.. Gate Lamps	2
9.. Tommy Bar	1
10. Motor Pan	1
11. Spade/Fowrah	1
12. Rammer	1 (in case of asphalted road this may not be provided)
13. Pick Axe	1 (in case of asphalted road this may not be provided)
14. Tin case for flags	1
15. Can for oil	1
16. Water pot/Bucket	1
17. Canister for Muster Roll	1
18. Set of spare spectacles of Gateman wearing glasses.	1
19. Board demarcating protection of L.C. Gate Diagram in case of obstruction on Gate.	1
20. Basket	1
21. Whistle	1
22. Wall clock	1
23. Small size chains with padlocks to be used in case of failure of boom lock	2

1.3 **THE GATEMAN SHALL BE PROVIDED WITH FOLLOWING REGISTERS: -**

- i) Gate working instructions in Hindi / English.
- ii) Gate working instructions in local vernacular language.
- iii) Gateman Rule Book in Local vernacular language.
- iv) List for tools and books.
- v) Duty Roster.
- vi) Certificate for working as gateman.
- vii) Bio–Data particulars of Gateman, including date of passing vision test, initial/refresher course, safety camp etc.
- viii) Accident Register.
- ix) Records of last census of road traffic at level crossing gate.
- x) Public complaint Book.
- xi) Inspection Book.

#### 1.4 **DUTIES OF GATEMAN:**

##### 1. **ALERTNESS:**

The Gateman on duty shall be alert. He should be prepared to take immediate action, when danger is apprehended. Keys of the Gate shall be in his personal custody.

##### 2. **POSITION OF GATE KEEPER DURING PASSAGE OF TRAINS:**

During passage of trains, Gateman will stand in the manner indicated below:

- i) Gateman will stand attentively in front of the Gate – lodge facing the approaching train.
- ii) In daytime, Gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In nighttime, Gateman shall hold lighted hand signal lamp with white light facing the track.
- iv) He shall keep the whistle slung around his neck from a cord.

##### 3. **ROUTINE DUTIES OF GATEMAN:**

- i) Gateman shall ensure that red banner flag by day and red light by night is placed across the track whenever the Gate is kept in open condition for passage of road vehicles.
- ii) Gateman shall ensure that all Gate lamps and hand signal lamps are lighted and kept burning continuously from sunset to sunrise.
- iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the Gate unless his reliever arrives and takes over charge from him. However, if it is necessary to leave the Gate in an emergency, he must close and lock the Gate against road traffic, before leaving the Gate.
- iv) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle/wagons /trains/battery/box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- vi) If lifting barriers get damaged or becomes out of order, the Gateman shall use the spare chain with disc and padlocks for securing the Gate against road traffic.
- vii) Gateman shall report the SM and Permanent Way Inspector any defect in his Gate or apparatus pertaining to it, as soon as possible.
- viii) Gateman shall wear badge and prescribed uniform while on duty at level crossing Gate.
- ix) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- x) Gateman shall work the Gate as per Gate working instructions and remain well conversant with these instructions.
- xi) Gateman shall ensure that equipment supplied at the Gate is in good order and ready for immediate use.
- xii) Gateman shall see that the channel for the flange of the wheel is kept clear.
- xiii) Gateman must keep the road surface well-watered and rammed in case of unmetalled roads.
- xiv) Gateman must be vigilant to see that inconvenience to road users due to closure of Gates should be to the minimum possible extent.
- xv) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

##### 4. **ACTION IN CASE OF UNUSUAL OCCURRENCE OF TRAIN.**

In case Gateman observes anything unusual with a passing train, he shall take following action:

- i) He shall take prompt action to warn the Loco Pilot/guard of the passing train by showing red flag by day and red light by night.

- ii) He shall simultaneously try to draw the attention of the Loco Pilot /guard by whistling continuously, shouting, gesticulating, and throwing ballast on the brake van or by any other means.
- iii) If Loco Pilot /guard fails to take notice, Gateman shall immediately inform the SM on duty to take appropriate action, under exchange of private number.
- iv) In case of train parting, Gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavor to attract the attention of the Loco Pilot /Guard by whistling continuously, shouting, gesticulating, and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- vi) In case the train does not stop, Gateman shall immediately inform the SM to take appropriate action, under exchange of private number.

5. **ACTION IN EMERGENCY AT THE LEVEL CROSSING:-**

- i) In case of an obstruction at the level crossing Gate, he shall place banner flag/red light lamps on the stave on track at 5 m. away from the edge of the road at Level Crossing.
- ii) Thereafter, if he is unable to remove the obstruction, Gateman shall immediately advise the SM on duty regarding the defects/obstructions at the Gate, under exchange of private number.
- iii) If there is no response from the SM on duty after three attempts, he shall first protect the Gate and then inform on phone.

**a) The Gateman shall protect the line as under : -**

- i) Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the direction from which a train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night towards the other direction 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the Gate along with detonators and red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction from which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing Gate and place 3 detonators on the track in 10 meters apart. Having thus protected the line he shall return to the level crossing Gate picking up the intermediate detonator on his way back which was placed at boom.
- v) Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the Gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.
- vii) In case the Gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- viii) Thereafter, he shall warn the Loco Pilot and stop the approaching train by waving his red flag by day, red hand signal lamp by night repeatedly.

**(b) Other actions to be taken by Gateman:**

- i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (a) and (b) above.
- ii) If the Gate is broken by a road vehicle, which is fouling the track, or if lifting barriers or any other part of the Gate foul the track, or if there is any other obstruction at the Gate, the Gateman shall take immediate action.



- iii) He shall note down the particulars of the road vehicle, vehicle number, name of the driver, owner and relay these details to the SM/JRPD & PWI regarding the particulars and obstructions at the level crossing Gate, through messenger or other means available.

1.5 **SPECIAL INSTRUCTIONS:**

1. **MODE OF OPERATION:**

This is a Manned & Non-interlocked Engineering L.C.Gate situated at Km 137/2-3 between JRPD-KPJG stations. This gate is provided with winch operated coupled lifting barriers and the gate is closed/opened by the gateman manually by winch operation. Telephone communication is provided between the L.C. gate lodge with SM office of JRPD station. The level crossing gate is normally kept closed and locked against road traffic. The Station Master/JRPD shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gateman supported by exchange of private number. When the gateman desires to open the gate for passage of road traffic he should ensure that no PN has been exchanged with the Station Master/ JRPD for the passage of train or the whole of the train with last vehicle indicator has passed over the level crossing gate for which the gateman has exchanged private number with the SM/ JRPD. Before opening the gate for road traffic, he shall display banner flag/danger signal at either side of the track at a distance of 5 meters away from the gate.

2. **EXCHANGE OF PRIVATE NUMBERS:**

- (i) The normal position of level crossing gate being "Closed to Road Traffic" it should always be in closed condition against road traffic, except when, it is opened for passage of road traffic over the level crossing, subject to conditions prescribed below.
- (ii) The Station Master / JRPD before permitting each train to enter into the block section, shall ask Gateman on the telephone by giving a Private Number whether, gate is closed against road traffic for the passage of train. The Gateman only after ensuring that the gate is actually closed and locked against road traffic shall give a Private Number to the Station Master / JRPD in assurance of gate being closed and locked against road traffic.
- (iii) The Station Master / JRPD shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gateman supported by exchange of private number.
- (iv) When the gateman desires to open the gate for passage of road traffic he should ensure that:
- (1) He has not exchanged any private number with the SM / JRPD as per (ii) above.
  - (2) If he has exchanged private number with the Station Master / JRPD, the whole of the train with last vehicle indicator has passed over the level crossing gate and Station Master / JRPD has not exchanged private number with him for any other movement immediately in rear of the train.
- Before opening the gate for road traffic, he shall display banner flag/danger signal at either side of the track at a distance of 5 meters away from the gate. Then he shall open the gate for passing the road traffic, keeping a red flag / red hand signal lamp ready in his hand to stop approaching train if any.
- (v) In case the Gateman is not responding on the telephone or in case the telephone becomes defective or private number is not received from the Gateman, the Station Master/ JRPD shall adhere to the procedure prescribed in SR 16.03.04.
- (vi) In the event of failure of telephone, if the gate is required to be opened for the passage of road traffic, the gateman shall look out in both directions before opening the gate to ensure that no train is approaching from either end. He shall then plant a banner flag during day and a hand signal lamp with the red light during night, 5 meters away from the gate on the track on either side. He will thereafter, open the gate for passing the road traffic keeping a red flag / red hand signal lamp ready in his hand to stop approaching train if any.

### 3. **FAILURE OF TELEPHONIC COMMUNICATION:**

When Telephonic Communication fails or SM/ BRGA does not get any response from the Gateman despite 2 or 3 attempts, the following procedure shall be adopted:

- a) SM/ JRPD shall serve a caution order to the Loco pilot and the Guard of every train proceeding into the affected section giving the number and kilometreage of the level crossing and directing the loco pilot:-
  - i) To whistle frequently to attract the attention of the gateman,
  - ii) To proceed cautiously, and stop 30M short of the level crossing & be guided by hand signal.
- b) (i) The Loco Pilot after stopping, if the gateman is available and apparently in a fit condition to continue his duty and the gates are closed, shall arrange to advise the station master / JRPD as the case may be of the fact using the telephone provided at the gate. The Station Master/ JRPD on receipt of such an advice from the Loco Pilot shall discontinue issue of caution order to the following trains provided the acknowledgement of the gateman is available over the telephone.
  - (ii) In the above circumstance, the Loco Pilot should not stop his train at the next station to advise the SM.
- c) (i) If the loco Pilot does not find the gateman at the level crossing or if the gateman is apparently unfit for duty and the gates are not closed, he shall depute his Assistant, the Loco Pilot shall seek assistance of the Assistant Guard or Guard of the train. The same should be informed to the Station Master/ JRPD on gate telephone.
  - (ii) The Loco Pilot, after being hand signaled, shall pass the level crossing and stop clear of it by at least 2 bogie lengths to pick up the Assistant or Assistant Guard / Guard, as the case may be. The Railway servant deputed for closing the gate shall reopen it for road traffic after the passage of the last vehicle of the train.
  - (iii) If, however, the telephone is out of order or the gateman is not available or is apparently unfit to continue his duty and intimation of the fact could not be given to the station/ JRPD from the gate, the Loco Pilot shall stop his train at the next station (even if it is through passing station) and give a memo to the Station Master indicating the condition of the gateman, gate and telephone.
  - (iv) The Station Master on receipt of the Loco Pilot's report regarding absence or unfitness of the gateman, shall advise the station Master/ KPJG, the Notice Station, the Section Controller, JE/SE/SSE (P.Way) and AEN concerned and the Gangmate of the nearest gang for immediate posting of a gateman. He shall also inform the maintenance staff to attend and repair the telephone, if required. Issue of caution order should continue till normal working condition is restored.
- a) Before giving line clear to a train, the Station Master/ JRPD shall advise the Station Master/ KPJG of the facts by message supported by a Private Number, and obtain his acknowledgement with a Private Number. The latter shall issue a caution order to the Loco Pilot as detailed in Para (i).
- b) Necessary entries shall be made in the Caution Order Register, Station Diary or Signal Failure Register as the case may be by Station Masters at either end of the affected station. The Section Controller shall also keep a note in his chart indicating the action taken by him.

### 4. **FAILURE OF LIFTING BARRIERS:**

- (i) When the gate cannot be closed due to failure of lifting barriers, the gateman will immediately inform the station Master on duty/JRPD, under exchange of Private number, and ensure that lifting barriers of gate do not foul the track.
- (ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.

- (iii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- (iv) After securing the gate against road traffic, he shall show green hand signal flag by day and green light by night to the driver of an approaching train.
- (v) SM on duty/ JRPD shall issue caution order to the Loco Pilot of departing train. He shall also advise the Station master/KPJG at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vi) He should also advise maintenance staff responsible for maintenance of the lifting barriers to rectify the defect at the earliest.
- (vii) Normal working will be resumed only after maintenance staff rectify the lifting barriers and issue reconnection/fit memo for the same.

5. **OBSTRUCTION AT THE GATE:**

- i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall Immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.
- ii) Immediately after this, the gateman shall advise the Station Master/ JRPD, regarding the defects/obstruction at the gate, under exchange of private number.
- iii) Stationmaster on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- iv) If there is no response from the Station Master / JRPD after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item No.1.4. (5).
- vi) Thereafter he shall protect the gate from the other direction also.
- vii) He shall note down the particulars of the road vehicle, name of the driver, owner and reply these details to the station Master/ JRPD who shall not start the trains unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- viii) The Station Master/JRPD shall also inform the station Master/KPJG at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been clear of all obstruction.
- ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- x) Station Master/ JRPD shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and they're after exhibit green hand signal, if the gate is not obstructed.
- xii) Station Master/ JRPD shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xiii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers and issue reconnection/fit memo for the same.

6. **OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:**

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master/ JRPD will adopt the procedure given under item No.5 above. If the obstruction fouls the level Crossing Gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

**2.0 GATE WORKING INSTRUCTIONS OF “C” CLASS ENGG. NON-INTERLOCKED. ENGG. LEVEL CROSSING GATE AT KM 134/7-8 (NO. ST-86) BETWEEN JRPD - KPJG STATIONS.**

**2.1 GENERAL INSTRUCTIONS-**

**2.1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:**

1	No. of Level Crossing Gate	:	ST-86
2	Engineering or Traffic gate	:	Engineering
3	Under control of station master or PWI	:	PWI
4	Location at Km.	:	134.739 (134/7-8)
5	At station	:	--
6	In between station	:	JRPD- KPJG
7	BG/MG/NG	:	BG
8	Single line/double line/multiple line	:	Single line
9	Normal position	:	Open to Road traffic
10	Interlocked/ Non-Interlocked	:	Non-Interlocked
11	Means of Interlocking	:	Nil.
12	Provision of gate single at Km.	:	i) UP Line :NIL ii) DN Line :NIL
13	Signaling arrangement	:	Nil.
14	Means of communication Telephone.	:	Telephone communication from Gate Goomty with SM office/JRPD.
15	Width of the level crossing gate	:	7.5 meters.
16	Type of road	:	Others
17	Name of road	:	NH-42 toTukuda village Road
18	Metalled /Non-Metalled	:	Metalled
19	Approach road	:	Metalled
20	Width of the road	:	5.5m
21	Angle of road crossing (in case of the SKEW gates)	:	Nil.
22	Road gradients (if any)	:	[a]North Side.- 1 in 30 [b] South Side.- 1 in 30
23	Road alignment (straight/Curve)	:	[a] North Side:- Straight [b] South Side:- Straight
24	Provision of height gauges	:	Not Provided
25	Type of barriers	:	Winch Operated Lifting barriers
26	Length of check rails	:	9.5m
27	Road surface in between level crossing gates.	:	C.C. Block
28	Length of rumble strip/ speed breakers.	:	7.5m
29	Road signs	:	Provided
30	Speed breakers indication board	:	Provided
31	TUV	:	2595 on 03/2013.
32	Census next due on	:	03/2016
33	Demarcation for placement of detonators.	:	Displayed
34	No. of gateman working	:	02
35	Nearest Railway Medical Assistance	:	Talcher
36	Nearest Private Medical Assistance available (if any)	:	Jarpada
37	List of equipment available (Yes/No)	:	Yes

**2.2. EQUIPMENT:**

<b>ITEMS</b>	<b>QUANTITY/NUMBERS</b>
1. Hand Signal Lamp/Tri Colour Torch	: 3(5 on Quadruple/Line or twin single line)
2. Hand Signal Flag Green	: 1 mounted on sticks
3. Hand Signal Flag Red	: 3 (6 on Quadruple/line or Twin single line and 7 in case Hexaple section mounted on sticks)
4. Banner Flag Red	: 3 (5 on Quadruple/Line or twin single line)
5. Posts for exhibiting red banner flag	: 2 (4 on Q/Twin single line and 5 on Hexaple section)
6. Spare Chains with Padlocks	: 2 with stop mark
7. Detonators	: 10 in tin case
8. Gate lamps	: 2
9. Tommy Bar	: 1
10. Mortar Pan	: 1
11. Spade/ Fowrah	: 1
12. Hammer	: 1(in case of Asphalted Road this may not be provided)
13. Pick Axe	: 1(in case of Asphalted Road this may not be provided)
14. Tin Case for Flags	: 1
15. Cane for oil	: 1
16. Water pot/Bucket	: 1
17. Canister for Muster roll	: 1
18. Set of spare spectacles of gateman wearing glasses	: 1
19. Board demarcating protection of L.C gate diagram in case of obstruction on gate	: 1
20. Basket	: 1
21. Whistle	: 1
22. Wall clock	: 1
23. Small size chain with padlocks to be used in case of failure of gate boom lock.	2

**2.3 THE GATEMAN SHALL BE PROVIDED WITH FOLLOWING REGISTERS: -**

- i) Gate working instructions in Hindi / English.
- ii) Gate working instructions in local vernacular language.
- iii) Gateman Rule Book in Local vernacular language.
- iv) List for tools and books.
- v) Duty Roster.
- vi) Certificate for working as gateman.
- vii) Bio–Data particulars of Gateman, including date of passing vision test, initial/refresher course, safety camp etc.
- viii) Accident Register.
- ix) Records of last census of road traffic at level crossing gate.
- x) Public complaint Book.
- xi) Inspection Book.

**2.4 DUTIES OF GATEMAN:****1. ALERTNESS:**

The gateman on duty shall be alert. He should be prepared to take immediate action, when danger is apprehended. Keys of the gate shall be in his personal custody.

2. **POSITION OF GATE KEEPER DURING PASSAGE OF TRAINS:**

During passage of trains, gateman will stand in the manner indicated below:

- i) Gateman will stand attentively in front of the gate – lodge facing the approaching train.
- ii) In daytime, gateman shall hold red & green flags furled up on separate sticks in right & left hands respectively.
- iii) In nighttime, gateman shall hold lighted hand signal lamp with white light facing the track.
- iv) He shall keep the whistle slung around his neck from a cord.

3. **ROUTINE DUTIES OF GATEMAN:**

- i) Gateman shall ensure that red banner flag by day and red light by night is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- ii) Gateman shall ensure that all gate lamps and hand signal lamps are lighted and kept burning continuously from sunset to sunrise.
- iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless his reliever arrives and takes over charge from him. However, if it is necessary to leave the gate in an emergency, he must close & lock the gates against road traffic, before leaving the gate.
- iv) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle/wagons /trains/battery/box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- vi) Gateman shall also be prepared to repeat any signal which guard may give to driver on walkie – talkie or in any other way.
- vii) If lifting barriers get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- viii) Gateman shall report to the nearest Station Master, Gangmate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- ix) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- x) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xi) Gateman shall work the gate as per gate working instructions & remain well conversant with these instructions.
- xii) Gateman shall ensure that equipment supplied at the gate is in good order & ready for immediate use.
- xiii) Gateman shall see that the channel for the flange of the wheel is kept clear.
- xiv) Gateman must keep the road surface well-watered and rammed in case of unmetalled roads.
- xv) Gateman must be vigilant to see that inconvenience to road users due to closure of gate should be to the minimum possible extent.
- xvi) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

4. **ACTION IN CASE OF UNUSUAL OCCURRENCE OF TRAIN.**

In case gateman observes any thing unusual with a passing train, he shall take following action:

- i) He shall take prompt action to warn the driver/guard of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the Loco Pilot/guard by whistling continuously, shouting, gesticulating, and throwing ballast on the brake van or by any other means.
- iii) If driver/guard fails to take notice, gateman shall immediately inform the station Master, to take appropriate action, under exchange of private number.

- iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavor to attract the attention of the Loco pilot/Guard by whistling continuously, shouting, gesticulating, and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- vi) In case the train does not stop, gateman shall immediately inform the Station Master to take appropriate action, under exchange of private number.

**5. ACTION IN EMERGENCY AT THE LEVEL CROSSING:**

- i) In case of an obstruction at the level crossing gate, he shall place banner flag/red light lamps on the stave on track at 5 m. away from the edge of the road at Level Crossing.
- ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the SM on duty, regarding the defects/obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master after three attempts, he shall first protect the gate and then inform on phone.

**A) THE GATEMAN SHALL PROTECT THE LINE AS UNDER: -**

- i) Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the direction from which a train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night towards the other direction 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators and red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction, which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate & place 3 detonators on the track in 10 m apart. Having thus protected the line he shall return to the L.C. gate picking up the intermediate detonator on his way back, which was placed at boom.
- v) Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco pilot of the approaching train.
- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- viii) Thereafter, he shall warn the driver and stop the approaching train by waving his red flag by day, red hand signal lamp by night repeatedly.

**(B) OTHER ACTIONS TO BE TAKEN BY GATEMAN:**

- i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (a) and (b) above.
- ii) If the gate is broken by a road vehicle, which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
- iii) He shall note down the particulars of the road vehicle, vehicle number, name of the driver, owner & relay these details to the Station Master & Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

## 2.5 **SPECIAL INSTRUCTIONS-**

### 1. **MODE OF OPERATION:**

This is a Non-interlocked 'C' Class Engineering L.C.Gate situated at Km 134.739 (134/7-8) between JRPD-KPJG stations. This gate is provided with winch operated coupled lifting barriers. The gateman closes and opens the lifting barriers of gate manually by operating the winch. Telephone connection is provided between the L C. gate lodge and SM's office of JRPD station. The level crossing gate is normally kept open to road traffic and closed against road traffic for passage of trains. The gateman shall be authorized to open the L.C.Gate after complete passage of train from the gate by observing tail board/ tail lamp. The gateman before opening the gate shall ensure that SM has not advised him to keep the gate closed for any other train from the same direction or from other direction. He shall display a banner flag across the track while the gate is in open condition.

### 2. **EXCHANGE OF PRIVATE NUMBERS.**

(a) When Gate is connected with the station at the dispatching end:

- i) Station Master /JRPD at the dispatching end shall advise the gateman the number, description, direction and expected time of the passage of the train at the gate, under exchange of private number.
- ii) Such advice shall be given before taking 'OFF' departure signal or giving an authority to proceed to the Loco pilot.
- iii) The gateman on receipt of the advice shall close the gate well in time and confirm the same, under exchange of private number.
- iv) Station Master / JRPD will take off the departure signals after getting the private number of the gateman.
- v) The gateman shall be authorized by the Station Master / JRPD to open the L.C.Gate after complete passage of train from the gate by observing tail board/ tail lamp. The gateman before opening the gate shall ensure that SM has not advised him to keep the gate closed for any other train from the same direction or from other direction. He shall display a banner flag across the track while the gate is in open condition.

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

- i) Station Master /KPJG at the dispatching end shall advise the Station Master / JRPD 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 / JRPD at the receiving end shall in turn convey the same advice to the gateman, under exchange of private number.
- iv) Gateman shall close the gate and thereafter give his private number to the SM/JRPD.
- v) Only then shall the Station Master / JRPD at the receiving end grant line clear to the Station Master /KPJG at the dispatching end.
- vi) The gateman shall be authorized by the SM/JRPD to open the L.C.Gate after complete passage of train from the gate by observing tail board/ tail lamp. The gateman before opening the gate shall ensure that SM has not advised him to keep the gate closed for any other train from the same direction or from other direction. He shall display a banner flag across the track while the gate is in open condition.

### 3. **FAILURE OF TELEPHONIC COMMUNICATION:**

When Telephonic Communication fails or SM/ HKG does not get any response from the Gateman despite 2 or 3 attempts, the following procedure shall be adopted:

- a) SM/ JRPD shall serve a caution order to the Loco pilot and the Guard of every train proceeding into the affected section giving the number and kilometrage of the level crossing and directing the loco pilot:-



- (i) To whistle frequently to attract the attention of the gateman,
  - (ii) To proceed cautiously, and stop 30M. short of the level crossing and be guided by hand signal.
- b) (i) The Loco Pilot after stopping, if the gateman is available and apparently in a fit condition to continue his duty and the gates are closed, shall arrange to advise the station master / JRPD as the case may be of the fact using the telephone provided at the gate. The Station Master/ JRPD on receipt of such an advice from the Loco Pilot shall discontinue issue of caution order to the following trains provided the acknowledgement of the gateman is available over the telephone.
- (ii) In the above circumstance, the Loco Pilot should not stop his train at the next station to advise the Station Master.
- c) (i) If the loco Pilot does not find the gateman at the level crossing or if the gateman is apparently unfit for duty and the gates are not closed, he shall depute his Assistant, the Loco Pilot shall seek assistance of the Assistant Guard or Guard of the train. The same should be informed to the Station Master/ KPJG on gate telephone.
- (ii) The Loco Pilot, after being hand signaled, shall pass the level crossing and stop clear of it by at least 2 bogie lengths to pick up the Assistant or Assistant Guard / Guard, as the case may be. The Railway servant deputed for closing the gate shall reopen it for road traffic after the passage of the last vehicle of the train.
  - (iii) If, however, the telephone is out of order or the gateman is not available or is apparently unfit to continue his duty and intimation of the fact could not be given to the station/ JRPD from the gate, the Loco Pilot shall stop his train at the next station (even if it is through passing station) and give a memo to the Station Master/KPJG indicating the condition of the gateman, gate and telephone.
  - (iv) The Station Master/ JRPD on receipt of the Loco Pilot's report regarding absence or unfitness of the gateman, shall advise the station Master/KPJG, the Notice Station, the Section Controller, JE/SE/SSE (P.Way) and AEN concerned and the Gangmate of the nearest gang for immediate posting of a gateman. He shall also inform the maintenance staff to attend and repair the telephone, if required. Issue of caution order should continue till normal working condition is restored.
- d) Before giving line clear to a train, the Station Master/ JRPD shall advise the Station Master/KPJG of the facts by message supported by a Private Number, and obtain his acknowledgement with a Private Number. The latter shall issue a caution order to the Loco Pilot as detailed in Para (a).
- e) Necessary entries shall be made in the Caution Order Register, Station Diary or Signal Failure Register as the case may be by Station Masters at either end of the affected station. The Section Controller shall also keep a note in his chart indicating the action taken by him.

#### 4. **FAILURE OF LIFTING BARRIERS:**

- i) When the gate cannot be closed due to failure of lifting barriers, he gateman will immediately inform the station Master on duty/ JRPD, under exchange of Private number, and ensure that lifting barriers of gates do not foul the track.
- ii) He shall immediately fix red banner flag by day and red by night on the post at that end first from which the train is approaching and then at the other end.
- iii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- iv) After securing the gate against road traffic, he shall show green hand signal flag by day and green light by night to the Loco Pilot of an approaching train.
- v) Station Master on duty/ JRPD shall issue caution order to the Loco Pilot of departing train.

- vi) He shall also advise the Station master/KPJG at the dispatching end, under exchange of private number, to similarly issue a caution order to the driver before dispatching a train into the block section from his end.
- vii) He should also advise maintenance staff responsible for maintenance of the lifting barriers to rectify the defect at the earliest.
- viii) Normal working will be resumed only after maintenance staff rectify the lifting barriers and issue reconnection/fit memo for the same.

**5. OBSTRUCTION AT THE GATE:**

- i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall Immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.
- ii) Immediately after this, the gateman shall advise the Station Master/ JRPD on duty, regarding the defects/obstruction at the gate, under exchange of private number.
- iii) Stationmaster/ JRPD on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- iv) If there is no response from the Station Master / JRPD after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instructions for duties of gateman under item No.2.4. (5).
- vi) Thereafter he shall protect the gate from the other direction also.
- vii) He shall note down the particulars of the road vehicle, name of the driver, owner and reply these details to the station Master who shall not start the trains unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- viii) The Station Master/ JRPD shall also inform the station Master KPJG at the dispatching end, under exchange of private number, asking him not to dispatch any train into the block section from his end, until the track has been clear of all obstruction.
- ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- x) Station Master / JRPD shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and they're after exhibit green hand signal, if the gate is not obstructed.
- xii) Station Master JRPD shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xiii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers and issue reconnection/fit memo for the same.

**6. OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:**

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master/ JRPD will adopt the procedure given under item No.5. above. If the obstruction fouls the level Crossing Gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstructions.

**APPENDIX – ‘B’****DETAILS OF SIGNALLING AND INTERLOCKING INSTALLATIONS, INSTRUCTIONS FOR WORKING THEM NORMALLY AND IN EMERGENCIES ETC., INCLUDING THE POWER SUPPLY ARRANGEMENTS.**

1.0 This is a ‘B’ Class Station with Standard II (R) Interlocking (with isolations). The points and Signals are power operated from composite miniature central panel installed in the Station Master’s Office. This Station is equipped with multi aspect colour light signaling. Token less Block Instruments (DIADO) have been provided in the SM panel room for sections JRPD-BONA & JRPD-KPJG.

1.1 **DESCRIPTION OF PANEL:** The yard layout is depicted on the panel and the panel is fixed parallel to the track so that when SM on duty faces the panel, the yard drawing of the panel corresponds to the actual layout.

1.1.1 **DESCRIPTION OF POINT PUSH BUTTON (RUNNING LINE POINT) :-**

Srl No	Point No.	Colour	Description
1	6	BLACK	Crossover point between Main line and Loop line no.2 at TLHR end with Over run line.
2.	7	BLACK	Crossover point between Main line and Loop line no.1 at TLHR end with Over run line.
3.	8	BLACK	Crossover point between Main line and Loop line no.2 at SBP end with Over run line.
4	9	BLACK	Crossover point between Main Line and Loop line no.1 at SBP end with Over run line.

1.1.2 **DESCRIPTION OF POINT GROUP BUTTON:** - These are two buttons at the top of panel one for Normal and one for Reverse operation of points. These are coloured BLACK with red dot. The button is operated in conjunction with point button to operate the concerned point to the required setting.

1.1.3 **OPERATION OF POINTS BY POINT PUSH BUTTONS:** - Points are operated for NORMAL to REVERSE or vice versa by operating concerned point push button along with common point group button (Black with red dot) for normal or reverse operation. When the points are required to set from normal to reverse, the concerned point push button along with common point group button for reverse operation are to be pressed simultaneously. As soon as the operation is initiated the WHITE indication will start flashing till the point is correctly set to reverse at site and steady WHITE indication glows. Similar operation shall be done when the points are required to set from reverse to normal. Only one point can be operated individually at a time. When the points of any route have been correctly set and relevant signal taken ‘OFF’, RED indication near the point on the panel appears indicating that the concerned points are locked either in NORMAL or REVERSE position as the case may be.

1.2.0 **POINT INDICATIONS:** - Points are normally operated automatically along with route setting operation. However, required points can also be operated individually. For this, POINT BUTTONS, which are BLACK in colour, are fitted over the point layout on the panel board. The individual operation of the electric point machine is controlled by these point push buttons in conjunction with the POINT GROUP BUTTON (which are BLACK with red dot on it) ‘N’ or ‘R’ as per requirement fitted on the top of panel board. The indication for points are as follows; -

- 1.2.1. When a point is set and locked in Normal position, a horizontal 'WHITE' indication appears suggesting that the point is set in NORMAL position.
- 1.2.2 When a point is set and locked in REVERSE position, a diagonal 'WHITE' indication appears suggesting that the point is set in REVERSE position.
- 1.2.3 When the points of any route have been correctly set and relevant signal taken 'OFF', RED indication near the point on the panel appears indicating that the concerned points are locked either in NORMAL or REVERSE position as the case may be.
- 1.2.4 When the points are not set or locked either in NORMAL or in REVERSE correctly, the normal and reverse steady indication will not be there but the WHITE indication will start flashing till such time the point is housed & locked properly in one of the positions. In such case points are to be set both ways by crank handle and clamped and padlocked. This WHITE indication will flash during operation of point also. After completion operation of point during crank handle operation, NORMAL or REVERSE indication appears on panel.
- 1.2.5 All points over running lines are operated by electric point machines.
- 1.2.6 **NON SETTING OF POINTS:** -The cause for non-setting of the point in the desired position shall be checked up by the SM on duty according to SR 3.68.01 (C). If there is a defect other than any obstruction, then the point shall be considered defective and action shall be taken for clamping and padlocking of these points in the desired position by Station Master on duty himself for all trains according to SR 3.69.03(C). In such case both ends of the points shall be clamped and padlocked.
- 1.2.7 **DESCRIPTION OF CRANK HANDLE BUTTONS:** All motor operated points in the yard have been grouped into two crank handle zones for emergency / manual operation of points by crank handles as follows:

SL NO.	CRANK HANDLE	COLOUR OF BUTTON	CONTROL POINTS
1	CH1	BLUE	6 A/ B and 7 A/ B at DN end.
2	CH2	BLUE	8 A/B and 9 A/B at UP end.

Crank Handle button must be operated in conjunction with GROUP TRANS GROUP RELEASE button to transmit or receive the crank handle.

- 1.3.0 **SIGNAL PUSH BUTTON:** Push buttons for operation of signals are provided near the signals on the panel. These are operated in conjunction with Route button (white coloured) to operate the signals.
- 1.3.1 **DESCRIPTION OF SIGNAL BUTTONS:**

SL. No.	BUTTON NO.	COLOUR	DESCRIPTION
01	C1	RED With white dot	DN Calling-on Signal for Line Nos.1,2 & 3
02	S1	RED	DN Home Signal for Line Nos.1,2 & 3
03	S2	RED	DN Starter signal for Line No.1
04	S3	RED	DN Starter signal for Line No.3
05	S4	RED	DN Starter signal for Line No.2
06	S5	RED	DN Advanced starter signal
07	SH 10	YELLOW	UP Shunt signal No.10

08	S 14	RED	UP Advanced starter signal
09	S15	RED	UP Starter signal for Line No.3
10	S16	RED	UP starter signal for Line No.1
11	S17	RED	UP Starter signal for Line no. 2
12	S18	RED	UP Home Signal for Line No.1,2 & 3
13	C18	RED With White Dot	UP Calling-on signal for Line Nos.1,2 & 3
14	SH19	YELLOW	DN Shunt signal no. 19

1.3.2 **SIGNAL INDICATIONS:** - Manually Operated Multi Aspect Colour Light Signals are provided as per General Rules 3.07 (4), 3.08 (4) (c) for the reception and departure lines. All signals in the yard are depicted on the panel along side the track as per their respective position in the yard. The aspects of all signals in the yard, at any time, are shown on the signal indications depicted on panel.

1.3.3 **ASPECTS OF SIGNALS;-**

**G:-**Green light indicates "PROCEED" aspect of the colour light signal and authorizes to proceed.

**Y:** - Yellow light indicates the "CAUTION" aspect i.e. Proceed and be prepared to stop at the next stop signal.

**YY:-**Double yellow light indicates "ATTENTION" aspect i.e. Proceed and be prepared to pass the next signal at restricted speed as may be prescribed by special instructions.

**R:** - Red light indicates the "STOP" aspect i.e. Stop dead.

The aspect of Distant signal is corrected vide amendment to GR-3.07 and CPTM/ECOR's letter No.ECOR/Optg/SC/55/X/SWR, dtd.05.02.2014. The revised indications are given as under.

Receiving On	Existing		Revised	
	Aspect of Distant	Aspect of Home	Aspect of Distant	Aspect of Home
To stop at home signal	Y	R	Y	R
i) To stop at loop line starter, ii) Through via loop.	YY	Y with lunar	YY	Y with lunar
To stop at main line starter	G	Y without lunar	YY	Y without lunar
Through via main line	G	G	G	G

2.0 **ROUTE BUTTONS:** - Route buttons are provided separately on each running line on the panel for initiation of route (viz. L2 UN, L1/2 UN, L1/1 UN, L3/2 UN and L3/1 UN). Common route buttons are also provided for taking off starters (viz.: IT1 UN, 18T1 UN). An individual route button is provided for taking off Advanced starter signal (Viz.: 14 UN & 5 UN). For clearing the signals, it is necessary to operate the signal buttons and the concerned route button concurrently. In the panel, the routes are set automatically by operation of entry and exit button.

2.1 **DESCRIPTION OF ROUTE BUTTONS**

SL.NO.	BUTTON NO.	COLOUR	DESCRIPTION
1	L2UN	WHITE	UP & DN common route button for Home/Calling on for Main Line, setting overlap up to advanced starter signal in particular direction.

2	L1/2UN	WHITE	UP & DN common route button for Home for Loop line No.1 setting route up to advanced starter signal in particular direction.
3	L1/1UN	WHITE WITH BLACK DOT	UP & DN common route button for Home/Calling on for loop line No.1 setting route up to the end of Over run line in particular direction (for home).
4	L3/1UN	WHITE WITH BLACK DOT	UP & DN common route button for Home/Calling on for loop line No.2 setting route up to the end of Over run line in particular direction (for home).
5	L3/2UN	WHITE	UP & DN common route button for Home for Loop line No.2 setting route up to advanced starter signal in particular direction.
6	IT1UN	WHITE	Common route button for UP starter No. 15, 16 &17.
7	18T1UN	WHITE	Common route button for DN starter No 2, 3 & 4.
8	14UN	WHITE	Route button for UP Advanced starter signal No. 14.
7	5UN	WHITE	Route button for DN Advanced Starter signal No.5.

3.0 **TRAIN ARRIVAL INDICATION THROUGH AXLE COUNTER:** The system provides for automatic check for last vehicle arrival through provision of axle counter. Axle counters are provided in JRPD - KPJG and JRPD– BONA section to check the complete arrival of trains. The system is interlocked with respective Block Instrument. When the Axle counter section indication provided for each direction on the panel individually for sections indicates 'RED' i.e. occupied even after the complete arrival of trains, the Block instrument of the respective section can be normalized after ensuring complete arrival of trains by means of physical verification of last vehicle for stopping as well as run through trains (refer resetting procedure of Axle counter).

3.0 **POWER FAILURE:-** Normal power supply to the signalling and interlocking installations at this station is drawn from SEB power supply source (AC 230 Volt / 50 Hz). Secondary cell back up through integrated power supply system are provided to prevent possibility of blank signals in case of SEB power supply failure and supply to other signaling installations. Whenever SEB power supply fails Secondary cell back up through integrated power supply system will immediately extend power supply to signals thereby preventing blank signals. In SM's Office there is SM power panel, which represents the voltage of the integrated power supply system as follows:

- (I) In case voltage drops 105.9V an audible buzzer appears for starting Generator.
  - (II) In case voltage drops 105.1V an audible buzzer appears for emergency start of Generator.
  - (III) In case voltage drops 104.3V an audible buzzer appears for system shut down.
- Based on the indication shown in the SM's Power Panel SM on duty should start DG for avoiding any case of shut down of power sub system of integrated Power Supply system.

The SM now has to start the diesel generator for standby (Auxiliary) power supply. After stable run of the Diesel generator, the SM on duty has to operate the change over switch for connecting the auxiliary supply to the signaling installation. On resumption of power supply, the Diesel generator shall be stopped by SM after isolating Diesel generator by change over switch. In case of any audible buzzer in SM's power panel, SM should acknowledge the buzzer by pressing 'buzzer' stop button.

Solar Power supply is provided in the station as standby power supply.

If there is any indication on SM's power panel regarding deviation in IPS system, S&T staff shall be called for rectification.

- 5.0 **EMERGENCY ROUTE RELEASE COUNTER:** This counter is provided to register the number of operations made for emergency cancellation of route. The SM on duty must record the last number registered on the counter while taking over/ handing over duty.
- 6.0 **EMERGENCY ROUTE RELEASE OPERATION AND EMERGENCY ROUTE RELEASE BUTTON (WHITE WITH RED DOT) :** This panel interlocking is based on the principle of 'DEAD APPROACH LOCKING'. As such when a route is set and signal is taken off on the route, the route gets locked. Normally the route is released by the passage of the train over the route. When it becomes necessary to alter the route after the signal has been taken off vide SR 3.36.02 (a), the concerned signal must be put back to danger by pressing the Signal cancellation button and the concerned signal button. Then the emergency route release button (white with red dot) positioned on the top of panel to be pressed by breaking the seal and subsequently the concerned signal button pertaining to the route is to be pressed. A white light will flash (Up or Down) indicating that the timer is working. After 120 seconds, the white light along with the white strip of light will disappear suggesting the route has been released. In case the route illumination (a white strip of lights) does not disappear, it suggests that the route is not released/cancelled. In such case the emergency cancellation of route has to be resorted to. The concerned S&T staff should be advised immediately to get the emergency route release button resealed after rectification of fault if any. Each operation of emergency cancellation of route is recorded in the emergency route release counter by registering the next higher number. All such operations and the new number should be recorded in the station diary and in the Train signal register.
- 7.0 **EMERGENCY POINT OPERATION (BLACK WITH RED DOT) :** Emergency point operation facility is provided to operate point in the event of failure of track circuit controlling the point. A push button (BLACK WITH RED DOT) is provided on the top of panel. If such operation is necessary, the SM on duty, after ensuring that no vehicle is standing on the concerned point track circuit, shall insert SM's emergency point operation key in and shall push the emergency Point operation button by breaking the seal along with relevant point button simultaneously. Then keeping point button pressed, emergency point button to be released and the point group normal or reverse button is to be pressed for operating the point to 'NORMAL or REVERSE. All such operations will be registered in the emergency point operation counter and the number will increase by one count.
- 8.0 Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose. Before initiating emergency point operation when the concerned point zone track circuit is showing occupied SM on duty must carry out physical verification at site to ascertain that the said track circuit is clear of vehicles. SM shall ensure resealing of Emergency point operation button by S&T staff after completion of such operation.
- 9.0 **EMERGENCY GATE RELEASE OPERATION: - NA**
- 10.0 **BUTTON HELD ACKNOWLEDGEMENT BUTTON (WHITE WITH RED DOT) :** All push button are self-restoring type. A button held acknowledgement push button (white with red dot) along with a white strip is positioned at the top of the panel. When any button gets stuck in pressed condition, a buzzer will sound along with flashing white light Indication. The Station Master shall stop the buzzer by pressing the button held acknowledgement button (white with Red dot). The buzzer will stop but the flashing white light will continue to glow till the pressed button is normalized. SM on duty shall try to find out the pressed button for normalization or otherwise inform the maintenance staff to rectify.
- 11.0 **OVERLAP TIME RELEASE INDICATION (WHITE LIGHT):** - These are two indications (white lights) for UP overlap time release and DN overlap time release to indicate the release of overlap. These indications will flash during releasing of overlap
- 11.0 **TRACK CIRCUITS:** - The station yard is fully track circuited from Home signal to Home signal and for seven rail lengths in rear of the Home signals on either side. Track circuits 1AT & 18AT are calling-on track circuits. 7AT, 7BT, 6AT, 6BT, 8AT, 8BT, 9AT and 9BT are point track

circuits. L1T1, L2T1, L1T2, L2T2, L3T1, L3T2 & L3T3 are berthing track circuits. Other track circuits namely 1T, 1T1, 18T and 18T1 are for signal replacement, route holding and trolley suppression. Indications for all track circuits are indicated on the panel. Normally these are not lit when the track circuits are clear. RED light appears when the track circuit is occupied/failed. White lights for the track indications appear when the relevant route is set. In case of failure of any track circuit, the controlled signals or points are to be treated as non-interlocked and trains shall be worked as per relevant rules

12.0 **STATION MASTER'S PANEL CONTROL KEY:** - The panel is fitted with Station Master's lock up key to prevent any unauthorized operation of the Panel. The SM on duty is the only authorized person to operate the panel and the panel Key must always remain in his personal custody vide BWM 6.14 (3)(d) & GR 5.08. The key locks the panel board and no operations are possible. In case of emergency, signals can be put back to danger by operating concerned signal button and Signal cancel button without releasing the panel lock also. However, the provisions of SR 3.36.02 shall be followed while replacing the signals to 'ON'.

13.0 **CRANK HANDLE CONTROL KEY AND OPERATION:** When any point fails to operate normally by the route setting operation or through the concerned Point button through panel and it is inevitable to operate the points with crank handle, the Station master on duty shall personally ensure clamping and padlocking all facing and trailing points of the route. Crank handles are interlocked with signals and interlocking system. The CH push button CH1 and CH2 (Blue) and group button (white with black dot) is provided at the top of the panel board. This button has two indications, viz. WHITE AND RED. The White indication suggests that the crank handle key is in its interlocked position of the panel. This is called 'Crank Handle Key 'IN' indication. The Red indication suggests that the crank handle key is locked and not free for extraction from RKT. This is called 'Crank handle key locked' indication. The key out position of the crank handle locks all reception and departure signals in their normal position. For crank handle operation of the points,

The SM has to press concerned crank handle button and Trans button. This will enable SM/TP to extract crank handle key CH-1/CH-2 from RKT at end location. SS/SM/TPM on duty after extracting the crank handle key from RKT at end-location, insert it in the space provided for it on the point machine and turn it to open up the slot for crank handle in the point machine. After inserting the crank handle in the point machine he shall operate it to set the point in desired position. After completion of point work the crank handle key is to be inserted in the RKT at end location and transmitted to station. Station Master on getting ' Key IN ' flashing indication that will appear on panel, shall press relevant CH button & Group Release button to get the steady

key "IN" indication. SM on duty shall personally ensure clamping and padlocking all facing and trailing points en-route. The cases of failure of Motor operated points should be promptly reported to the concerned ESM/Signal Inspector for immediate rectification. SM on duty as per OM 20.06 (d) shall maintain an emergency crank handle register. The procedure for use of crank handle for Motor operated points shall be followed in terms of operating Manual 20.06.

14.0 **SETTING OF ROUTE AND TAKING OFF RECEPTION SIGNALS:** - For setting a route all the concerned points must be set by operation of relevant point button and group button one at a time in the desired position or by operating signal button and route Button. As soon as the points on route, overlap and isolation are set to the required position, the concerned signal for the route will clear and a white strip of light will appear on the entire route confirming that the Route is set & locked. The signal 'off' indication will appear on the panel provided other conditions for taking 'OFF' reception signals are satisfied.



- 14.1 SETTING OF ROUTE AND TAKING OFF DEPARTURE SIGNALS:** For setting a particular route for departure of a train, all the concerned points must be set by operation of point button and point group button one at a time in the desired position or by operating signal button and route button. To take off Advanced starter, line clear must be obtained from the concerned block station in advance. Then the concerned Advanced starter signal button shall be pressed along with the Advanced starter route button for two to three seconds and released. This will clear the Advanced starter signal.
- 14.1.1** To take off the starter signal the concerned signal button to be pressed and at the same time common Route button to be pressed for two to three seconds and released. This will clear starter signal and a white Strip of light will appear on the route from the concerned Starter to the Advanced starter signal.
- 14.2.0 TAKING OFF CALLING-ON SIGNAL:** - Miniature colour light Calling-on signal is provided below the Home signals in terms of GR 3.13 (6) (b). A Calling -on signal shows no light in the 'ON' position. A calling on signal is taken 'OFF' for reception of a train when the Home signal above cannot be taken 'OFF' due to failure or any other reason or for admission of train on blocked line.
- To take off Calling-on signal the train must come to a stop at the foot of the home signal, occupying the track circuit in rear of the signal. When a train occupies the track circuit, a RED light strip will appear on the panel. The particular route on which train is intended to be received shall be set by operating by point push button and group button individually or by route by signal and route button pressing or by crank handling in the event of failure of operation of points through panel. After the route is set, the calling on signal button 'C1'/'C18' (Red with white dot) (as the case may be), shall be pressed simultaneously along with the concerned route button for 2-3 seconds and released. After a lapse of 120 seconds, the calling on signal clears i.e., a white light glows at the concerned calling on signal on the panel. For loop lines, route button L1/2 UN & L3/2 UN shall be used irrespective of the setting of the overlap point. SM shall ensure that no train is made through by taking off the calling on signal.
- 14.3.0 RELEASE / CANCELLATION OF ROUTE:** Normally when a train is received on any route and dispatched, the route illumination will disappear automatically after passage of the train suggesting that the route is released.
- 14.4 REPLACEMENT OF SIGNALS TO 'ON':** Signals are replaced to 'ON' automatically by the passage of a train past the signal. It will not be possible to re-clear the signal again unless the due process for clearing the signal is repeated again. For replacement of any signal to 'ON' position manually, the respective signal button and the signal cancellation button (RED) to be pressed simultaneously.
- 14.5.0 INTERLOCKING OF SIGNALS/POINTS:** All running line points are fitted with facing point locks in the point machine and are electrically detected by the relevant home signal and starter signals.
- 14.5.1** Advanced starter signal is interlocked with respective block instrument in sending position i.e., train going to position and by axle counter for last vehicle check.
- 14.5.2** The block instrument cannot be made normal unless the respective Home signal is put back to 'ON'.
- 14.5.3** Signals once taken 'OFF' can be put back to danger in case of emergency by pressing concerned signal button and signal cancellation button even when the panel is locked up with Station Master's key.

- 14.6 **PILOTING OF TRAINS:** - In the event of failure of both Home signal and Calling ON signal simultaneously, it is inevitable to pilot the train 'IN'. For piloting the train, the setting of route must be ensured by SM on duty personally and the point's en-route must be clamped & padlocked at both facing & trailing end by Operating staff. Same procedure shall be adopted when route illumination fail to disappear. Facing and trailing ends of the all motor operated points must be clamped and padlocked while piloting 'IN' or 'OUT' and during non-signalled movement.
- 14.7 **SHUNTING:** For shunting, OFF aspect of starter signals shall be used. For back shunting, shunt signals provided on each side of the yard shall be used.
- 15.0 **DESCRIPTION OF SIDING: NIL**
- 16.0 **VERIFICATION OF LINE CLEARANCE BY STATION MASTER ON DUTY FOR RECEPTION OF TRAIN INTO STATION YARD:** - In the Station yard, a route on the running line comprises of entrance, berthing and dispatch portion of the yard and this portion of the yard should be cleared of any obstruction for the passages of any train or for any other movements. The clearance of the route including overlap must be ensured by the SM on duty personally through panel indications of track before any movement of trains are permitted on the concerned route subject to the other conditions such as locking of the points etc.
- 17.0 **CRANK HANDLING EMERGENCY OPERATION OF POINTS:** Crank handle operation is interlocked with the signalling and interlocking system. When a route is not released after passage of a train or the Crank handle is in locked condition due to any failure, the "CH key" can also be extracted from the CH location box by applying emergency Crank Handle operation. The procedure is same for transmitting the CH key. In key "in" and lock condition, when the CH button and group trans button are pressed simultaneously, both the lock indication and key "in" indication start flashing. After 120 seconds the lock indication disappears and the key in indication continues to flash. At this position the key can be extracted from the RKT in the CH location box by pressing the push button switch provided inside the CH location box. The procedure for receiving the CH key is same like the normal operation of Crank handle.
- 18.0 **INSTRUCTIONS REGARDING STABLING OF TRAINS ON RUNNING LINES:** When a train is stabled on a running line for a duration exceeding ten hours, the use of the said running line for passing the trains 'IN', 'THROUGH' or 'OUT' at the station shall be done with a lot of care and diligence. SM on duty shall meticulously observe the proper functioning of the relevant track circuits (occupancy/clearance) while admitting a train. Such observance should continue for a minimum of four to five trains thereafter. If SM on duty is not satisfied with the proper functioning of the track circuits on which the train was earlier stabled, the signals of the concerned line shall be suspended and the S & T maintenance staff shall be informed for attending to this.
- 19.0 **EMERGENCY ROUTE CANCELLATION BUTTON AND VEEDER COUNTER:** - For the purpose of emergency operations there is an emergency 'Route cancellation'. There is a 'VEEDER COUNTER' for counting emergency operations involving operation of the emergency route cancellation button (provided at the top of the panel). The SM on duty must press the emergency route cancellation button and the signal button conforming to the section for which emergency route release is desired. A flashing indication will appear indicating that the cancellation operation has been initiated and after lapse of 120 seconds, the desired route will release provided all other conditions are favorable for route release.

The Veeder counter registers the number of such emergency cancellation operations. SM on duty should specify the cause for its usage giving the particulars of causes and the time of operation as related to a particular train etc. in the Train signal register as well as in a separate register meant for this purpose. The detailed operational instructions are as follows:

**20.0 EMERGENCY OPERATIONS – CANCELLATION OF THE LOCKING OF POINTS NOT RELEASED AFTER THE PASSAGE OF THE TRAIN FOR WHATEVER REASON:** - If the locking of the route does not get released for one reason or the other after passage of the train, it is necessary to take recourse to the following emergency operations.

- a) Firstly it must be ensured that the signals are in the normal position.
- b) Operation as detailed in para 6.0 of Appendix-B to be followed.

In case route is not released even after emergency route cancellation, facility of crank handling of points shall be used. For releasing the crank handle even when lock indication of crank handle appears on the panel, press Group Trans button and crank handle button. After two minutes, key from RKT can be extracted. For further operation 13.0 of Appendix 'B' shall be followed.

**21.0 LOCKING OF RELAY ROOM:** - (Refer para No-4.2 of main SWR).

**22.0 MAINTENANCE OF S&T INSTALLATION & ADHERENCE TO MAINTENANCE SCHEDULES:** - Regular maintenance of the S&T installations, adherence to schedules of maintenance, testing of points, track circuits, ground frames, level crossing gates, associated interlocking apparatus, cables and the interlocking functional tests is must for safe and satisfactory working of these installations at this station.

The tests, checks and replacements etc., including overhauling shall conform to the schedules of Maintenance as indicated in the Signal Engineering Manual as also as per the current and extant instructions/circulars on the subject. During checking/ testing or during day to day as well as regular maintenance of S&T gears, SM on duty shall co-operate with S&T staff for safe and satisfactory maintenance.

**22.1 PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF A SIGNAL INTERLOCKING INSTALLATION:** - In case of failure of any interlocking gear at the station, the failure report should be communicated by the SS/SM on duty to the sectional Maintainer, the JE/SSE (SIG) of the Section and others through a memo as per SR 3.51.04 and 3.68.04 and the SM shall document all such transactions.

**22.2 INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:-** However, before declaring a signal or any other S&T gear as defective, the SM on duty shall verify them and setting of points on the route and overlap for a signal to which it applies shall be inspected by the SM on duty irrespective of the position of buttons and indications on the panel and will work vide GR 3.68.

**22.3 RECTIFICATION AND CHECK BEFORE RESUMING NORMAL WORKING:** - After receipt of this information, the sectional Maintainer shall attend to the failure after giving a Disconnection Memo. After rectification of the fault, the Sectional Maintainer shall give a Reconnection Memo detailing the rectification. Thereafter, the SM on duty shall personally check the defective apparatus. After satisfying himself that the gear is in good and proper working order, he shall resume the normal working of the said defective apparatus in terms of SR 3.68.04 (c), (d), (e) & (f).

- 22.4 **PROCEDURE FOR CARRYING OUT PLANNED MAINTENANCE WORK:** - Whenever any normal maintenance or special works for major renewals etc., are involved, the signal & Telecom should pre plan these works. Field staff and the JE/SSE (SIG) should give 'Advance Intimation' to the SM in writing about this work in terms of SR 15.08.01.
- 22.5 **EMERGENCIES:** - Notwithstanding anything contained in the aforesaid paras when equipment is found to be defective and unsafe for passage of trains, the Signal & telecom. Staff must at once suspend the working of the equipment and associated installations and issue 'Suspension Memo' explaining the seriousness of defect or damage to the interlocking installation to the SS/SM on duty and take the Station Master's acknowledgement. After this, the usual practice of exchange of disconnection memo and reconnection memo can follow. The SM on duty must act promptly on such messages and take adequate precaution treating the S&T installation as defective and pass trains over the affected interlocking equipment according to extant instructions as contained in GR 3.77.
- 23.0 **PROCEDURE TO BE FOLLOWED IN THE CASE OF FAILURE OF SIGNALS AND POINTS AND USE OF EMERGENCY CRANK HANDLE:** - Whenever a signal or a point becomes defective, any movement over the points on the running lines shall be made after clamping and padlocking of both facing and trailing points supervised by SM on duty personally for all trains at this station.
- 23.1 In case of failure of a signal or a point and in case the point can not be operated from the panel, emergency crank handle, which is interlocked with system is to be extracted and the following procedure is to be adopted.
- 23.2 Emergency crank handle is provided for all motor operated points. This is mechanically attached to the key on RKT and can be released by pressing Crank Handle control push button and Group Trans button simultaneously. All signals will be locked in normal position as soon as the key is released. SM on duty shall transmit the key to required end of the yard and operate the point manually.
- 23.3 When the crank handle key is removed from RKT for operation of the defective motor operated points, the responsibility for its safe custody vests with the Station Master on duty, till it is replaced back in RKT.
- 23.4 The case of failure of motor operated points should be promptly reported to the concerned Signal maintainer or JE/SSE (sig) for rectification.
- 23.5 Whenever an Emergency Crank Handle is required to be used by a signal official for maintenance work or attending to failure, the signal official will give a disconnection memo to the SM on duty. The SM on duty will obtain the acknowledgement of the signal official in the Emergency Crank Handle Register and then hand over to him the Emergency Crank Handle. The points will be treated as defective till the Emergency Crank Handle is returned back to the SM on duty.
- 23.6 Before parting with the Emergency Crank Handle either for attending failures or for maintenance work by Signal maintenance officials, the SM on duty will ensure that the reception and departure signals are put back to 'ON' position. The points for the affected lines should be treated as non-interlocked. The SM on duty is responsible for introduction of non-interlocked working and the trains will be piloted 'IN' and 'OUT' duly clamping and padlocking both facing and trailing points over which the train is to pass, as per GR 3.69 and 3.70 with relevant SRs. The SM on duty will be personally responsible for setting and locking of points for reception or dispatch of all trains.

- 23.7 The Emergency Crank Handle Register is to be maintained vide OM 20.06 note (d) by the SM on duty wherein the particulars of the usage of the Emergency Crank Handle must be recorded.
- 24.0 **SUSPENSION OF LAST STOP SIGNALS:** - When the Block instrument is suspended with its handle in 'TRAIN ON LINE' position or "TRAIN GOING TO" position as the case may be for whatever reason, the concerned last stop signal controlled by the Block Instrument must be treated as suspended and trains shall be piloted 'OUT'.
- 24.1 The SM on duty shall not grant 'LINE CLEAR' unless he has ensured that the lamps of fixed signals, which apply, to the train are burning. If the signal lights can not be kept burning, the SM on duty before giving 'LINE CLEAR' shall initiate action in accordance with the procedure prescribed in GR 3.68 to 3.72 & relevant SRs vide GR 3.49 (4).
- 24.2 The SM on duty shall not grant or ask 'LINE CLEAR', if the Axle Counter Section indicates section occupied and will treat the Block Instrument as suspended.
- 25.0 **SIGNAL LIGHTS:** - The SM on duty must also ensure from panel board that all the signal lights are burning properly and brightly. This fact must be recorded in the Diary under a separate entry and confirm to the Section Controller on duty.
- 26.0 **CORRECTING TIME IN STATION CLOCK:** - The SM shall set the time in his clock according to the time signal given by the Section Controller on duty at 16.00 hours every day according to SR 4.01.01 and 4.01.02.
- 27.0 **NORMAL POWER SUPPLY:** - The station works on 230 volts AC single – phase power supply. The normal power supply is from the WESCO. Stand – by power is supplied by the diesel generators two in number. Also solar photovoltaic system has been provided in the station.
- 27.1 **POWER FAILURE AND REPORTING SUCH FAILURES:** - Normal power supply to the Signaling and Interlocking installations at this station is drawn from the SEB Power supply source (at 230 V, 50 Hz). Secondary cell backup through integrated power supply system are provided to prevent possibility of blank signals in case of SEB power supply failure and supply to other signaling installations. Whenever SEB power supply fails secondary cell back up through integrated power supply system will immediately extend power supply to signals thereby preventing blank signals. In SM office there is SM power panel, which represents the voltage of the integrated power supply system as follows:
- (I) In case voltage drops 105.9V an audible buzzer appears for starting Generator.
  - (II) In case voltage drops 105.1V an audible buzzer appears for emergency start of Generator.
  - (III) In case voltage drops 104.3V an audible buzzer appears for system shut down.
- Based on the indication shown in the SM's Power Panel SM on duty should start DG for avoiding any case of shut down of power sub system of integrated Power Supply system.

The SM now has to start the diesel generator for standby (Auxiliary) power supply. After stable run of the Diesel generator, the SM on duty has to operate the change over switch for connecting the auxiliary supply to the signaling installation. On resumption of power supply, the Diesel generator shall be stopped by SM on duty after isolating Diesel generator by change over switch. In case of any audible buzzer in SM's power panel, SM on duty should acknowledge the buzzer by pressing 'buzzer' stop button.

Solar Power supply is provided in the station as standby power supply.

If there is any indication on SM's power panel regarding deviation in IPS system, S&T staff shall be called for rectification.

**28.0 AXLE COUNTER AS LAST VEHICLE CHECKING DEVICE (LVCD):-** The system provides for automatic check for last vehicle arrival through provision of axle counter. Digital Axle counter for section JARAPADA-KEREJANGA and Analog Axle counter section JARAPADA-BOINDA section has been provided to check the complete arrival of trains. The system is interlocked with the Block Instrument. When the Axle counter section indication provided on the panel for either section indicates (R) i.e. occupied even after the complete arrival of trains, SM on duty shall resort to resetting of axle counter in the reset panel provided for section JRPD-KPJG and in the SM panel for section JRPD-BONA. If after resetting operation axle counter fails to show section clear indication then the Block instrument of the respective section will remain suspended and the trains will be worked as per Para No.30.

**28.1 PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF AXLE COUNTER (RESETTING) FOR SECTION JRPD-BONA:-**

After arrival of a train, if section clear indication (GREEN) does not appear and/or section occupied indication (RED) continues to glow in the panel, it may be assumed that the axle counter system has failed and the station master on duty shall verify that:

- a) The last preceding train has arrived complete.
- b) Block section is clear of any train/ vehicles.

Before resetting the Axle counter, dispatching station should verify clearance of block section by exchanging private number with station in advance. During such failure the following procedures shall be followed.

- 1) Side station of the concerned block section, should give permission by pressing the "Reset Permission" button.
- 2) When the "Reset Permission" button is pressed at side station, a white indication "LVV Reset Permission received" appears in the panel at JRPD for the concerned block section.
- 3) On duty SM JRPD, then should turn the reset key and press the "LVV Reset Ack" button simultaneously.
- 4) Yellow indication of "LVV Axle counter Reset initiated" appears on the panel.
- 5) The SM on duty JRPD should release the button and normalize the reset key.
- 6) The yellow indication of "LVV Axle counter reset initiated" goes out and the concerned block section Axle counter is reset and block section clear i.e. green indication appears on the panel for the concerned block section.

When after resetting, "GREEN" indication does not appear on the panel, the Station Master on duty shall inform S&T staff regarding the failure. The block working in the concerned section shall remain suspended and GR14.13 shall be followed in addition to para 6.5 of Station working Rule to ensure complete arrival of trains.

**28.2 AXLE COUNTER RESETTING PROCEDURE FOR SECTION JRPD-KPJG:-**

- (A) After the train has been received by the receiving station or after a block back operation or when no train has entered into the block section and the axle counter displays RED, then the following procedure shall be adopted to reset the axle counter.
- (B) **VERIFY THE BLOCK SECTION IS CLEAR OF ANY VEHICLES**
  - i) Whenever after complete arrival of train, the LVV axle counter continues to show 'RED' on the panel board, the on duty SM at both ends of the section shall resort to reset the axle counter.
  - (i) Procedure laid down in GR 4.17 & relevant SRs thereto shall be followed for the purpose.
  - (ii) By checking the train register, the detail of the train passed through the block section and finding out from the station at other end of the concerned block section or from Controller that last train has passed and arrived complete. SM on duty shall exchange private number with the

SM at other end of the concerned block section or with the Controller or from whom the complete arrival has been confirmed.

- (iii) If the failure has occurred after arrival of a train, SM on duty shall also obtain intact position from the guard of stopping train or by exchanging all right signal with the guard of through train, so that he can ensure that the train has arrived completely before resorting to the reset of LVCD axle counter.

(C) **RESETTING PROCEDURE :-**

After complete arrival of train, if the axle counter of the section does not clear or Axle counter section free indication (GREEN) does not appear in the axle counter panel, The receiving station SM shall call the attention of the station in rear through telephone for resetting and shall establish communication with the said station if resetting of equipment is considered necessary giving details of last train that has arrived complete at his station and the block section is clear.

The receiving station shall inform the sending station as to whether the last train that entered into the section has arrived or not, if arrived fully, shall intimate authenticated by exchanging Private number with the sending station.

As digital Axle counter has been provided as LVCD, resetting is to be done by both of sending end and receiving end individually.

The status of the section LVCD i.e. Clear (GREEN), occupied (RED), preparatory reset (Miniature yellow) and power on indication (YELLOW) are provided in the reset box.

The procedure to be followed for re-setting by both of sending end and receiving end individually is as follows:-

- a. Insert SM's LV reset key, turn right and keep pressed.
- b. Press LV reset button provided on the panel.
- c. Release SM's LV reset key and reset button.
- d. Turn left the SM's LV reset key and remove it.
- e. The system obtains preparatory reset state and preparatory reset indication (miniature Green) glows on the panel.
- f. The counter reading increases by one count after a gap of 5 seconds approximately.
- g. The counter reading should be recorded.
- h. First train is to be piloted to the section to make the system normal.

The SM shall record in his Train Signal Register, Station Diary and register meant for it the details of resetting operation giving details of train number, time, Private Number exchanged with SM in rear and reasons for the resetting operation.

If the axle counters functioning properly now, then Block Section clear indication 'GREEN' will appear on the panel and the concerned Block working will be normalized.

If the axle counter section indication does not appear 'Green' and continues to show 'RED' indication, the concerned Block instrument of section shall remain suspended and failure intimation to be given to sectional signal Maintainer/JE/SE (Signal) for early rectification.

29.0 **TELECOMMUNICATIONS: -**

1. Telephone attached with single line token less Block Instruments for either side Block Section
2. Station to Station fixed telephone (Hot line) is provided.
3. Station is provided with auto telephone connected with Railway Exchange
4. BSNL telephone is provided.
5. The station is connected to Sambalpur-ANGL control circuit by control telephone.
6. Station to station 25 Watt VHF communication is provided
7. Telephone is provided between Station and both end crank handle locations
8. Telephone connection has been provided with Station and Engg.LC Gates at Km 137/2-3 and KM 134/7-8.

**Note:**

- (i) For obtaining line clear, VHF should be used as a last alternative and not as a sole means of communication.
- (ii) VHF and Walkie Talkie sets should not be used for unnecessary discussions with Drivers, Guards or any other staff.
- (iii) The on duty SM shall use the above electrical communication instruments stated in Para-29.0 from item No. (1) to (6) strictly in order of preference for obtaining/granting line clear vide SR 14.01.01. In case of failure of any of the above means of communication the SM on duty shall work vide SR 6.02.06.

**29.1 TOKEN LESS BLOCK INSTRUMENT:****29.2 KEYS & BUTTONS**

**SM's KEY**-Intended to lock the instrument and to prevent unauthorized manipulation of the same during the absence of SM.

**Shunting Key**- This key remains normally inserted in the instrument and can be removed only if block handle is in either line closed position or TGT position.

**Push button PB1**- This is a push button used to transmit DC pulses for exchanging bell code signals.

**Push button PB2**- This is a push button used in conjunction with PB1 for releasing block handle of other instrument.

**Switch S1 with counter**- It is used for cancellation of line clear. The counter registers No of such operation.

**Switch S2 with counter**- For cancellation of line clear by the sending station after the train has entered the block section & return to the sending station and received on proper signals. The counter registers the number of such operation.

**TOL Indicator**- This indicator normally displays a white indication and displays red indication with caption "Train on line" when a train enters the block section.

**Time-release indicator**- This indicator is operated during canceling line clear operation when the required time delay has taken place. Normally the indicator displays white with caption 'Locked' and changes over to green with caption 'Free' when occupied.

**Galvanometer**- It deflects the flow of current from one instrument to another when either push button PB1 or PB2 is pressed

**Block handle**- Block handle can be set at 'N' (Line closed), 'L' (Train going to) and 'R' (Train coming from position). It is locked by the block lever lock in all position.

**Buzzer BZ1**- Audible indications at both stations when the train enters the block section.

**Buzzer BZ2**- Audible indication at the receiving station when the whole of the train has arrived.

**29.3 MODE OF SIGNALING OF TRAINS ON DAIDO TYPE TOKENLESS BLOCK INSTRUMENT FOR A TRAIN TO LEAVE A BLOCK STATION FOR THE BLOCK STATION IN ADVANCE- (BWM 4.33).**

**Despatching Station**

[Block handle in 'Line Closed position. All signals & concerned buttons are in normal position.]

1. Inserts SM's key and turns
2. Presses the button PB-1 and sends cell attention code of bell signals.

**Receiving Station**

[Block handle in 'Line Closed position. All signals & concerned buttons are in normal position.]

3. Inserts SM's key



5. Sends 'Attend telephone' code of bell signals
7. Attends on telephone, gives the name of the station and asks B if he is prepared to receive train No..... [Refer BWM Rule No. 2.07 (3)]
9. Repeats the PN given by Station Master 'B' and replaces telephone.
11. Sends 'Is line clear enquiry' code of signals through button PB-1 & keeps the buttons PB-1 and PB-2 pressed on the last beat for 5 seconds or until the Galvanometer needle vibrates.
14. Turns operating handle
- 15(
  - a) Takes 'OFF' the last Stop signal (after ensuring that the route is clear and points are correctly set and locked)
  - b) Train enters Block section.
  - c) Last Stop signal returns to 'ON' position.
  - d) 'Train on line' indication appears automatically.
  - e) Buzzer 1 starts operating.
17. Sends 'Call attention' code of bell signals through button PB-1
19. Sends 'Train Entering Block section' code of bell signals after complying with BMW Rule 2.07 (5)
21. Buzzer 1 stops.
4. Acknowledges the call attention code of bell signals by pressing the button PB-1.
6. Acknowledges the 'Attend telephone' code of bell signals and attends on telephone.
8. Gives out the name of the station, and if he is prepared to receive, replies, 'Yes' take line clear for train No. .... Private Number.....
10. Replaces telephone.
12. Turns the operating handle to 'Train coming from' position.
13. Acknowledges the "Is line clear" code of bell signals through button PB-1 and keeps the buttons PB-1 and PB-2 pressed on the last beat for 5 seconds or till the Galvanometer needle vibrates.
16. 'Train on Line' indication appears automatically and Buzzer 1 starts operating.
18. Acknowledges 'Call attention' code of bell signals through button PB-1
20. Acknowledge 'train Entering Block section code of bell signals through PB-1. Buzzer stops.
22. Takes 'OFF' the reception signals (after ensuring that the line nominated is clear and points are correctly set and locked).
- 23.(
  - a) Train enters the station. Reception signals replaced to ON position automatically.
  - b) Buzzer 2 starts operating.

- (c) Buzzer 2 stops when reset push button is pressed.
- (d) Complies with BMW Rule 2.07 (6)
- 24. Sends 'Call attention code of bell signals through PB-1
- 25. Acknowledges 'Call attention' code of bell signals
- 26. Sends 'Train out of block section' code of bell signals through PB-1 & the buttons PB-1 & PB-2 pressed on the last beat for 5 sec. or till the Galvanometer needle vibrates.
- 27. Turns operating handle to 'Line Closed' position.
- 28. Acknowledges 'Train out block section' code of bell signals through PB-1 and keeps " Buttons PB-1 and PB-2" pressed on the last beat for 5 seconds or till the Galvanometer needle vibrates.
- 29. Turns operating handle to "Line Closed" position and thus buzzer 2 stops.

29.4 **TO CANCEL A LINE CLEAR WHICH HAS BEEN OBTAINED: (BWM 4.34)**

Before proceeding to cancel the line clear obtained, the Station Master at the station at which the instrument is in 'Train going to' positing, shall personally ensure that the train concerned has not started, the Last Stop Signal has been properly put back to 'ON' position and the concerned buttons on the panel are normal and that they remain so until the cancellation procedure is completed.

Despatching Station

(Block Instrument handle at "train going to" position, concerned Last Stop signal is restored to normal) If the departure singles had been taken 'OFF' they are replaced to 'ON' position.

1. Sends "Call attention" code of bell signal on PB-1
3. Sends "Attend Telephone" code of bell Signal on PB-1
5. Takes up telephone, calls out station name and asks for his consent.
7. Turns switch SI, from normal to cancellation position.
  - (a)
  - (b) The 'Counter' register next higher number,

Receiving Station.

(Block Instrument handle at "Train Coming from" position)

2. Acknowledges on PB-1
4. Acknowledges on PB-1 and attends telephone.
6. Ensures that reception signal(s) is/are at 'ON', Calls out station name and then gives his consent on telephone.

- (c) Waits for 2 minutes.
- (d) T.E.R (Time Element Relay) Indicator operates.
- 8. Sends 'Call attention' code of bell signals.
- 9. Acknowledges 'Call Attention' code of bell signals.
- 10. Sends cancellation code of bell signals through PB-1 and keeps the buttons PB-1 & PB-2 pressed for 5 seconds on the last beat.
- 11. Turns his Block handle to 'Line Closed' position and acknowledges the code of bell signals through PB-1 and keeps PB-1 and PB-2 pressed for 5 seconds.
- 12. Turns switch SI to normal position, Turns Block handle to 'Line Closed' position.

**29.5 NORMALISING OF BLOCK INSTRUMENT WHEN TRAINS RETURNS TO THE DISPATCHING BLOCK STATION:-**

Before receiving the train back into the station from which it started, the following is the sequence of actions to be taken:-

Station 'A'

Despatching Station

(Block handle on 'Train Going to' position).

- 1. Advises Station Master B on telephone the intention to push back the train.
- 3. Turns the switch S2 from normal to
  - (a) cancellation position.
  - (b) The 'Counter' registers next higher number.
  - (c) Takes 'OFF' the reception signals.

- (d) Train enters the station.
- (e) Buzzer 2 for arrival of the train starts operating
- (f) Buzzer to stop when reset push button is pressed.
- 4. Sends 'Train out of Block Section' code of bell signals through PB-1 and keeps the buttons PB-2 pressed for 5 seconds on the last beat or till the galvanometer needle vibrates.

Station 'B'

Receiving Station.

(Block handle on 'train Coming from' position)

- 2. Gives consent on telephone.

- 5. Turns his block handle to 'Line Closed' position.

6. Acknowledges 'Train out of Block Section' code of bell signal and keeps buttons PB-1 and PB-2 pressed for 5 seconds on the last beat or till the galvanometer needle vibrates.
7. Turns switch S2 to normal position.
8. 'Turns the Block handle to 'Line Closed' position.

#### 29.6 OPERATIONS OF TLBI (DIADO) INSTRUMENT:

SM shall follow the detail procedure vide 4.36 for shunting between last stop signal & the first stop signal from the opposite direction, 4.37 for shunting between the last stop signal & opposite first stop signal behind departing train, 4.38 for shunting outside first stop signal, 4.39 for working of Motor trolley, 4.40 for working of material trolley, 4.43 for failure of electrical instrument & 4.45 for resumption of normal working, of BWM Chapter-IV, Part-II.

#### 29.7 INTERLOCKING BETWEEN SIGNALS AND BLOCK INSTRUMENTS:

- 1) a) The block working of the section JRPD-KPJG & JRPD-BONA is controlled with the provision of Token-less Block Instrument (Diado type),
  - b) The Advanced starter signals are interlocked with the respective Block Instrument in such a way that the any Advanced starter signal can not be taken off unless the Line Clear is obtained from the block station in advance and the handle of the TLBI is turned to "TGT" position.
  - c) The concerned Advanced starter signal aspect will be changed its "OFF" aspect to "ON" aspect as soon as the leading pair of the train wheels occupies the concerned Advanced starter signal replacement track circuit provided ahead of the respective signal.
- 2) **BLOCK RELEASE:-**
  - [a] The Block Instruments are restored to normal (Line Closed condition) only after the complete arrival of the train past the block over lap ahead of the respective Home signal on either side of the Station yard.
  - [b] All the power signaling installations in the Station yard are centrally controlled from the panel and it is explicit in this arrangement that the complete arrival of a train into the yard from the block section can not be ensured by the operating personnel in the centrally located panel hence, to ensure complete arrival of the incoming train, Axle Counters are provided between JRPD-KPJG & JRPD-BONA sections.
  - [c] In the event of failure of Axle Counter, block working of the section concerned is to be suspended, Line clear SM shall not normalize the commutator of the concerned Block Instrument to "Line Closed" position and shall not dispatch "Train out of block section" report to the station in rear until he is satisfied by seeing the Last Vehicle Indicator on the last vehicle of the incoming train (after arrival) of which Axle Counters failed or obtaining the complete arrival certificate from the Guard of the train. Then station master shall resort to resetting procedure of the axle counter of concerned block section.

#### 30.0 FAILURE OF COMMUNICATION / FAILURE OF BLOCK INSTRUMENTS:

- 1) In the event of failure/suspension of block instrument, Track circuit & Axle Counter- 'Line Clear' shall be obtained over telephone attached to the block instrument or station to station telephone by exchanging identification number and supported by private number as per SR 6.02.06 (a) and Chapter-III Part-I of Block Working Manual.
- 2) In the event of failure/suspension of block instrument and block telephone attached to the block instrument, or the Station to station fixed telephone-

- 'Line Clear' shall be obtained on Railway auto phone or BSNL phone, by exchanging identification number supported by private number vide SR 6.02.06 (1)(b) and Chapter-III Part-I of Block Working Manual.
- 3) In the event of failure/suspension of block instrument, block telephone and station to station fixed telephone or Railway auto phone or BSNL phone-
- 'Line Clear' shall be obtained over the control phone exchanging identification number and supported by 'Private Number' vide SR 6.02.06(1) (c) and Chapter-III Part-I of Block Working Manual.
4. In the event of failure / suspension of block instrument or block telephone attached to the block instrument, or station to station fixed telephone or Railway auto telephone or BSNL phone or control telephone-
- "Line clear shall be obtained on the VHF set exchanging ID number supported by Private Number provided that the instructions contained in SR 14.01.02 are followed vide SR 6.02.06(i)(d), Chapter-III part-I of Block Working Manual"
- 5) In the event of total failure of all communications trains shall be worked vide SR 6.02.04.

**APPENDIX - 'C'**

**ANTI COLLISION DEVICE (RAKSHA KAVACH)**

NIL

**APPENDIX - 'D'****1.0 STATION SUPERINTENDENT (IN-CHARGE):**

He is the over all In-charge of the station; He is responsible for the efficient discharge of duties devolving upon all the Staff employed at the station whether permanent or temporary according to Station Working Rules, Manuals & safe working Instructions. He shall get himself well conversant with the detailed working of Station and panel, points and signals etc.,

He is responsible for maintaining the Assurance Register up-to-date. He shall conduct surprise night inspection and safety meetings/fire drills etc. as per instructions issued from time to time. He shall see that all the staff under his control working safely according to the rules in force.

He shall see that all signals, points, level crossing gates and the whole machinery at the station are in proper working order. He shall report all the defects to the concerned officials.

He shall satisfy himself that the staff employed under him are well conversant with Station Working Rules and perform their duties correctly. He is responsible for maintaining SWR, other Rule books and Assurance Register up to date.

He shall see that all safety records are maintained properly and all rules prescribed in G & SR, Block Working Manual, Operating Manual and other relevant directions issued from time to time by competent authorities are followed rigidly by all concerned and any irregularities if noticed are reported promptly to the authorities concerned.

He shall see that all accidents are promptly reported, attended to and GA-3 along with accident message is submitted to the concerned officers in time. He shall see that the staff is civil and helpful to all users of railway.

He shall frequently visit the platform, Panel Room, etc. in order to maintain an effective supervision over the said staff and their working. He shall see that station premises are kept neat and clean.

He is responsible for booking all staffs working under him for PME and Refresher Course / Safety camp in their due time. His Special attention is drawn out to chapter II of General and Subsidiary Rules and GR 5.01 to 5.08 with relevant Subsidiary Rules, Chapter – XXII of Operating Manual.

He shall see that all equipment, apparatus and instruments including signal and interlocking gears are in proper working order and all failures are promptly reported to officials concerned for repairs/rectifications.

He shall pay special attention towards passenger amenities & coaching trains punctuality and yard feasibility. He shall endeavor for minimizing detention to freight trains by judicious planning of trains staff. He shall pay attention to smooth functioning of goods train to eliminate detentions. He shall attend to all compliance by traveling/trading public.

He shall see that the law and order in the station area is taken care of with the help of G.R.P. and R.P.F and civil authorities as per need.

He shall ensure compliances of all Operating, Safety and Commercial records maintained at the station. He is responsible for overall supervision of the station.

His special attention is drawn to chapter No.II of G & SR (Amendment) 2000 and GR 5.01 to 5.08 with relevant SRs. He shall follow the instruction laid down in SR 3.68.01© & (d) and SR 14.07.01 and BWM 2.09 (e). He shall conduct surprise night inspection, safety meetings and fire drills. He shall maintain good public relation as well as look after passenger's amenities and be helpful to travelling public.

- 2.0 **USE OF PRIVATE NUMBER BOOKS & IDENTIFICATION NUMBER SHEET:-** Sufficient Private Number books and I.D number sheets in sealed covers shall be kept always in the stock by Station Superintendent under lock and key. He shall maintain a register for this purpose.
- 3.0 **ACCIDENTS:** Accidents shall be reported and immediate action shall be taken by the Station Superintendent in charge in accordance with the instruction laid down in the Accident Manual. Whenever the Station Superintendent receives report of an accident, he shall take all necessary precautionary measures to protect the traffic and shall arrange earliest possible assistance as required at the site of accident. He shall frame the accident message/reports and follow up all safety principles without delay.
- 4.0 **TESTING OF POINTS AND SIGNALS** :The Station Superintendent shall test the working of the reception signals daily during the day when there is no train due to arrive/leave the station. He shall also test the working of points, crossings etc. and record the result in the Station Master's diary as per SR 5.01.03.
- 5.0 **HANDING OVER AND TAKING OVER CHARGE:** The Station Master in- charge/ Dy.SS/Station Master/Assistant Station Master on duty shall record in the diary the condition of all the running lines, the caution orders in force at the time of handing over charge. These entries must be counter signed by Station Master/Assistant Station Master coming on duty while taking over charge. This will not, however, relieve any one of the SS/SM of his responsibility to ensure by physical check that the nominated line is clear of all obstructions before admission of any train on it.
- 6.0 **DY.SS/SM/ASM**  
He shall work in shift duty for train passing and booking of traffic, returns and other statements shall be prepared and submitted by him in time under the direction of the Station Superintendent in charge. He shall assist the Station Superintendent in charge for the up keep of the station in all aspects.

Station Master on duty who makes an entry in the train signal register must continue on duty till all the entries pertaining to the trains are completed vide Subsidiary Rule 14.07.01.

He is responsible for train passing during his shift. He shall promptly bring to the notice of SS all irregularities and accidents in course of his shift duties. During the absence of SS the duties of Station Superintendent will devolve on him. He shall follow GR 3.49, SR 3.68.01 (c) & (d), SR 14.07.01. His special attention is drawn to chapter II of G & SR (Amendment) 2000 and SR 5.01 to 5.08 with relevant SRs. He shall carry out the instructions given to him by the SS.

7. **TRAFFIC POINTSMAN:**  
He shall work under the instructions of the SM on duty and follow the GR 2.05 to 2.11 and other relevant rules laid down in GR & SR. He shall remain responsible for.
- (i) Delivery of authority to proceed and caution order etc. to the Loco Pilot of train.
  - (ii) Correct setting, locking and crank handling of points for reception / despatch and shunting operations under the supervision of Station Master.
  - (iii) To couple and uncouple vehicles under the supervision of Station Master/Guard when shunting operation is in progress.

- (iv) Piloting and hand signaling of trains when necessary.
- (v) Knowledge of hand signals, detonators and their use.
- (vi) Protection of line in emergency and fog signalling.
- (vii) Exchange of signals with the Driver and Guard of passing trains as directed by the SM.
- (viii) Cleaning, Oiling and lighting of lamps.
- (ix) Loading/unloading of parcels, luggage and packages to and from the train and watching the packages and other materials by properly stacking in the station premises.
- (x) Dusting of station office, filling UP the fire buckets with sand/water and getting train intact arrival register (T-1410) signed by guard as and when required.
- (xi) Serving messages and other duties entrusted to them by the SMR//SM from time to time.
- (xii) Uses of emergency crank handle for setting of points.
- (xiii) To supervise shunting as per SR 5.13.03.
- (xiv) They must be thoroughly conversant with the GR 3.38, 3.46, 3.77 (I), 5.09, 3.52 to 3.60, 3.62, 5.13, 5.15, 5.16, 5.21, 5.23 & SRs there to.



**APPENDIX - 'E'****ESSENTIAL EQUIPMENTS OF THE STATION**

Below is the list of essential safety equipment, which shall be readily available in good working order with necessary relief stock.

1.	Detonators	10 in tin case
2.	Battery operated LED based flashing Hand Signal lamps	04 Nos.
3.	Hand signal flags	04 sets.
4.	Safety chains with pad locks	06 Nos.
5.	Wedges/Sprags	08 Nos.
6.	Fire buckets (with sand and water)	05 Nos.
7.	Clamps with padlocks	06 Nos.
8.	Reminder collars	06 Nos.
9.	"Motor Trolley on Line" boards	02 Nos.
10.	First aid Box	01 No.
11.	Stretcher	01No.
12.	Blanket	01 No.
13.	Fire Extinguishers (DCPT)	01 No.
14.	Skids	06 Nos.
15.	Block suspension board	02 Nos.

**APPENDIX - 'F'****RULES FOR WORKING OF DK STATIONS, HALTS, IBH, IBS AND OUTLYING SIDING**

-NIL-

**APPENDIX - 'G'****RULES FOR WORKING OF TRAINS IN ELECTRIFIED SECTION.**

-NIL-