

**STATION WORKING RULES OF RAHAMA STATION**

BG Station.

Date of Issue: 10.10.13

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**NOTE:**

The Station Working Rules must be read in conjunction with General & Subsidiary Rules, Block Working Manual and Operating Manual. These rules do not in any way supersede any rules in the above books.

1. **STATION WORKING RULE DIAGRAM:**

The Station Working Rule diagram No. SI/WRD/10689 ALT-C based on CSTE/East Coast Railway's Signal Interlocking Plan No. SI/10689 ALT-C shows the complete lay out of the yard, siding, normal position of points, the Signaling 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:**

2.1. **GENERAL LOCATION:**

RAHAMA (Code: RHMA) is a 'B' class four lined station on (Cuttack-Paradeep section) Double line electrified (BG) section in KUR division of East Coast Railway on 'D' Special route. It is situated at Km. 468.633 from Howrah. The station is provided with standard III Interlocking and equipped with Central Panel and Multiple Aspect Colour Light signal signals. The station is worked under Absolute Block System of GR & SRs.

[Refer GR 8.01 (1) (a), (b), 2 (b), 8.03(1), (a), (b), (c) (ii), 8.05 (2) (3) & 8.06, 8.14, 8.15]

2.2. **BLOCK STATIONS, IBH, IBS ON EITHER SIDE AND THEIR DISTANCE AND OUTLAYING SIDINGS:**

2.2.i. **BLOCK STATIONS ON EITHER SIDE AND THEIR DISTANCES:**

RAHAMA station is situated between Gorakhnath (Code: GRKN) at West end situated at a distance of 15.633 Km. and Badabandha (Code: BDBA) at East end situated at a distance of 12.317 Km.

2.2.ii. **IBH/IBS/OUT LYING SIDING/DK STATION:**

NIL

2.2.iii **PASSENGER HALT:**

JHANKAD-SARALA ROAD P.H. (Code: JSRD) is situated at Km. 458.30 from Howrah between Gorakhnath and Rahama Station.

2.3.a. **BLOCK SECTION LIMITS ON EITHER SIDE OF THE STATION ON DIFFERENT DIRECTIONS:**

Between Stations	The Point from which the 'Block Section' Commences	The Point at which the 'Block Section' end
RHMA-BDBA UP Direction	UP Advanced Starter Signal No.7 of RHMA station.	BSLB on UP line of BDBA.
RHMA-BDBA DN Direction	DN Advanced Starter Signal No.12 of BDBA station.	Outermost facing point No.22A of RHMA.
RHMA-GRKN UP Direction	UP Advanced Starter Signal No.7 of GRKN station.	UP BSLB on UP line of RHMA.
RHMA-GRKN DN Direction	DN Advanced Starter Signal No.10 of RHMA station.	Outermost facing point No.22A of GRKN.

b. **STATION SECTION:**

Station Section	The point from which the 'Station Section' Commences	The Point at which the 'Station Section' end
UP Line	UP BSLB of RHMA	UP Advanced Starter No.7 of RHMA.
DN Line	Outermost facing point No. 22A DN line of RHMA	DN Advanced Starter No.10 of RAHAMA.

c. **STATION LIMIT:****UP LINE:**

From UP distant signal to UP Advanced Starter Signal No.7.

**DN LINE:**

From DN distant signal to DN Advanced Starter Signal No.10.

2.4 **GRADIENTS:**a) **TOWARDS CTC END: (UP AND DN LINES)**

From	To	Gradient
CSB	CH: 688 M	1 in 600 'R'
CH: 688 M	CH: 986 M	1 in 553 'F'
CH: 986 M	CH: 1768 M	1 in 1300 'F'
CH: 1768 M	CH: 2248 M	1 in 6000 'R'
CH: 2248 M	CH: 3368 M	1 in 2300 'R'

b) **TOWARDS PRDP END: (UP AND DN LINES)**

From	To	Gradient
CSB	CH: 864.07 M	1 in 600 'F'
CH: 864.07 M	CH: 1288 M	Level.
CH: 1288 M	CH: 1954.98 M	1 in 2000 'F'
CH: 1954.98 M	CH: 2136 M	1 in 1250 'F'
CH: 2136 M	CH: 2545 M	Level.
CH: 2545 M	Towards Block section	1 in 200 'R'

2.5 **LAYOUT:**

The station is provided with four running lines in the Main yard (namely DN Loop, DN Main, UP Main, Common Loop) and two non-running line i.e. Engineering siding and Hot Axle siding. Line No. 2 is isolated from line No. 1 & 3 with provision of an Over Run line at either end.

a. **ENGINEERING SIDING:**

The Engineering siding at PRDP end of the yard with one side entry is taking off from UP Main. The entrance point and corresponding out point are coupled and operated by an arc lever at site. The entrance is fitted with hand plunger locks. These hand plunger locks are unlocked by the Engineering siding key 'S' released by pressing the button No.30 with trans button provided on Panel at SM's office. For unlocking the HPL the SM on duty shall press control button-30 & group trans button on the panel. One indication will appear beside the RKT instrument provided in the SM's office. The TPM on duty shall press the switch provided beside the RKT instrument and simultaneously turn it towards left direction for extraction. After extracting the key he shall proceed towards the concerned HPL of Engineering siding. On reaching at site he shall unlock the plunger key and operate the HPL towards desired position as per requirement. Thereafter, SM on duty shall allow movement over the said points. Reception signal (1A, C1A in UP direction and SH9A & SH12A and Starter signal No.3) are electrically interlocked in such a way that these signal cannot be taken 'OFF' if the siding S is taken 'OUT' from the RKT provided at SM's office. After completion of work he shall normalize the HPL and take out the key with him. On reaching at station he shall insert the key in the RKT instrument and turn towards

right direction. Then flashing indication will appear on the panel beside control button No.30. Thereafter SM on duty shall press control button-30 & group release button simultaneously. Then steady indication of control 30 will appear on the panel.

b. **HOT AXLE SIDING:**

The Hot Axle siding at PRDP end of the yard with one side entry is taking off from DN Loop. The entrance point and corresponding out point are coupled and operated by an arc lever at site. Both the entrances are fitted with hand plunger locks. These hand plunger locks are unlocked by the Hot Axle Siding Keys 'Q' released by pressing the button No. 28 with trans button provided on Panel at SM's office. For unlocking the HPL, the SM on duty shall press control button-28 & group trans button on the panel. One indication will appear beside the RKT instrument provided in the SM's office. The TPM on duty shall press the switch provided beside the RKT instrument and simultaneously turn it towards left direction for extraction. After extracting the key he shall proceed towards the concerned HPL of Hot Axle siding. On reaching at site he shall unlock the plunger key and operate the HPL towards desired position as per requirement. Reception signal (2C, C2C in DN direction, SH9D and starter signal No.4) are electrically interlocked in such a way that these signal cannot be taken 'OFF' if the siding Q is taken 'OUT' from the RKT provided at SM's office. After completion of work, he shall normalize the HPL and take out the key with him. On reaching at station he shall insert the key in the RKT instrument and turn towards right direction. Then flashing indication will appear on the panel beside control button No.-28. Thereafter SM on duty shall press control button-28 & group release button simultaneously. Then steady indication of control 28 will appear on the panel.

**PLAT FORMS**

- 1) Line No. 1 (UP Main) : H.L.P.F.  
2) Line No. 4 (DN Loop) : H.L.P.F.

2.5.1 **RUNNING LINES, DIRECTION OF MOVEMENT & HOLDING CAPACITY IN CSL:**

**DIRECTION OF TRAFFIC:**

The trains coming from GRKN end are UP trains and the trains coming from BDBA end are DN trains.

2.5.2 **HOLDING CAPACITIES:**

Line No.1	UP Main	870	Meters	(Electrified).	From SB to Starter
Line No.2	Common Loop	836	Meters	(Electrified).	From Starter to Starter
Line No.3	DN Main	877	Meters	(Electrified).	From SB to Starter
Line No.4	DN Loop	860	Meters	(Electrified).	From SB to Starter.

2.5.3 **NON RUNNING LINES AND THEIR CAPACITIES IN CSR:**

H/A Siding	183.65	Meters	(Electrified).	From DS to DE
Engg. Siding	240	Meters	(Electrified).	From DS to DE

2.5.3.a **ANY SPECIAL FEATURES IN THE LAYOUT:**

NIL

b. **SPECIAL RESTRICTIONS:**

- i) Shunting in face of an approaching train is prohibited.  
ii) Hand shunting, Fly Shunting and loose shunting at both end of the yard is prohibited

2.6 **LEVEL CROSSINGS:**

- (a) There is a 'C' class midsection manned non-interlocked level crossing gate No.CP-31 situated at Km. 455/1-3(UP) & 455/4-2 (DN) between GRKN-RHMA Station. Telephone communication is provided between the Gate lodge and the Station Master on duty at GRKN Station.

- (b) There is a 'B2' class midsection manned non-interlocked level crossing gate No. CP-34 situated at Km. 458/11-13(UP) & 458/14-12 (DN) between GRKN-RHMA Station. Telephone communication is provided between the Gate lodge and the Station Master on duty at GRKN Station.
- (c) There is a 'C' class midsection manned non-interlocked level crossing gate No. CP-35 situated at Km. 460/33-461/1(UP) & 461/2-460/34 (DN) between GRKN-RHMA Station. Telephone communication is provided between the Gate lodge and the Station Master on duty at GRKN Station.
- (d) There is a 'C' class mid section manned non-interlocked level crossing gate No. CP-36 situated at Km. 463/1-3 (UP) & 463/4-2 (DN) between GRKN-RHMA Station. Telephone communication is provided between Gate lodge and Station Master on duty at RHMA.
- (e) There is a 'B' class mid section manned interlocked level crossing gate No. CP-38 situated at Km. 465/9-11 (UP) & 465/12-10 (DN) between GRKN-RHMA Station. Telephone communication is provided between Gate lodge and Station Master on duty at RHMA.
- (f) There is a 'C' class mid section manned non-interlocked level crossing gate No. CP-39 situated at Km. 466/17-19 (UP) & 466/20-18 (DN) between GRKN-RHMA Station. Telephone communication is provided between Gate lodge and Station Master on duty at RHMA.
- (g) There is a 'C' class mid section manned non-interlocked L.C. Gate No. CP-41 situated at Km. 467/27-29 (UP) & 467/30-28 (DN) between GRKN-RHMA Station. Telephone communications is provided between Gate lodge and SM/RHMA.
- (h) There is a 'C' class mid section manned Interlocked L.C. Gate No. CP-42 situated at Km. 469/19-21 (UP) & 469/22-20 (DN) at BDBA end of the yard and directly operated by means of a winch from the Gate lodge. Telephone communications is provided between Gate lodge and SM/RHMA.
- (i) There is a 'C' class mid section manned non-interlocked L.C. Gate No. CP-43 situated at Km. 472/27-29 (UP) & 472/30-28 (DN) between BDBA-RHMA Station. Telephone communications is provided between Gate lodge and SM/BDBA.
- (j) There is a 'C' class manned interlocked level crossing gate No. CP-48 situated at Km. 479/5-7 (UP) & 479/8-6 (DN) between BDBA-RHMA. Telephone communication is provided between the Gate lodge and the Station Master on duty at BDBA Station.

### 3. **SYSTEM AND MEANS OF WORKING:**

Trains are worked under Absolute Block System by means of SGE type Lock and Block Instrument for section RHMA-GRKN and RHMA-BDBA in terms of Chapter-XIV of General and Subsidiary Rule and Chapter-VI of Block Working Manual.

The Block Instrument shall be operated by the SM on duty and the keys of the Block Instruments shall remain under the personal custody of the Station Master on duty. Authority to proceed for the Loco Pilot is the taking 'OFF' of the Last Stop Signal in both directions vide GR 14.08(a). The Block Instruments are non co-operative. Line clear is granted/obtained through telephone attached with the Block Instrument.

### 4. **SYSTEM OF SIGNALLING AND INTERLOCKING:**

- 4.1 This Station is provided with Standard-III interlocking with Multiple Aspect Colour Light Signaling having maximum equipment of signals. The aspects and indications of the MACLS are governed by GR 3.08 (4) (b). The Station is provided with central panel interlocking and having no end cabins. All signals and points are electrical operated from the central panel provided at SM's Office. Calling-on signals are provided below Home signals (i.e. in both UP & DN directions) as per GR 3.13 (1) (b), (2) (3) (4) & (6) (b). Central panel with miniature push buttons are provided in the Station Master's office to electrically control all signals, points, siding key, Gate key, etc. The control panel is provided with SM's key which shall always remain in the personal custody of the Station Master on duty in terms of SR 3.36.03(a).

**TRACK CIRCUITS:**

Both UP and DN main line, DN loop & Common loop Lines are track circuited. In addition there are short length track circuits in advance of Advanced Starter Signals and Home signal in both the directions are also provided. For Calling-on signals (91M Rail length) track circuits are also provided in rear of the Home signals in both directions. From last trailing point/fouling mark in either side of Yard to Advanced Starter Signals are also track circuited (i.e. 7 AT and 10 AT in UP and DN directions respectively). Indications for the above track circuits/Axle Counters are available on panel at SM's office. White light on panel indicates track clear and Red light indicates track occupied condition.

**AXLE COUNTER:**

Block section between Gorakhnath and RAHAMA on both UP & DN lines and RHMA-BDBA on both UP & DN Lines are monitored by axle counter system. Electronic axle counters along with associated entrance and exit trolly suppression track circuits are provided at both end of the Block Section.

A pair of electronic axle counter is provided between GRKN-RHMA on DN Line one beyond DN Advanced Starter of RHMA and another beyond the DN Home signal is on track 2T2 at GRKN and on UP Line, one beyond UP Advanced Starter of GRKN and the other 180 meters beyond UP Home Signal of RHMA.

A pair of electronic axle counter is provided between RHMA-BDBA on DN Line one beyond DN Advanced Starter of BDBA and another beyond the DN Home signal is on track 2T2 at RHMA and on UP Line, one beyond UP Advanced Starter of RHMA and the other 180 meters beyond UP Home Signal of BDBA. These pair of axle counters will monitor track and count the axles "IN" and axles "OUT" to indicate whether the Block Section is clear of trains as well as to verify the last vehicle of the incoming train.

The position of Block Section whether "Clear" or "occupied" are reflected in the illuminated panel diagram provided in the SM's Office. It shows "GREEN" when Block section is clear and "RED" when occupied.

Normally when there is no train in the Block Section the Axle Counter shows "GREEN". Whenever a train enters in to Block Section, Block Section clear indication "GREEN" for the particular section disappears and "RED" indication appears. After the complete arrival of the train if the "RED" indication does not change to "GREEN", it should be assumed as Block Instrument failure for the particular section and necessary action as per GR 14.13 is to be taken. The axle counters are interlocked with the respective Block Instruments for that section. The Block Instruments are interlocked with respective Block Section Axle Counters. Unless Block Section clear indication appears on the panel, it will not be possible to grant "Line Clear" or normalize the Block Instruments.

All points and signals are power operated. RKTs with Crank Handles are provided at both end locations for the operation of points in case of failure.

Calling-on Signals are provided below UP and DN Home Signals. It shows no light when 'ON' and 'Yellow' light when taken "OFF". Back Shunt Signals are provided at top points.

4.2 **CUSTODY OF RELAY ROOM KEY AND PROCEDURE FOR ITS HANDING OVER AND TAKING OVER BETWEEN STATION MASTER AND S&T MAINTENANCE STAFF.**

The relay room should be kept locked with two separate locks. The arrangement should be such that one key is kept with on duty SM and other key with Maintainer.

(A.SENAPATI)  
DSTE/KUR

(B.PANDA)  
DOM/KUR

Whenever required, the SM shall hand over the key to Maintainer with proper acknowledgement in basement/relay room register. The maintainer on receipt of key from SM may use the same and key in his custody to open the basement/relay room by inserting key one after another separately into earmarked locks. After completion of the work, the basement/relay room is to be locked using both the keys separately and designated key to be handed over to the SM. The details of the transaction are to be properly recorded in basement/relay room register maintained at the station and duly signed by the SM and Maintainer respectively.

#### 4.3 **POWER SUPPLY:**

1. A changeover switch is provided in the Station Master's Office with the three power supplies viz., UP AT, DN AT and Local for changing the switch to the required supply position. A luminous indicator above the circuit breaker for each supply indicates the availability of the supply.
2. Normally the switch will be kept towards UP AT or DN AT position. Whenever power block is to be given on the line, the on duty SM must ascertain that power is available on the other AT.  
Eg: If power block is to be given on the UP line, DN AT must be available and vice-versa.
3. In case of failure of one of the AT supply without any power block, the on duty SM has to check whether the circuit breaker has tripped. (Three circuit breakers are provided in the changeover switch board, one for each supply and their normal position is down and when tripped it goes up.) In case of failure of both AT supplies, the Local supply shall be utilized by operating the switch.

If the circuit breaker is tripping even after resetting, no attempt shall be made to hold it by any other mean and a message shall be given to the AEE and CTFO/PSI for prompt rectification.

4. Whenever there is a failure of power supply in one AT the SM shall take prompt action to inform to all concerned for the rectification. The SM himself, during his daily checks, shall test the availability of power supply on both ATs and make an entry in the Station Diary duly initiating action for rectification of failure, if any.
5. IPS (Integrated Power Supply) arrangement has been provided at the station to take care of the signaling system as well as to avoid blanking of signals in case of power failure.

In case of AT/GRIDCO Power failure the IPS takes care of the signaling system approximate for 6 to 8hrs.

One Indication panel for monitoring of IPS voltage has been provided in SM Room. The Indication panel shall display the voltage of IPS as well as health of the IPS provided to operate signaling gears. Audio Visual alarm has been provided in the panel to guide on duty SM to take action in case of low voltage or no voltage or any defect in IPS is shown in the SM panel. Details indications and alarm have been described below:

#### **SM INDICATION PANEL FOR IPS.**

- Call S&T – Red indication
- Signal system shut down - Red indication
- Emergency start DG - Red indication
- Start DG - Red indication
- Stop DG - Green indication

To acknowledge the indication on panel two push buttons are provided. Besides this the panel also has digital display of IPS battery voltage.

When ever alarm appears on the SM panel due to any fault in the IPS system or due to low battery voltage on duty shall acknowledge the alarm by pressing the push button provided on the panel. Pressing on the push button shall mute the buzzer but relevant indication will continue to show till the fault is rectified by S&T staff. After acknowledgement of the alarm on duty SM shall immediately inform S&T staff at station regarding the alarm.

5. **TELECOMMUNICATIONS:**

- a) Telephone attached to Block Instrument for section RHMA–GRKN & RHMA-BDBA.
- b) Railway Auto telephone is provided at this station.
- c) The station is connected to CTC-PRDP, BRAG-KIS (VIA-NQR), BRAG-KIS (VIA-CTC) Control Circuit.
- d) The station is connected to CTC-PRDP traction Control Circuit.
- e) VHF set is provided at this station.
- f) Telephone is provided between Station Master's office and both end crank handle locations.
- g) Telephones are provided with L.C. Gates at Km. 463/1-3 (UP) & 463/4-2 (DN), Km. 465/9-11 (UP) & 465/12-10 (DN), Km. 466/17-19 (UP) & 466/20-18 (DN), Km.467/27-29 (UP) & 467/30-28 (DN), Km. 469/19-21 (UP) & 469/22-20(DN) and SM's office separately.
- h) BSNL phone is provided at the station.

**NOTE**

- a. For obtaining line clear VHF should be used as a last alternative and not as a sole means of communication.
- b. VHF & Walkie Talkie sets should not be used for unnecessary discussion with Loco Pilot /Guards and any other staff.

6 **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 provisions of General Rules, Subsidiary Rules, Station Working Rules, Block Working Manual, Operating Manual and any 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 Master 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 IN EACH SHIFT:**

The following is the complement of operating staff provided at the station in each shift for train passing duty.

		<b><u>In each shift</u></b>
SS	1 (One)	In each day shift
SM/ASM	1 (One)	In each night shift
Traffic points man	1 (One)	In each shift
Traffic Gateman	1 (One)	In each shift

The above staff shall work as per roster issued from time to time by Divisional Railway Manager (P) and these rosters shall be conspicuously displayed in the Station Supdt's office and in Gate lodge for traffic gate man (Details duties are given in Appendix-'D').

6.1.2 **RESPONSIBILITY FOR ASCERTAINING CLEARANCE OF LINES AND ZONES OF RESPONSIBILITY:**

The SM on duty is responsible to ascertain the clearance of the nominated line between BSLB/first facing point and advanced starter signal in each direction.

**6.1.3 ASSURANCE OF THE STAFF IN THE 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 the SWR thoroughly and understood the system of working in force at the station and must sign such declaration.

No Railway servant shall be entrusted with any duty involving the safety of the public unless the SS 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 well conversant with the Station Working Rules of the Station 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 Class-IV staff, their signature/thumb impression must be obtained after explaining full about their duties and responsibility.

The SS is personally responsible for maintaining the Assurance Register and for obtaining declaration from the staff working under him. The Assurance Register must be maintained in two parts one for Group-'C' staff and other for Group-'D' staff & duplicate copy of the Assurance Register must be maintained and kept in the personal custody by the SS.

The declarations are to be renewed in the following cases:

- (i) Whenever there is any 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 and over

**6.1.4 USE OF PRIVATE NUMBER BOOKS AND IDENTIFICATION NUMBER SHEETS:**

Sufficient private number books and identification number sheets in sealed covers shall always be kept in stock by SS, under lock and key by maintaining one register for this purpose.

**6.2 CONDITIONS FOR GRANTING LINE CLEAR:**

Before granting line clear to a train, the SM on duty shall ensure that:

- (i). The whole of the last preceding train has arrived complete.
- (ii) The relevant approach Signals have been put back to 'ON' position behind the last preceding train.
- (iii) The line is clear up to the outer most facing point No. 20A on DN line for DN trains and up to BSLB on UP line for UP trains.

**NOTE :**

- (a) The SM on duty shall ensure that all signal lights pertaining to the train is burning properly. If, the light of the reception signal is fused/not burning, the "LINE CLEAR" shall not be granted for a train till such time it is ensured that the concerned Loco Pilot is notified the fact in writing by the SM on duty of the station to which such "LINE CLEAR" is to be granted.
- (b) Before granting line clear to an UP train, the SM on duty shall ensure closure of the L.C. Gates at Km. 463/1-3, 466/17-19 & 467/27-29 from the gateman on duties under exchange of private numbers separately.

**RECEPTION OF TRAINS:**

Before admitting a train on any line, it must be ensured that the correct route set 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 panel indication or by physical verification of the



nominated route in case of failure of track circuit. SM on duty shall ensure that the traffic level crossing gate is closed against road traffic. Then he shall take off the concerned Reception Signal.

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 panel indication for the concerned line is 'Clear' is available 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, Calling-on signal of the concerned route cannot be taken off.

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"

#### **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 and Yellow light when taken "OFF". A Calling-on signal, will be taken 'OFF' for reception of a train when the Home signal above it 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 the point push button and group button individually or 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 switch 'C1A/B' – 'C2A/B/C' (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 Yellow light glows at the concerned Calling-on signal on the panel. Every such operation has to be recorded by the on duty SM along with the reasons to do so.

#### **NOTE:**

No train can pass through while receiving on Calling-on signal.

#### **SHUNT SIGNALS:**

Back shunt signals 9A/B/C/D and 12A/B are provided at CTC and PRDP end respectively for shunting purpose.

### **6.2.1 ANY SPECIAL CONDITIONS TO BE OBSERVED WHILE RECEIVING OR DESPACTHING A TRAIN:**

#### **6.2.1.1 SETTING OF POINTS AGAINST BLOCK LINE:**

When a running line is blocked by stabled load wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after the arrival of a train, the points in rear shall be set against the blocked line except when shunting or any other movement is required to be done on that line. [Refer SR 3.51.06(a)].

If all the lines at a station happen to be blocked, when line clear has been granted to a train, the point should be set for the line occupied by a stabled load or a Goods train.[Refer SR 3.51.06 (b)].

The above precautions shall be taken in addition to the observance of other precautions. [Refer SR 5.04.01 & SR 5.23.01].

#### 6.2.1.2 **RECEPTION OF A TRAIN ON BLOCKED LINE:**

When ever trains are to be admitted on an obstructed line the calling-on signal may be taken off. If the Calling-on signal failed then the SM on duty shall authorize the on duty TPM with from 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 than 45mts. from the point of obstruction to indicate to the Loco Pilot as to where the train shall be brought to a stand.

#### 6.2.1.3 **RECEPTION OF TRAIN ON NON-SIGNALLED LINE:**

Before receiving a train on non-signalled line, the SM shall ensure that

- a. The train is brought to a stand at the first stop signal.
- b. The line on which it is intended to receive the train is clear up to the trailing points or up to the place at which the train is required to come to a stand.
- c. All points over which the train has to pass are correctly set, the facing points and trailing points clamped and padlocked and
- d. T/369(3b) shall be given to the Loco Pilot to pass he approach stop signal at 'ON' position. [Refer GR 5.10].

#### 6.2.1.4 **DESPATCH OF TRAIN FROM NON-SIGNALLED LINE:**

Whenever a train is to be dispatched from a non-signalled line, a starting order on form T-511 shall be given to the Loco Pilot to start from the non-signalled line. Before handing over the T/511 the SM shall depute his pointsman at the foot of the concerned points. The TPM on duty shall clamp and padlock the same after setting the point in the desired direction under the supervision of SM on duty then after handing over the authority he shall show the proceed hand signal to the Loco Pilot. [Refer SR 5.11.1].

#### 6.2.1.5 **DESPATCH OF TRAIN FROM LINE PROVIDED WITH COMMON STARTER SIGNAL:**

NIL

- 6.2.1.6 .a. For receiving UP & DN trains on common loop, the clearance of the over run line should be ensured.
- b. DN Main, UP Main, DN Loop & Common loop are track circuited. In case of failure of track circuits, the clearance of the nominated line has to be ensured physically before piloting 'IN' a train.

#### 6.3 **CONDITIONS FOR TAKING "OFF" APPROACH SIGNALS:**

The SM on duty shall nominate a clear line not only up to the starter but also for an adequate distance beyond it for reception of trains. [Refer GR 3.36, 3.38, 3.40, 3.47, 4.17 and SR 3.36.01, 3.36.02, 3.36.04, 3.40.01, 3.40.02, 4.17.02 and Block Working Manual].

#### 6.3.1 **RESPONSIBILITY OF STATION MASTER FOR RESTORATION OF SIGNALS TO "ON":**

If a signal once taken 'OFF' for reception/dispatch of a train, has to be, in an emergency put back to 'ON' in case of reception signal, the route over which the train would pass shall not be altered until after the train has come to stand unless the

route has to be altered to avert an accident. In case of departure signal, before changing the points or allowing any other movements the "Authority to Proceed" if any, handed over to the Loco Pilot must be withdrawn and the Loco Pilot of the train concerned shall be advised of the change in writing and his acknowledgement will be obtained in a memo. [Refer SR 3.36.02 (a) & (b)]

#### 6.4 **SIMULTANEOUS RECEPTION/DESPATCH OF TRAINS:**

The following simultaneous reception and dispatch facilities are provided at this station.

1.	Reception of UP train on line No.1 (UP Main).	Reception/Dispatching of a DN train on/from line No. 2 or 3 or 4.
2.	Reception of an UP train on line No.2 (Common Loop), setting to Over Run Line.	Reception/Dispatching of a DN train on/from line No.3 or 4. OR dispatching of an UP train from Line No.1
3.	Reception of a DN train on line No.4 (DN loop), setting to Sand Hump.	Dispatching of a DN train from line No.2 or 3. OR Reception/Dispatching of an UP train on/from line No.1 or 2.
4.	Reception of a DN train on line No.3 (DN Main)	Reception/Dispatching of an UP train on/from line No.1 or 2
5.	Reception of a DN Train on line No. 2 (Common Loop), setting to Over Run Line.	Reception/Dispatching of an UP train on/from Line No.1 OR dispatching of a DN train from 3 or 4.

#### **ADEQUATE DISTANCE (SIGNAL OVERLAP):**

To take off the Home signals for admission of a train, the adequate distance (Signal Overlap) as mentioned below shall be kept clear. [Refer GR 3.40 and SR thereto].

#### **CLEARANCE OF ADEQUATE DISTANCE (SIGNAL OVERLAP)**

<b>FOR UP TRAINS:</b>		
Line Number	From	To
1. UP Main	Starter Signal No.3	Up to UP Advanced Starter Signal No. 7, keeping the L.C. Gate No. CP-42 in closed condition.
2. Common Loop	Starter Signal No.5	Up to the end of the Over Run line, keeping the L.C. Gate No. CP-42 in closed condition OR Up to UP Advanced Starter Signal No.7, keeping the L.C. Gate No. CP-42 in closed condition.
<b>FOR DN TRAINS:</b>		
2. Common Loop	Starter Signal No.6	Up to the end of the Over Run line OR up to UP Advanced Starter Signal No.10.
3. DN Main	Starter Signal No.8	Up to UP Advanced Starter Signal No.10.
4. DN loop	Starter Signal No.4	Up to the end of the Sand Hump OR up to UP Advanced Starter Signal No.10.

#### 6.5 **COMPLETE ARRIVAL OF TRAINS:**

The entire block section between RHMA-GRKN and RHMA-BDBA on both UP and DN Lines are monitored by axle counter system and the position of the block section whether occupied or clear is indicated in panel board at SM's office. As soon as train enters in to that block section. The RED indication appears on control panel. After whole train clears the block section GREEN indication appears on the control 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 indication (GREEN) on the control panel.

If a train passes the station without conforming the last vehicle indicator, then the SM on duty shall advise the station in advance to stop the train to ensure the complete arrival of the train under exchange of Private number and he need not withhold

(A.SENAPATI)  
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(B.PANDA)  
DOM/KUR

closing of block section vide GR 4.17(3). After obtaining conformation about the complete arrival of the said train under of exchange of Private number he may send another train in to the concerned block section.

In case of failure of Axle counter in RHMA-BDBA block section, the traffic gateman shall ensure that the train has arrived complete and shall give one Private Number to the SM on duty vide SR 4.17.01(e)(iv) for the stopping train. In case of failure of Axle counter in RHMA-GRKN block section, the SM 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 SM on duty shall satisfy himself the complete arrival of the train by verification of the last vehicle indicator vide SR 4.16.04 that the train arrived complete.

Train passing on adjacent line shall be stopped and Guard and Loco Pilot shall be issued with Caution Order to proceed cautiously and stop short of any obstruction as per SR 4.17.03. On occasions when motor trolley follows a train the points shall not be operated until the following motor trolley is admitted on the same line. In the event of motor trolley is delayed in the section the SM on duty shall take action in terms of SR 15.25.03(b)(vi).

#### 6.6 **DESPATCH OF TRAINS:**

To dispatch a train, the Station master on duty having obtained line clear for that train, shall set the route for the outgoing train correctly and satisfy himself by observing the visual indication on the panel board. He shall suspend all non-isolated shunting and the Station Master shall ensure that the traffic level crossing gate is closed against road traffic then he shall take "OFF" the concerned route starter and advanced starter signal. The 'OFF' aspect of the route starter and Advanced Starter is the authority to proceed into the block section. [Refer GR 3.38, SR 3.36.04(b) and BWM 2.07.5(a)]

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 worked without Guard or Brake Van the instruction laid down in Subsidiary Rule shall be followed. The interlocked level crossing gate shall remain closed against road traffic for dispatch of trains. [Refer SR 4.23.02 & 4.25.02].

#### **NOTE:**

1. The L.C. Gates at Km. 455/4-2, 458/14-12 & 461/2-460/34 are having telephonic communication with SM/GRKN. Before dispatching a DN train into RHMA-GRKN, SM/RHMA shall advise SM/GRKN the number description, direction and expected time of passage of the train at the gate under exchange of private number.
  - (i) Such advice shall be given before obtaining line clear.
  - (ii) SM/GRKN shall in turn convey the same advice to the gatemen, under exchange of private numbers separately.
  - (iii) Gatemen shall close the gates and thereafter give their private numbers to the SM/GRKN.
  - (iv) Only then shall SM/GRKN grant line clear to SM/RHMA. [Refer SR 16.03.03 (c), (b)]
2. Before dispatching a DN train into RHMA-GRKN block section, the SM on duty shall ensure the closure of the L.C. Gates at Km. 463/4-2, 466/20-18 & 467/30-28 from the gatemen on duties under exchange private numbers separately.
3. Before dispatching an UP train into RHMA-BDBA block section, the SM on duty shall ensure the closure of the L.C. Gate at Km. 472/27-29 from SM/BDBA under exchange of private number.

6.7 **TRAINS RUNNING THROUGH:**

The procedure detailed in Para 6.4, 6.5 shall be observed. The Station Master is responsible to observe/watch the condition of the vehicles on a passing train and shall wave green hand signal horizontally until any thing wrong is noticed on train. For this purpose the Station Master on duty shall stand in such a position that he sees a clear view of the passing train and that his hand signals can clearly be seen by the Loco Pilot and Guard of the train. [Refer GR 4.17, 4.42 & 4.42.2]

He shall also depute his point man on duty to the other side for passing the train. The TPM on duty shall be responsible to observe/watch condition of the passing train and shall wave GREEN hand signal horizontally until any thing wrong is noticed on the train. If he notices any thing which is unsafe for the passing train then he shall at once show danger hand signal and report the same to the SM on duty.

The Station Master on duty is responsible to see that a train passes complete with its last vehicle indicator. If a train passes without last vehicle indicator or its authorized substitute, action shall be taken as per General and Subsidiary Rule. [Refer GR 4.17 & SR 4.17.02]

6.8 **WORKING IN CASE OF FAILURE:  
PROCEDURE TO BE FOLLOWED FOR WORKING OF TRAINS DURING  
FAILURE /SUSPENSION OF INTERLOCKING /SIGNALS/ POINTS:**

a. **TRACK CIRCUIT:**

In the event of failure of track circuit in the yard i.e. DN loop, Common Loop, UP/DN Main line, train shall be admitted into the yard by taking 'off' Calling-on signal. If, Calling-on signal fails, the train shall be piloted 'IN'. Before admitting a train on Calling-on signal or issuing piloting memo, the clearance of the track must be ensured by physical verification.

In the event of failure of track circuits in the advance of Advanced Starter then lock and Block working will be remained suspended with the concerned adjacent stations. All trains shall be piloted 'OUT' till its rectification. In the event of failure of track circuit ahead of Home Signal all trains shall be piloted out till its rectification.

b. **AXLE COUNTER:**

In the event of failure of axle counter of concerned block section initiation will be taken for resetting after ensuring the complete arrival of the train by either end SM. After resetting the first train will be piloted 'OUT' to the concerned Block section for normalizing the system of working. Details of operations involved in resetting of axle counter are given in Appendix-'B'.

c. **BLOCK INSTRUMENT(S):**

In the event of partial/total failure of block instrument the concerned block instrument shall be suspended till its rectification and trains shall work as per GR. [Refer SR 6.02.03 and SR 6.02.06].

During this period of time the authority will be T/369(3b) with identification number and Private Number issued from the station in advance written both in figure and words.

d. **RECEPTION OF TRAIN ON OBSTRUCTED LINE:**

When ever trains are to be admitted on an obstructed line the Calling-on signal may be taken off. If the Calling-on signal failed then the SM on duty shall authorize the on duty TPM with from 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 than 45mts. from the point of obstruction to indicate to the Loco Pilot as to where the train shall be brought to a stand.

e. **RECEPTION OF A TRAIN ON NON-SIGNALLED LINE:**

Before receiving a train on non-signalled line, the SM shall ensure that

- i) The train is brought to a stand at the first stop signal.
- ii) The line on which it is intended to receive the train is clear up to the trailing points or up to the place at which the train is required to come to a stand.
- iii) All points over which the train has to pass are correctly set & both, the facing and trailing end of the points are clamped and padlocked and
- iv) T/369(3b) shall be given to the Loco Pilot to pass the approach stop signal at 'ON' position.

f. **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 3.71, 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]

g. **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 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]

h. **DEFECTIVE INTERLOCKING:**

When interlocking becomes defective the SM on duty shall be responsible for correct setting, clamping and padlocking of points for admission of train. [Refer SR 3.69.03(c)].

i. **DEFECTIVE/DAMAGED POINTS:**

When any point fails to operate normally by the route setting operation or through the concerned point button through panel, it is inevitable to operate the points with crank handle. Station Master on duty shall depute the TPM on duty to the concerned location box at site with Crank handle, Location Box key & Flap key with proper entry in the concerned register. Station Master on duty shall personally ensure clamping and padlocking of all facing and trailing points enroute. Crank handles are interlocked with signals and interlocking system. Normally the crank handle is locked in the RKT instrument in the Station Master's room and in the location boxes provided on either end of the yard. These crank handles are for all motor operated points of the station.

The CH push button Nos. CH1/CH2/CH3/CH4 and group button (White with Black Dot) are provided at the top of the panel board.

**CRANK HANDLE****CONTROL POINTS**

CH-1	-----	22, 23, 24, 27
CH-2	-----	25, 26
CH-3	-----	20
CH-4	-----	21

Each button has two indications, viz. GREEN and RED. The Green 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 handles key is locked and not free for extraction from RKT. This is called 'Crank Handle Key Locked Indication'. When the 'CRANK HANDLE' key is extracted from RKT, there will be no indication; this is called 'KEY OUT' indication. The key out indication of the crank handle locks all reception and departure signals in their normal position. The crank handles are kept in the custody of SM on duty at Station Master's room. The Station Master has to press CH1/CH2/CH3/CH4 buttons along with Group Trans button. Then one indication (Yellow) will appear just below the RKT. On getting yellow indication on the RKT instrument, SM on duty shall press the switch provided beside the RKT. The indicator provided on the RKT show diagonally. This will enable the Station Master to extract the Key from RKT Instrument. After extracting the key from 1<sup>st</sup> RKT, he shall insert it in the 2<sup>nd</sup> RKT Instrument and turn to right. One indication will appear in the RKT of concerned location box. On getting indication the TPM on duty at site shall press the switch provided beside the RKT and extract the key from the RKT rotating towards left direction. Then he shall proceed towards the defective motor point with the crank handle key. On reaching near the concerned defective point he shall open the flap through the flap key. There after he shall insert the crank handle key in the motor point to open the flap for enabling crank handling. Then he shall insert the crank handle and rotate to the desired direction as per requirement for proper setting of the points. After setting the points correctly he shall extract the crank handle and key with proper locking. Then he shall clamp & padlock both end points and intimate to the SM on duty regarding correct setting, clamping & padlocking of the concerned point. The SM on duty shall ensure personally the same before handing over the Piloting IN/OUT memo. After completion of crank handling operation, the crank handle key is to be inserted in the RKT at site and rotate it towards right direction. One Yellow indication will appear beside the 2<sup>nd</sup> RKT provided in SM's Room. On getting the yellow indication the SM on duty shall press the switch and extract the key by turning to left.

After extracting the key he shall insert it in to the 1<sup>st</sup> RKT and turn towards right. There after key IN flashing indication will appear on the panel. On getting flashing indication on the panel SM on duty shall press concerned CH. Button & Group release button simultaneously. Then Key IN indication will be steady in the panel and yellow indication in the 1<sup>st</sup> RKT will be extinguished.

If the Crank Handle is in locked condition and it is necessary to operate the concerned point by Crank Handle due to whatever reason then the concerned signal should be put back to "ON" position then Crank Handle Key can be taken out after two minutes by pressing common 'TRANS' push button and concerned Crank Handle control push button simultaneously.

The cases of failure of motor operated points should be promptly reported to the concerned Signal Maintainer/Signal Inspector for immediate rectification. Station Master shall maintain an Emergency Crank Handle Register as per Operating Manual 20.06 (d). The procedure for use of crank handle for motor operated points shall be followed in terms of Operating Manual 20.06.

After any non-signalled movement has taken place over a point/points operated by an electric point machine, whether in the facing or trailing direction, the SM on duty shall operate point/points to "NORMAL" or "REVERSE" settings for the purpose of testing the points and after ensuring correct indications of "NORMAL" or "REVERSE" setting of points, the facing and trailing points shall be clamped and padlocked thereafter further movement shall be permitted over the points.

**6.9 PROVISIONS FOR WORKING OF TROLLIES/ MOTOR TROLLIES/MATERIALS LORRIES ETC**

Motor trolleys are 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, 6.11, 6.12, 6.13 of BWM]

**7.0 BLOCKING OF THE 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 the concerned berthing route button (UN OR UN1) and group "TRANS" button is to be pressed to inactivate the concerned route button. A RED flashing indication appears near the route button on panel. To activate the route button concerned route button along with the Group 'RELEASE' button is to be pressed. After route button is activated the flashing indication will disappear. And also reminders collars shall be placed on the concerned point push button controlling the blocked line. 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 to prevent rolling down of vehicles. [Refer SR 3.36.3(b), GR 5.23 and SR 5.23.01].

**7.1. LOADING AND UNLOADING OF VEHICLES ON RUNNING LINES:**

Except small loading and unloading of vehicles on running lines is prohibited unless permitted by DOM vide SR 5.19.01.

**SECURING OF VEHICLES:**

As far as practicable, loose vehicle shall not be allowed to stand on the running line. However under unavoidable circumstances, if it is necessary to detach vehicle from a train or to stable a train and leave them standing on the running line, the SM on duty shall be responsible to secure the vehicle/stable loads to prevent rolling down of vehicles and arrest obstruction and fouling. [Refer GR 5.23 & SR 5.23.01]

**USE OF REMINDER BLOCK COLLARS:**

Whenever any running line is blocked or when a train is stopped to cross another train or detained for any other reason, even for a short while or during shunting operations, the reminder collars shall be used by the SM on duty on the push button concerned. [Refer SR 3.36.03 (b)]

**ALTERATION OF A POINTS TO A CLEAR LINE WHENEVER A RUNNING LINE IS BLOCKED:**

- (a) When a running line is blocked by stable load, wagon, vehicles or by a train, which is to cross or to give precedence to another train or immediately after the arrival of a train at the station etc, the points at either end should immediately be set against the blocked line except when any shunting or any other movement is required to be done immediately in that direction on that line.
- (b) If all the lines at a station happen 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 any mishap, the chances of casualties are minimized. In case all the lines are occupied by passenger carrying trains, points should be set for a loop line to negotiate of which the speed of the incoming train



would be reduced, which in turn would minimize the consequences/causalities. While doing so, points may 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 for a loop occupied by a train whose passenger coach will in case, of collision, receive the impact.

8. **SHUNTING:**

Shunting will be carried out at the station in accordance with General Rule and relevant Subsidiary Rules and Block Working Manual. [Refer GR 3.46, 3.52 to 3.56, 5.13, 5.14, 5.16, 5.17, 5.19, 5.20 to 5.23 and 8.06 to 8.15]

The SM/Guard/Traffic Pointsman on duty is authorised to supervise shunting operation. Normally back shunt signals & caution aspect of starter signals shall be used for shunting operations. The official supervising shunting shall ensure the correct setting, clamping and padlocking of points in case of non-signaling movements.

The SM on duty and the official supervising shunting shall co-operate with each other regarding shunting operations. Neither reception signals nor departure signals shall be taken 'OFF' unless the shunting is isolated and the path of incoming/outgoing train is free from obstructions. The over-run line may be used as shunting neck.

8.1(i) **SHUNTING IN THE FACE OF AN APPROACHING TRAIN:**

Shunting in the face of an approaching train is prohibited.

8.2 **SHUNTING OUTSIDE HOME SIGNAL:**

- (i) When line clear has been given no shunting shall be permitted in the Block section in rear.
- (ii) Shunting or obstruction for any other purpose shall not be permitted in the block section in rear unless it is clear and is blocked back.
- (iii) Shunting or obstruction for any other purpose shall not be permitted in the block section in advance unless it is clear and is blocked forward vide GR 8.06(3).

8.3 **SHUNTING WITH IN STATION SECTION:**

Shunting with in station section may be carried by keeping the necessary signals at 'ON' position.

8.4. **SHUNTING IN THE SIDING:**

While shunting in the siding, it should be authorized by issuing T/806 clearly mentioning the limits up to which shunting is permitted as also the lines occupied in shunting. The relevant provisions of GR 5.14 and SRs thereto shall be meticulously followed for shunting operations.

a. **ENGINEERING SIDING:**

The Engineering siding at PRDP end of the yard with one side entry is taking off from UP Main. The entrance point and corresponding out point are coupled and operated by an arc lever at site. The entrance is fitted with hand plunger locks. These hand plunger locks are unlocked by the Engineering siding key 'S' released by pressing the button No.30 with trans button provided on Panel at SM's office. For unlocking the HPL the SM on duty shall press control button-30 & group trans button on the panel. One indication will appear beside the RKT instrument provided in the SM's office. The TPM on duty shall press the switch provided beside the RKT instrument and simultaneously turn it towards left direction for extraction. After extracting the key he shall proceed towards the concerned HPL of Engineering siding. On reaching at site he shall unlock the plunger key and operate the HPL towards desired position as per requirement. There after SM on duty shall allow movement over the said points. Reception signal (1A, C1A in UP direction and SH9A & SH12A and starter signal No.3) are electrically interlocked in such a way that these signal cannot be taken

'OFF' if the siding S is taken 'OUT' from the RKT provided at SM's office. After completion of work he shall normalize the HPL and take out the key with him. On reaching at station he shall insert the key in the RKT instrument and turn towards right direction. Then flashing indication will appear on the panel beside control button No.-30. Thereafter SM on duty shall press control button-30 & group release button simultaneously. Then steady indication of control 30 will appear on the panel.

b. **HOT AXLE SIDING:**

The Hot Axle siding at PRDP end of the yard with one side entry is taking off from DN Loop. The entrance point and corresponding out point are coupled and operated by an arc lever at site. Both the entrances are fitted with hand plunger locks. These hand plunger locks are unlocked by the Hot Axle Siding Keys 'Q' released by pressing the button No. 28 with trans button provided on Panel at SM's office. For unlocking the HPL, the SM on duty shall press control button-28 & group trans button on the panel. One indication will appear beside the RKT instrument provided in the SM's office. The TPM on duty shall press the switch provided beside the RKT instrument and simultaneously turn it towards left direction for extraction. After extracting the key he shall proceed towards the concerned HPL of Hot Axle siding. On reaching at site he shall unlock the plunger key and operate the HPL towards desired position as per requirement. Reception signal (2C, C2C in DN direction, SH9D and starter signal No.4) are electrically interlocked in such a way that these signal cannot be taken 'OFF' if the siding Q is taken 'OUT' from the RKT provided at SM's office. After completion of work, he shall normalize the HPL and take out the key with him. On reaching at station he shall insert the key in the RKT instrument and turn towards right direction. Then flashing indication will appear on the panel beside control button No. 28. Thereafter SM on duty shall press control button-28 & group release button simultaneously. Then steady indication of control 28 will appear on the panel.

9.0 **ABNORMAL CONDITIONS:**

a(i). **PARTIAL FAILURE:**

In the event of suspension of Lock and 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 exchanging 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-  
'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 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 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 Private Number.

The authority to proceed for the Loco Pilot is T/369(3b) bearing identification Number and Private Number received from the station in advance written both in figure and words. [Refer SR 6.02.06 & Chapter –VI of BWM]

- (ii) **AUTHORITY TO PROCEED IN THE OCCUPIED BLOCK SECTION IN CASE OF OBSTRUCTION OF LINE OR ACCIDENT:**  
 Rules and 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 as follows. [Refer SR 6.02.05]
- (a) 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.
- (b) SM at the dispatching end will hand over to the Loco Pilot the BLOCK TICKET as the authority which includes.
- An authority to pass the signals at 'ON' position.
  - **CAUTION ORDER:** existing speed restrictions shall be indicated in the Caution order. The speed restriction of 15 KMPH in day when view ahead is clear and 10 KMPH in night, when view ahead is not clear shall be indicated clearly.
- (c) Before resumption of normal working a message between the SM's of the concerned section shall be exchanged with private number. [Refer SR 6.02.05(d)(vi)].  
 The block ticket so issued must be collected by SM on duty 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 of 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 this fact. There after SMs at either end of the Block section shall immediately stop all trains proceeding in to the block section on adjacent line in either direction and warn the Loco Pilots and Guards of such trains by issue of suitable Caution Orders.
- The SM of each station shall arrange to send one railway servant in to the block section to collect information from the train crew about the where abuts and the condition of the train and nature of assistance if any required. The railway servant so deputed shall bring full particulars of the cause to the nearest SM & then action will be taken according to the circumstances of the case. [Refer GR 6.04 & SRs thereto]  
 [Refer GR 6.04 & SRs thereto]
- (iv) In the event of failure of axle counter of concerned block section initiation will be taken for resetting after ensuring the complete arrival of the train by either end SM. After resetting the first train will be piloted 'OUT' to the concerned Block section for normalizing the system of working. Details of operations involved in resetting of axle counter are given in Appendix-'B'.
- (b)(i) **PROCEDURE FOR EMERGENCY CRANK HANDLE OPERATION OF MOTOR OPERATED POINTS:**  
 Elaborated in the main body & Appendix-B of SWR.
- (ii) **PROCEDURE FOR EMERGENCY OPERATION OF POINT WITH POINT ZONE TRACK CIRCUIT:**  
 Elaborated in the Appendix-B of SWR.
- (c) Certification of clearance of track before Calling-on Signal operation is initiated:  
 Before taking off Calling-on signal during failure of track circuit, the route and the clearance of the track over which train would pass to be verified by SM on duty.
- (d) Reporting of failure of points, Track circuits/axle counter and interlocking:
- (i) 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

- (ii) The entries in failure registers are to be done with message to the section controller.

**9.1 TOTAL FAILURE OF COMMUNICATION:**

In the event of total failure of communications between GRKN-RHMA and RHMA-BDBA i.e. when line clear can not be obtained by any 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. Railway auto phone & BSNL phone.
  - D. Control telephone.
  - E. VHF sets.
- (i) Each train before being allowed into the Block Section should be stopped and the Guard and Loco Pilot of the train apprised of the situation.
  - (ii) The SM on duty will hand over an authority (T/C 602) for working of trains during total failure of communication which includes:
    - a) An authority to proceed without 'Line Clear'.
    - b) An authority to pass the Last Stop Signal at its "ON" position.
    - c) A caution order restricting the speed to 25 KMPH by day when view ahead is clear and 10 KMPH when view ahead is not clear.
  - iii) No train shall be allowed to enter the Block Section until there is a clear interval of 30minutes between the train about to leave and the train, which has immediately proceeded.
  - iv) Fixed signals except the last stop signal may be taken "OFF" for the dispatch of the train and for the reception of the train at the next block station and reception signals may be taken only after the train has been brought to a stand out side it.
  - v) On arrival at the next block station the Loco Pilot shall hand over the authority to proceed with out line clear to the SM on duty who will preserve the same for further inspection.
- Before resuming normal working when any means of communication is established. SM of either end must satisfy that there is no train in the block section. [Refer SR 6.02.03].

**9.2 TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION:**

During temporary single line working on one clear line when one line is obstructed either between GRKN-RHMA and RHMA-BDBA, trains shall be worked as per the procedure as detailed below. [Refer SR 6.02.01].

- a) Before introducing single line working the SM on duty must satisfy that the line on which single line will be introduced is clear and free from all obstructions.
- b) The Lock and Block instrument will be suspended.
- c) SM proposing single line working must issue a message with the cause of introduction of single line working, Line on which the single line will be introduced, Source of information about the clearance of the line on which single line will be introduced, Place of obstruction, restriction of speed, If any, last train arrived/left the station assurance about keeping the last stop signal at 'ON' position if the train runs on right lines and in case of wrong line all signals are to be kept at 'ON' position.
- d) SM of the other end block section will acknowledge the message and confirm the same by a Private Number.
- e) After obtaining line clear for the train from the Advance station the Loco Pilot must be given an authority (T/D 602) for temporary single line working on double line indicating there in.
  - (i) The line on which single line is introduced.
  - (ii) The kilometrage of obstruction.
  - (iii) Any other speed restriction if any thing is existing.
  - (iv) An authority to pass the last stop signal at its 'ON' position. The approach stop signals at the station in advance may be taken "OFF". In case a train proceeding on

wrong line, the train shall be piloted out and at the receiving station, the train shall be piloted 'IN', on the authority of T/369(3b).

- f) An endorsement will also be made in the Caution Order given to the Loco Pilot of the 1<sup>st</sup> train to inform all the gateman and gang men on the way about introduction of temporary single line working and specifying the road on which the train will run. This information shall be conveyed through the Loco Pilot of a subsequent train also, if necessary.
- g) The speed of the first train is to be restricted to 25 KMPH subject to other speed restriction.

On being ensured that the obstructed line is clear of all obstructions, SM on duty will resume normal working after exchanging message with the SM on duty of the other concerned end supported by private number in consultation with the SCR on duty. A goods train or an engine may be allowed on wrong line by blocking back the section without introducing single line working. [Refer SR. 6.02.05(g)(i)]

Whenever total interruption of all communication occurs during single line working on double line, the procedure detailed in GR should be followed.

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

Rules and 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 as follows. [Refer SR 6.02.05]

- (a) 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.
- (b) SM at the dispatching end will hand over to the Loco Pilot the BLOCK TICKET as the authority which includes.
  - i). An authority to pass the signals at 'ON' position.
  - ii). **CAUTION ORDER:** existing speed restrictions shall be indicated in the Caution order. The speed restriction of 15 KMPH in day when view ahead is clear and 10 KMPH in night, when view ahead is not clear shall be indicated clearly.
- (c) Before resumption of normal working a message between the SM's of the concerned section shall be exchanged with private number. [Refer SR 6.02.05 (d) (vi)].

The block ticket so issued must be collected by SM on duty 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.

### 10. **VISIBILITY TEST OBJECT:**

The signal lights of Common Loop starter signal No. 5 & 6 on either direction during day & night are the visibility test objects of UP and Down lines vide GR 3.61.2(b)(iii).

### 11. **ESSENTIAL EQUIPMENT AT THE STATION:**

(Details are given in Appendix-'E')

### 12. **FOG SIGNAL MEN NOMINATED TO BE CALLED IN CASE OF FOG: FOG SIGNALLING:**

In case of thick, foggy or tempestuous weather impairing visibility, whenever it is necessary to indicate to the Loco Pilot of an approaching train the locality of a signal, the SM on duty at station shall arrange for signaling in terms of General Rules 3.61 and Subsidiary Rules thereto. The assurance of the staff shall be obtained in the month of OCTOBER every year in the Fog Signal Register vide SR 3.61 as a token of their acknowledgement in fog signaling Rules.

Fog signalmen shall be detailed for duty at stations being recruited partly from the station traffic staff and partly from Engineering Gangman 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.

**INSTRUCTIONS:**

- a. This register contains the following parts.
  - Part – I : Particulars of fog signal men 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. As soon as a man is posted to or detailed for duty at a station as a Fog Signalman, the Station Master must satisfy himself that the man is fully acquainted with and understands the rules relating to the placing of detonating (fog) signals at stations during thick or foggy weather. As an assurance of this, the Station Master shall take the signature or thumb impression of such men in the appropriate column of Part - I of this register.
- c. In-charge of the station shall ensure that the information maintained in the register is kept up to date and is accurate in all respects.
- d. 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.

**APPENDICES**

- APPENDIX-A : WORKING OF LEVEL CROSSING GATES.
- APPENDIX-B : SYSTEM OF SIGNALLING AND INTERLOCKING AND COMMUNICATION AND 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 : LIST OF ESSENTIAL EQUIPMENTS PROVIDED AT THE STATION.
- APPENDIX-F : RULES OF WORKING OF DK STATION, HALTS, IBH, IBS AND OUTLYING SIDINGS.
- APPENDIX-G : RULES FOR WOKING OF TRAINS IN ELECTRIFIED SECTIONS.

1.0 **WORKING OF 'C' CLASS LEVEL CROSSING No. CP-36 SITUATED AT KM. 463/1-3 (UP) AND 463/4-2(DN) BETWEEN RHMA AND GRKN STATION.**

1.1 **BRIEF DESCRIPTION:**

1.	No. of Level Crossing Gate	CP-36
2.	Engineering or Traffic gate	Engineering
3.	Under control of Station Master or Permanent Way Inspector.	SSE (P.Way)/GRKN
4.	Location at Km.	Km. 463/1-3 (UP) & 463/4-2 (DN)
5.	At station	-
6.	In between station	RHMA-GRKN
7.	BG/MG/NG	BG
8.	Single line/double line/multiple line	Double Line
9.	Normal position	Open to Road Traffic
10.	Interlocked/ Non-Interlocked	Non-Interlocked.
11.	Means of Interlocking	---
12.	Provision of gate signal at Km.	---
13.	Signaling arrangement	---
14.	Means of communication Telephone.	Telephone with SM/RHMA
15.	Width of the level crossing gate	5.0 m
16.	Type of road	Others
17.	Name of road	Tirtol-Bandhabati Road
18.	Metalled /Non-Metalled	Metalled
19.	Approach road	Metalled
20.	Width of the road	5.0 m
21.	Angle of road crossing (in case of the SKEW gates)	60 <sup>0</sup>
22.	Road gradients (if any)	[a] North/ East Side: 1:20 [b] South/ West Side: 1:20
23.	Road alignment (Straight/Curve)	[a] North/ East Side: Straight [b] South/ West Side: Straight
24.	Provision of height gauges	Yes
25.	Type of barriers	Lifting
26.	Length of check rails	9.0 m
27.	Road surface in between level crossing gates.	C.C. Block
28.	Length of rumble strip/ speed breakers.	-
29.	Road signs	Yes
30.	Speed breakers indication board	Yes
31.	TVU	4949, August-2012
32.	Census next due on	August-2015
33.	Demarcation for placement of detonators.	Yes
34.	No. of gateman working	2 (Two)
35.	Nearest Railway Medical Assistance	Cuttack
36.	Nearest Private Medical Assistance available (if any)	Manijanga
37.	List of equipment available (Yes/No)	Yes.



**1.2 EQUIPEMENT TO BE AVAILABLE AT THE GATE:**

1.	LED tri-color hand signal lamp	3
2.	Hand Signal Flag Green	1 mounted on stick
3.	Hand Signal Flag Red	1 mounted on sticks
4.	Banner Flag Red	3
5.	Posts for exhibiting red banner flag	2
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.	Rammer	1
13.	Pick Axe	1
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 level crossing gate diagram in case of obstruction on gate	1
20.	Basket	1
21.	Whistle	1
22.	Wall clock	1
23.	Small chain with padlock	2

**1.3 RECORDS TO BE KEPT AT GATE LODGE**

In addition to the above equipment, following records shall also be kept at the Gate Lodge.

- 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 Gatemen, including date of passing vision test, initial/refresher course, safety camp, etc.
- viii) Accident Register.
- ix) Record of last census of road traffic at Level Crossing gate.
- x) Public Complaint Book.
- xi) Inspection Book.

**1.4. NORMAL WORKING OF THE LEVEL CROSSING GATE(NON-INTERLOCKED):**

The level crossing gate is normally kept open against road traffic and is closed for passage of the train. The SM on duty shall advise gateman on duty to close the gate against the road traffic. On receipt of telephonic advice he shall close the gate well in time and confirm the same to the SM on duty. Before opening the gate, he shall display the banner flag across the track.

1.5 **DUTIES OF GATEMAN:**

(1) **ALERTNESS:** The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.

(2) **POSITION 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 day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- (iii) In night time, 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 is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- (ii) Gateman shall ensure that gate lamps and lamps of all gate signals 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 reliever arrives and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and 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 / train / 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 Loco Pilot on walkie – talkie or in any other way.
- (vii) If lifting barriers / leaf gates 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 SM, 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 and remain well conversant with these instructions.
- (xii) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- (xiii) Gateman shall see that the channel for the flange of the wheel is kept clear.
- (xiv) Gateman shall 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 gates should be to the minimum possible extent.
- (xvi) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- (xvii) Gateman shall prevent trespassing by persons or cattle to the maximum extent.

(4) **ACTION IN CASE OF UNUSUAL OCCURRENCE ON 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, 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 Station Master, if connected on telephone, 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 DN motion as high and as low as possible.
- (vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

(5) **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:**

- (i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.
- (ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, if connecting by telephone, regarding the defects/obstructions at the gate, under exchange of private number.
- (iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.

The gateman shall protect the line as under:-

- (a)
  - (i) If both lines are obstructed the 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 line on which a train is expected to arrive first.
  - (ii) The he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
  - (iii) Gateman shall then proceed to protect the gate along with detonators, LED tri-color hand signal lamp 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 on the line on which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 on BG from the level crossing gate and place 3 detonators on the track 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.
  - (v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in Para (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 light up and fix the LED tri-color hand signal lamp to 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 ACTION 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 Para (a) above.
- (ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers / leaf gates 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 nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

1.6 **EXCHANGE OF PRIVATE NUMBER:**

- (a)
- (i) Before dispatching a DN train, SM/RHMA shall advise the gateman 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 taking 'OFF' departure signals 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 will take 'OFF' the departure signals after getting the private number of the gateman.
- (v) The gateman shall be authorized to open the level crossing after complete passage of the 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)
- (i) Before dispatching an UP train, SM/GRKN shall advise the SM/RHMA 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) On turn, SM/RHMA shall convey the same to the gateman, under exchange of private number.
- (iv) Gateman shall close the gate and thereafter give his private number to the SM/RHMA.
- (v) Only then shall the SM/RHMA shall grant line clear to SM/GRKN. [(Refer SR 16.03.03 (a) (b)]
- (vi) The gateman shall be authorized to open the level crossing after complete passage of the 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.

1.7 **FAILURE OF TELEPHONIC COMMUNICATION:**

When telephonic communication fails or it does not get any response from gateman despite 2 or 3 attempts, the following procedure should be adopted:

(A.SENAPATI)  
DSTE/KUR

(SHYAMAL NATH)  
Sr.DEN(E)/KUR

(B.PANDA)  
DOM/KUR

- (i) Station master at dispatching end shall issue caution order to the Loco Pilot of the departing train.
- (ii) The caution order shall advise the Loco Pilot to whistle continuously and approach the gate cautiously.
- (iii) The Loco Pilot shall be instructed to pass the gate cautiously, on being hand signaled by the gate man. If hand signal is not seen, the Loco Pilot should prepare to stop short of the gate and depute his assistant Loco Pilot to see the condition of the gate. If gate is closed, the assistant Loco Pilot will give all right signal and if the gate is not closed the assistant Loco Pilot must close the gate and then give all right signal. In the absence of the assistant Loco Pilot, the Loco Pilot may take the assistance of assistant Guard/Guard.
- (iv) In case of an approaching train, the station master shall advise the station master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- (v) The station master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vi) The station master shall advise the gateman through gangman/patrol man or the Loco Pilot of the first train that the telephone has become defective.
- (vii) He should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- (viii) Normal working will be resumed only after S&T staff rectifies the telephone and issue reconnection/fit memo for the same.

#### 1.8 **FAILURE OF LIFTING BARRIERS OR LEAF GATES:**

- (i) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure that lifting barriers or leaf gates 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, gateman shall show green hand signal flag by day and green light at night to the Loco Pilot of the approaching train.
- (v) Station Master on duty shall issue caution order to the Loco Pilot of departing train.
- (vi) He shall also advise the Station Master 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.
- (vii) Station Master shall advise maintenance staff responsible for maintenance of lifting barriers/ leaf gates to rectify the defect at the earliest.
- (viii) Normal working will resumed only after maintenance staff rectify the lifting barrier/ leaf gates and issue reconnection/ fit memo for the same.

#### 1.9 **OBSTRUCTION AT THE GATE:**

- (i) If the gate is broken by a road vehicle which is fouling the track or if lifting barriers/ leaf gates 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 on duty, regarding the defects / obstructions at the gate, under exchange of private number.
- (iii) Station Master 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 after two or three attempts, he shall first protect the gate and then inform on phone.

(A.SENAPATI)  
DSTE/KUR

(SHYAMAL NATH)  
Sr.DEN(E)/KUR

(B.PANDA)  
DOM/KUR

- (v) Gateman shall then rush with detonators, LED tri-color hand signal lamp and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate vide GR 16.07.
- (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 relay these details to the Station Master who shall not start the train unless he has been ensured by the gateman that the road vehicle or the lifting barriers/ leaf gates are not fouling the track.
- (viii) The Station Master shall also inform the Station Master 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 cleared 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 shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the gate on green hand signal of the gateman, if the gate is broken, but clear of any obstruction.
- (xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.
- (xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gate to repair the same at the earliest.
- (xiii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers/ leaf gates and issue reconnection/ fit memo for the same.

1.10 **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 will adopt the procedure given under item No.1.9 above. If the obstruction fouls the Level Crossing Gate, gate man must keep the gates closed against road traffic till the track is cleared of the obstruction.

2.0 **WORKING OF 'A' CLASS LEVEL CROSSING NO. CP-38 SITUATED AT KM. 465/9-11 (UP) & 465/12-10 (DN) BETWEEN RHMA - GRKN STATION.**

2.1 **BRIEF DESCRIPTION:**

1.	No. of Level Crossing Gate	CP-38
2.	Engineering or Traffic gate	Engineering.
3.	Under control of Station Master or Permanent Way Inspector.	SE/P.Way/GRKN
4.	Location at Km.	Km. 465/9-11 (UP) & 465/12-10 (DN),
5.	At station	---
6.	In between station	RHMA-GRKN
7.	BG/MG/NG	BG
8.	Single line/double line/multiple line	Double line
9.	Normal position	Open to road traffic
10.	Interlocked/ Non-Interlocked	Interlocked
11.	Means of Interlocking	Gate Stop Signal
12.	Provision of gate signal at Km.	Gate Stop Signal in both UP & DN direction
13.	Signaling arrangement	Gate Stop Signal in both UP & DN direction
14.	Means of communication Telephone.	Telephone with SM/RHMA
15.	Width of the level crossing gate	7.5 m
16.	Type of road	Others
17.	Name of road	Maniganga - Ersama road
18.	Metalled /Non-Metalled	Metalled
19.	Approach road	-
20.	Width of the road	5.38 m
21.	Angle of road crossing (in case of the SKEW gates)	45 <sup>0</sup>
22.	Road gradients (if any)	[a] North/ East Side: 1:30 [b] South/ West Side: 1:40
23.	Road alignment (Straight/Curve)	[a] North /East Side: Curve [b] South /West Side: Curve
24.	Provision of height gauges	Yes
25.	Type of barriers	Lifting
26.	Length of check rails	12.60 m
27.	Road surface in between level crossing gates.	C. C. Block
28.	Length of rumble strip/ speed breakers.	10.0 m
29.	Road signs	Yes
30.	Speed breakers indication board	Yes
31.	TVU	43463 on August - 2012
32.	Census next due on	August - 2015
33.	Demarcation for placement of detonators.	Available
34.	No. of gateman working	03 (Three)
35.	Nearest Railway Medical Assistance	Paradeep
36.	Nearest Private Medical Assistance available (if any)	Manijanga PHC
37.	List of equipment available (Yes/No)	Yes

**2.2. A. EQUIPEMENT TO BE AVAILABLE AT THE GATE:**

1.	LED tri-color hand signal lamp	3
2.	Hand Signal Flag Green	1 mounted on stick
3.	Hand Signal Flag Red	3 mounted on sticks
4.	Banner Flag Red	3
5.	Posts for exhibiting red banner flag	2
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.	Rammer	1
13.	Pick Axe	1
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 level crossing gate diagram in case of obstruction on gate	1
20.	Basket	1
21.	Whistle	1
22.	Wall clock	1
23.	Small Chain with padlock	2

**B. RECORDS TO BE KEPT AT GATE LODGE:**

In addition to the above equipment, following records shall also be kept at the Gate Lodge.

- 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 Gatemen, including date of passing vision test, initial/refresher course, safety camp, etc.
- viii) Accident Register.
- ix) Record of last census of road traffic at Level Crossing gate.
- x) Public Complaint Book.
- xi) Inspection Book.
- xii) S&T register.

**2.3. INTERLOCKING AND NORMAL WORKING:**

This gate is interlocked with independent Gate Stop signals. The interlocking is achieved by mechanically Ground lever frame & closure of the L.C.Gate Boom. The normal position of the gate is open. A four-lever ground frame is provided at the gate lodge. When it is necessary to close the gate for passage of a train, the SM on duty shall inform the Gateman to close and lock the gate. The function of the lever frames are illustrated below:



Lever No.1 Spare  
 Lever No.2 Boom locking lever  
 Lever No.3 UP Gate Stop Signal  
 Lever No.4 DN Gate Stop Signal

The Gateman on duty shall then close the barriers of the L.C.Gate by operating winch. The key 'G' is to be extracted from the winch, which will be inserted in the lever of 2GF. When 2GF reversed locks the booms of the gates and releases UP and DN Gate Stop signals 3GF & 4GF respectively. After passage of the train this signal levers to be normalized and this lock lever to be made normal. This will be inserted in the winch and unlock to open the gate by operating the winch.

To avoid the detention to the road traffic at the Level crossing gate, the gate signals should not be taken off too early in advance and L.C. Gate should not be kept closed for more than 10minutes at a stretch.

#### 2.4. **INTIMATION TO GATEMAN:**

- i) Immediately after departure of the train, SM shall inform the gateman through telephone connected at his end, the number, description, direction and expected time of the passage of the train at the gate.
- ii) If the telephone is connected to the station at the receiving end, this advice shall be given by the Station Master to the Gateman as soon as he receives train entering section advice from the dispatching station.
- iii) If the actually running time of the train from either end of the section is less than 10 minutes, SM will convey this advice to the gateman before obtaining /granting line clear.
- iv) It should be the duty of the gateman to ensure that the gate is closed in time, so that there is no detention to the train or excessive detention to road traffic.

#### 2.5. **DUTIES OF GATEMAN:**

##### 1) **ALERTNESS:**

The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.

##### 2) **POSITION 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 day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In night time, 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 place red banner across the track during emergencies & obstruction on the track.
- ii) Gateman shall ensure that gate lamps and lamps of all gate signals 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 reliever arrives and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and 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 / train / 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 Loco Pilot on walkie – talkie or in any other way.
- vii) If lifting barriers / leaf gates 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 SM, Gangmate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- ix) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.
- x) At the gate whose signal have become defective, the gateman shall close and lock and lifting barriers / leaf gates on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot to report the defect at the next station.
- xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xiii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- xiv) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- xvi) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.
- xvii) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xviii) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- xix) Gateman shall prevent trespassing by persons or cattle to the maximum extent.

4) **ACTION IN CASE OF UNUSUAL OCCURRENCE ON 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, 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 Station Master, if connected on telephone, 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, if connected on telephone, to take appropriate action, under exchange of private number.

5) **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:**

- i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.
- ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, if connecting by telephone, regarding the defects/obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
  - a) The gateman shall protect the line as under:-
    - i) If both lines are obstructed the 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 line on 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 on the other line 5 meters away from the site of obstruction.
    - iii) Gateman shall then proceed to protect the gate along with detonators, LED tri-color hand signal lamp 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 on the line on which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 on BG from the level crossing gate and place 3 detonators on the track 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.
    - v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para (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 light up and fix the LED tri-color hand signal lamp to 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 action 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 para (a) above.
- ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers / leaf gates 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 nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

2.6 **FAILURE OF TELEPHONIC COMMUNICATION:**

When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted:

- i) If the telephone fails at the gate connected with the Station at the dispatching end, station master shall then issue a caution order to the Loco Pilot of the departing train.
- ii) Station master shall advise the Loco Pilot to whistle continuously and proceed cautiously while approaching the gate.
- iii) In case the gate signal is ON he should stop short of gate signal and follow the procedure laid under GR 3.73.
- iv) In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- v) The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- vi) Station master will also advise the gateman through gang man/patrolman/Loco Pilot of the first train that the telephone has become defective.
- vii) Station master should also advise S & T staff responsible for maintenance of the telephone to rectify the defect at the earliest.
- viii) Normal working will be resumed only after S & T staff rectify the telephone and issue reconnection/ fit memo for the same.

#### 2.7 **FAILURE OF LIFTING BARRIERS OR LEAF GATES:**

- i) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure the lifting barriers or leaf gates 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, gateman shall show green hand signal flag by day and green light to the Loco Pilot of the approaching train.
- v) Station Master on duty shall issue caution order to the Loco Pilot of departing trains.
- vi) He shall also advise the Station Master 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.
- vii) Station Master shall advise maintenance staff responsible for maintenance of lifting barriers/ leaf gates to repair the defect at the earliest.
- viii) Normal working will resumed only after maintenance staff repair the lifting barrier/ leaf gates and issue reconnection/ fit memo for the same.

#### **NOTE:**

Authority to pass signals at "ON" position as per rules shall also be issued to the Loco Pilots of both departing and arriving trains.

#### 2.8 **FAILURE OF GATE KEY WITH THE GATE IN CLOSED POSITION, WHEN GATE KEY CANNOT BE EXTRACTED FOR OPENING THE GATE:**

- i) If the gate key cannot be extracted from the winch, the gate leaves or the key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange private number.
- ii) If Emergency Key is available at the gate lodge/Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic. ( In this gate the emergency key is not available)
- iii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/ dispatch of trains as prescribed for non-interlocked gates should be adopted.

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- iv) Station Master on duty shall issue a caution order to the Loco Pilot of a departing train.
- v) He shall also advise the Station Master 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) Station Master shall advise S & T staff responsible for maintenance of winch/gate leaves/key transmitter to rectify the defect at the earliest.
- vii) Normal working will be resumed only after S & T staff repairs the winch/gate leaves/key transmitter and issue reconnection/ fit memo for the same.

#### 2.9 **FAILURE OF GATE KEY WITH THE GATE IN OPEN CONDITION:**

- i) If the gate key cannot be extracted from the winch, gate lever or key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.
- ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/ dispatch of trains as prescribed for non-interlocked gates should be adopted.
- iii) Gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- iv) Station Master on duty shall issue caution order to the Loco Pilot of a departing train.
- v) He shall also advise the Station Master 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) Station Master shall advise S & T staff responsible for maintenance of winch/gate leaves/key transmitter to rectify the defect at the earliest
- vii) Normal working will resumed only after S & T staff repair the winch/gate leaves/key transmitter and issues reconnection/ fit memo for the same.

#### 2.10 **DEFECTIVE GATE SIGNALS:**

- i) The gateman shall treat the gate signal as defective and must not lower them under following circumstances:
- ii) If gate signals can be taken "OFF" without closing the gate, or
- iii) The key can be extracted from the operating winch when the gate is in open condition, or
- iv) If the Gate or the Gate Signal or Distant Signal becomes defective in "OFF" position, the gateman will make all efforts to put it at "ON" position even by cutting signal wires, if necessary.
- v) The gateman will immediately advise the Station Master on duty, under exchange of private number, regarding defective gate signals.
- vi) Thereafter, the gate must be treated as non interlocked and procedure for reception/ dispatch of trains as prescribed for non-interlocked gates should be adopted.
- vii) He shall show green hand signal flag by day and green light by night to the passing train after closing the gate.
- viii) Station Master on duty will issue caution order to the Loco Pilot of a departing train.
- ix) He shall also advise the Station Master 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.
- x) Station Master shall advise S & T staff responsible for maintaining the gate signal to repair the same at the earliest
- xi) Normal working will be resumed after S & T staff rectifies the defective gate signal and issue reconnection/ fit memo for the same.

**2.11 OBSTRUCTION AT THE GATE:**

- i) If the gate is broken by a road vehicle which is fouling the track or if lifting barriers/ leaf gates 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 on duty, regarding the defects / obstructions at the gate, under exchange of private number.
- iii) Station Master 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 after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators, LED tri-color hand signal lamp and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect gate vide GR.16.07.
- 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 relay these details to the Station Master who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers/ leaf gates are not fouling the track.
- viii) The Station Master shall also inform the Station Master 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 cleared 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 shall then issue a caution order to Loco Pilot of all trains to proceed cautiously, and pass the reception/departure 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 there after exhibit green hand signal, if the gate is not obstructed.
- xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gate to repair the same at the earliest.
- xiii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers/ leaf gates and issue reconnection/ fit memo for the same.

**2.12 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 will adopt the procedure given under item No. 2.11 above. If the obstruction fouls the Level Crossing Gate, gate man must keep the gates closed against road traffic till the track is cleared of the obstruction.

3.0 WORKING OF 'C' CLASS LEVEL CROSSING GATE NO. CP-39 SITUATED AT KM. 466/17-19 (UP) & 466/20-18 (DN) BETWEEN RHMA-GRKN STATION.

3.1 **BRIEF DESCRIPTION:**

1.	No. of Level Crossing Gate	CP-39
2.	Engineering or Traffic gate	Engineering.
3.	Under control of Station Master or Permanent Way Inspector.	SSE /(P.Way.)/GRKN
4.	Location at Km.	Km. 466/17-19 (UP) & 466/20-18 (DN)
5.	At station	---
6.	In between station	RHMA-GRKN
7.	BG/MG/NG	BG
8.	Single line/double line/multiple line	Double Line
9.	Normal position	Open to Road Traffic
10.	Interlocked/ Non-Interlocked	Non-Interlocked
11.	Means of Interlocking	---
12.	Provision of gate signals	UP line: DN line:
13.	Signaling arrangement	---
14.	Means of communication Telephone.	Telephone to SM/RHMA
15.	Width of the level crossing gate	7.50m.
16.	Type of road	Others
17.	Name of road	Matagajpur
18.	Metalled /Non-Metalled	Metalled
19.	Approach road	Black Top
20.	Width of the road	5.50M
21.	Angle of road crossing (in case of the SKEW gates)	60 <sup>0</sup>
22.	Road gradients (if any) a) North/East Side b) South/West Side	1:40 1:40
23.	Road alignment (Straight/Curve) a) North/East Side b) South/West Side	Straight Straight
24.	Provision of height gauges	Yes
25.	Type of barriers	Lifting
26.	Length of check rails	11.0 M
27.	Road surface in between level crossing gates.	C.C. Block
28.	Length of rumble strip/ speed breakers.	10.0m
29.	Road signs	Available
30.	Speed breakers indication board	Available
31.	TVU	4131, On August- 2012
32.	Census next due on	August-2015
33.	Demarcation for placement of detonators.	Available
34.	No. of gateman working	2 (Two)
35.	Nearest Railway Medical Assistance	Cuttack
36.	Nearest Private Medical Assistance available (if any)	Cuttack
37.	List of equipment available (Yes/No)	Yes

**3.2 EQUIPMENTS TO BE AVAILABLE AT THE GATE:**

Sl. No.	Items	
1.	LED tri-color hand signal lamp	3
2.	Hand signal flag Green	1 mounted on stick
3.	Hand signal flag Red	3 mounted on sticks
4.	Banner flag Red	3
5.	Posts for exhibiting Red Banner Flag	2
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.	Rammer	1
13.	Pick axe	1
14.	Tin case for flag	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 level crossing gate diagram in case of obstruction on gate	1
20.	Basket	1
21.	Whistle	1
22.	Wall clock	1
23.	Small size chain with Pad lock	2

**3.3. RECORDS TO BE KEPT AT GATE LODGE:**

In addition to the above equipment, following records shall also be kept at the Gate Lodge.

- 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 Gatemen, including date of passing vision test, initial/refresher course, safety camp, etc.
- viii) Accident Register.
- ix) Record of last census of road traffic at level crossing gate.
- x) Public Complaint Book.
- xi) Inspection Book.



**3.4 NORMAL WORKING OF THE LEVEL CROSSING GATE (NON-INTERLOCKED):**

The level crossing gate is normally kept open against road traffic and is closed for passage of the train. The SM on duty shall advise gateman on duty to close the gate against the road traffic. On receipt of telephonic advice he shall close the gate well in time and confirm the same to the SM on duty. Before opening the gate, he shall display the banner flag across the track.

**3.5 DUTIES OF GATEMAN:**

(1) **ALERTNESS:** The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.

**(2) POSITION 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 day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- (iii) In night time, 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 is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- (ii) Gateman shall ensure that gate lamps and lamps of all gate signals 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 reliever arrives and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and 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 / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vaccum 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 Loco Pilot on walkie – talkie or in any other way.
- (vii) If lifting barriers / leaf gates 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 SM, 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 and remain well conversant with these instructions.
- (xii) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- (xiii) Gateman shall see that the channel for the flange of the wheel is kept clear.
- (xiv) Gateman shall 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 gates should be to the minimum possible extent.
- (xvi) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- (xvii) Gateman shall prevent trespassing by persons or cattle to the maximum extent.

(4) **ACTION IN CASE OF UNUSUAL OCCURRENCE ON 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, 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 Station Master, if connected on telephone, 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, if connected on telephone, to take appropriate action, under exchange of private number.

(5) **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:**

- i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.
- ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, if connecting by telephone, regarding the defects/obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.

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

- i) If both lines are obstructed the 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 line on which a train is expected to arrive first.
- ii) The he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, LED tri-color hand signal lamp 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 on the line on which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 on BG from the level crossing gate and place 3 detonators on the track 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.

- v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para (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 light up and fix the LED tri-color hand signal lamp to 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 ACTION 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 para (a) above.
- (ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers / leaf gates 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 nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

**3.6 EXCHANGE OF PRIVATE NUMBER:**

- (a)
  - (i) Before dispatching a DN train, SM/RHMA shall advise the gateman 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 taking 'OFF' departure signals 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 will take 'OFF' the departure signals after getting the private number of the gateman.
  - (v) The gateman shall be authorized to open the level crossing after complete passage of the 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)
  - (i) Before dispatching an UP train, SM/GRKN shall advise the SM/RHMA 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) On turn, SM/RHMA shall convey the same to the gateman, under exchange of private number.
  - (iv) Gateman shall close the gate and thereafter give his private number to the SM/RHMA.
  - (v) Only then shall the SM/RHMA shall grant line clear to SM/GRKN. [(Refer SR 16.03.03 (a) (b)]
  - (vi) The gateman shall be authorized to open the level crossing after complete passage of the 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.

### **3.7 FAILURE OF TELEPHONIC COMMUNICATION**

When telephonic communication fails or it does not get any response from gateman despite 2 or 3 attempts, the following procedure should be adopted:

- (i) Station Master at dispatching end shall issue caution order to the Loco Pilot of the departing train.
- (ii) The caution order shall advise the Loco Pilot to whistle continuously and approach the gate cautiously.
- (iii) The Loco Pilot shall be instructed to pass the gate cautiously, on being hand signaled by the gate man. If hand signal is not seen, the Loco Pilot should prepare to stop short of the gate and depute his assistant Loco Pilot to see the condition of the gate. If gate is closed, the assistant Loco Pilot will give all right signal and if the gate is not closed the assistant Loco Pilot must close the gate and then give all right signal. In the absence of the assistant Loco Pilot, the Loco Pilot may take the assistance of assistant Guard/Guard.
- (iv) In case of an approaching train, the station master shall advise the station master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- (v) The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vi) The Station Master shall advise the gateman through gangman/patrol man or the Loco Pilot of the first train that the telephone has become defective.
- (vii) He should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- (viii) Normal working will be resumed only after S&T staff rectifies the telephone and issue reconnection/fit memo for the same.

### **3.8 FAILURE OF LIFTING BARRIERS OR LEAF GATES:**

- (i) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure that lifting barriers or leaf gates 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, gateman shall show green hand signal flag by day and green light at night to the Loco Pilot of the approaching train.
- (v) Station Master on duty shall issue caution order to the Loco Pilot of departing train.
- (vi) He shall also advise the Station Master 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.
- (vii) Station Master shall advise maintenance staff responsible for maintenance of lifting barriers/ leaf gates to rectify the defect at the earliest.
- (viii) Normal working will resumed only after maintenance staff rectify the lifting barrier/ leaf gates and issue reconnection/ fit memo for the same.

### **3.9 OBSTRUCTION AT THE GATE:**

- (i) If the gate is broken by a road vehicle which is fouling the track or if lifting barriers/ leaf gates 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.

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- (ii) Immediately after this, the gateman shall advise the Station Master on duty, regarding the defects / obstructions at the gate, under exchange of private number.
- (iii) Station Master 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 after two or three attempts, he shall first protect the gate and then inform on phone.
- (v) Gateman shall then rush with detonators, LED tri-color hand signal lamp and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate vide GR.16.07.
- (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 relay these details to the Station Master who shall not start the train unless he has been ensured by the gateman that the road vehicle or the lifting barriers/ leaf gates are not fouling the track.
- (viii) The Station Master shall also inform the Station Master 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 cleared 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 shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the gate on green hand signal of the gateman, if the gate is broken, but clear of any obstruction.
- (xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.
- (xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gate to repair the same at the earliest.
- (xiii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers/ leaf gates and issue reconnection/ fit memo for the same.

### **3.10 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 will adopt the procedure given under item No. 3.9 above. If the obstruction fouls the Level Crossing Gate, gate man must keep the gates closed against road traffic till the track is cleared of the obstruction.

4.0 **WORKING OF 'C' CLASS LEVEL CROSSING GATE NO. CP-41 SITUATED AT Km. 467/27-29 (UP) & 467/30-28 (DN) BETWEEN RHMA-GRKN STATION.**

4.1 **BRIEF DESCRIPTION:**

1.	No. of Level Crossing Gate	:	CP- 41
2.	Engineering or Traffic gate	:	Engineering.
3.	Under control of Station Master or Permanent Way Inspector.	:	SE/P.Way/GRKN
4.	Location at Km.	:	Km. 467/27-29 (UP) & 467/30-28 (DN)
5.	At station	:	---
6.	In between station	:	RHMA-GRKN
7.	BG/MG/NG	:	BG
8.	Single line/double line/multiple line	:	Double Line
9.	Normal position	:	Open to Road Traffic
10.	Interlocked/ Non-Interlocked	:	Non-Interlocked.
11.	Means of Interlocking	:	---
12.	Provision of gate signal at Km.	:	---
13.	Signaling arrangement	:	---
14.	Means of communication Telephone.	:	Telephone with SM/RHMA
15.	Width of the level crossing gate	:	7.50 m
16.	Type of road	:	Others
17.	Name of road	:	Makarpadia Road
18.	Metalled /Non-Metalled	:	Moorum
19.	Approach road	:	Moorum
20.	Width of the road	:	5.50 m
21.	Angle of road crossing (in case of the SKEW gates)	:	60 <sup>0</sup>
22.	Road gradients (if any)	:	[a] North/ East Side: 1:30
		:	[b] South/ West Side: 1:30
23.	Road alignment (Straight/Curve)	:	[a] North/ East Side : Straight
		:	[b] South/ West Side : Straight
24.	Provision of height gauges	:	Yes
25.	Type of barriers	:	Lifting barrier.
26.	Length of check rails	:	10.97 m
27.	Road surface in between level crossing gates.	:	C.C. Block
28.	Length of rumble strip/ speed breakers.	:	5.50 m
29.	Road signs	:	Yes
30.	Speed breakers indication board	:	Yes
31.	TVU	:	13668 on August - 2012
32.	Census next due on	:	August - 2015
33.	Demarcation for placement of detonators.	:	Yes
34.	No. of gateman working	:	(02) Two
35.	Nearest Railway Medical Assistance	:	Paradeep
36.	Nearest Private Medical Assistance available (if any)	:	Rahama
37.	List of equipment available (Yes/No)	:	Available.

**4.2. EQUIPEMENT TO BE AVAILABLE AT THE GATE:**

1.	LED tri-color hand signal lamp	3
2.	Hand Signal Flag Green	1 mounted on stick
3.	Hand Signal Flag Red	3 mounted on sticks
4.	Banner Flag Red	3
5.	Posts for exhibiting red banner flag	2
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.	Rammer	1
13.	Pick Axe	1
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 level crossing gate diagram in case of obstruction on gate	1
20.	Basket	1
21.	Whistle	1
22.	Wall clock	1
23.	Small chain with pad lock	2

**4.3 RECORDS TO BE KEPT AT GATE LODGE**

In addition to the above equipment, following records shall also be kept at the Gate Lodge.

- 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 Gatemen, including date of passing vision test, initial/refresher course, safety camp, etc.
- viii) Accident Register.
- ix) Record of last census of road traffic at Level Crossing gate.
- x) Public Complaint Book.
- xi) Inspection Book.

**4.4 NORMAL WORKING OF THE LEVEL CROSSING GATE(NON-INTERLOCKED)**

The level crossing gate is normally kept open against road traffic and is closed for passage of the train. The SM on duty shall advice gateman on duty to close the gate against the road traffic. On receipt of telephonic advice he shall close the gate well in time and confirm the same to the SM on duty. Before opening the gate, he shall display the banner flag across the track.

**4.5 DUTIES OF GATEMAN:**

(1) **ALERTNESS:** The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.

(2) **POSITION 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 day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- (iii) In night time, 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 is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- (ii) Gateman shall ensure that gate lamps and lamps of all gate signals 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 reliever arrives and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and 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 / train / 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 Loco Pilot on walkie – talkie or in any other way.
- (vii) If lifting barriers / leaf gates 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 SM, 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 and remain well conversant with these instructions.
- (xii) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- (xiii) Gateman shall see that the channel for the flange of the wheel is kept clear.
- (xiv) Gateman shall 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 gates should be to the minimum possible extent.
- (xvi) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- (xvii) Gateman shall prevent trespassing by persons or cattle to the maximum extent.



**(4) ACTION IN CASE OF UNUSUAL OCCURRENCE ON 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, 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 Station Master, if connected on telephone, 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, if connected on telephone, to take appropriate action, under exchange of private number.

**(5) ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:**

- i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.
- ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, if connecting by telephone, regarding the defects/obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.

The gateman shall protect the line as under:-

**(a) ON DOUBLE LINE SECTION:**

- i) If both lines are obstructed the 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 line on which a train is expected to arrive first.
- ii) The he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, LED tri-color hand signal lamp 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 on the line on which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 on BG from the level crossing gate and place 3 detonators on the track 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.
- v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para 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 light up and fix the LED tri-color hand signal lamp to 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 ACTION 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 para (a) above.
- ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers / leaf gates 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 nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

4.6 **EXCHANGE OF PRIVATE NUMBER:**

- (a)
  - (i) Before dispatching a DN train, SM/RHMA shall advise the gateman 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 taking 'OFF' departure signals 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 will take 'OFF' the departure signals after getting the private number of the gateman.
  - (v) The gateman shall be authorized to open the level crossing after complete passage of the 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)
  - (i) Before dispatching an UP train, SM/GRKN shall advise the SM/RHMA 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) On turn, SM/RHMA shall convey the same to the gateman, under exchange of private number.
  - (iv) Gateman shall close the gate and thereafter give his private number to the SM/RHMA.
  - (v) Only then shall the SM/RHMA shall grant line clear to SM/GRKN. [(Refer SR 16.03.03 (a) (b)]
  - (vi) The gateman shall be authorized to open the level crossing after complete passage of the 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.

4.7 **FAILURE OF TELEPHONIC COMMUNICATION**

When telephonic communication fails or it does not get any response from gateman despite 2 or 3 attempts, the following procedure should be adopted:

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- (i) Station master at dispatching end shall issue caution order to the Loco Pilot of the departing train.
- (ii) The caution order shall advise the Loco Pilot to whistle continuously and approach the gate cautiously.
- (iii) The Loco Pilot shall be instructed to pass the gate cautiously, on being hand signaled by the gate man. If hand signal is not seen, the Loco Pilot should prepare to stop short of the gate and depute his assistant Loco Pilot to see the condition of the gate. If gate is closed, the assistant Loco Pilot will give all right signal and if the gate is not closed the assistant Loco Pilot must close the gate and then give all right signal. In the absence of the assistant Loco Pilot, the Loco Pilot may take the assistance of assistant Guard/Guard.
- (iv) In case of an approaching train, the station master shall advise the station master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- (v) The station master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vi) The station master shall advise the gateman through gangman/patrol man or the Loco Pilot of the first train that the telephone has become defective.
- (vii) He should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- (viii) Normal working will be resumed only after S&T staff rectifies the telephone and issue reconnection/fit memo for the same.

#### 4.8 **FAILURE OF LIFTING BARRIERS OR LEAF GATES:**

- (i) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure that lifting barriers or leaf gates 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, gateman shall show green hand signal flag by day and green light at night to the Loco Pilot of the approaching train.
- (v) Station Master on duty shall issue caution order to the Loco Pilot of departing train.
- (vi) He shall also advise the Station Master 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.
- (vii) Station Master shall advise maintenance staff responsible for maintenance of lifting barriers/ leaf gates to rectify the defect at the earliest.
- (viii) Normal working will resumed only after maintenance staff rectify the lifting barrier/ leaf gates and issue reconnection/ fit memo for the same.

#### 4.9 **OBSTRUCTION AT THE GATE:**

- (i) If the gate is broken by a road vehicle which is fouling the track or if lifting barriers/ leaf gates 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 on duty, regarding the defects / obstructions at the gate, under exchange of private number.
- (iii) Station Master 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 after two or three attempts, he shall first protect the gate and then inform on phone.

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- (v) Gateman shall then rush with detonators, LED tri-color hand signal lamp and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate vide GR.16.07.
- (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 relay these details to the Station Master who shall not start the train unless he has been ensured by the gateman that the road vehicle or the lifting barriers/ leaf gates are not fouling the track.
- (viii) The Station Master shall also inform the Station Master 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 cleared 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 shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the gate on green hand signal of the gateman, if the gate is broken, but clear of any obstruction.
- (xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.
- (xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gate to repair the same at the earliest.
- (xiii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers/ leaf gates and issue reconnection/ fit memo for the same.

#### 4.10 **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 will adopt the procedure given under item No.4.9 above. If the obstruction fouls the Level Crossing Gate, gate man must keep the gates closed against road traffic till the track is cleared of the obstruction.

5.0 **WORKING OF 'C' CLASS LEVEL CROSSING GATE NO. CP-42 SITUATED AT KM. 469/19-21(UP) & 469/22-20(DN) AT RAHAMA STATION.**

5.1. **BRIEF DESCRIPTION:**

1	No. of Level Crossing Gate	CP-42
2	Engineering or Traffic gate	Traffic
3	Under control of Station Master or Permanent Way Inspector.	SM/RHMA
4	Location at Km.	Km. 469/19-21 (UP) & 469/22-20 (DN)
5	At station	RHMA
6	In between station	RHMA-BDBA
7	BG/MG/NG	BG
8	Single line/double line/multiple line	Double line
9	Normal position	Open to Road Traffic
10	Interlocked/ Non-Interlocked	Interlocked
11	Means of Interlocking	EKT
12	Provision of gate single at Km.	---
13	Signaling arrangement	Station Stop Signal
14	Means of communication Telephone.	Telephone with SM/RHMA
15	Width of the level crossing gate	7.50 m
16	Type of road	Others
17	Name of road	Balisahi
18	Metalled /Non-Metalled	Metalled
19	Approach road	Metalled
20	Width of the road	5.50 m
21	Angle of road crossing (in case of the SKEW gates)	---
22	Road gradients (if any)	[a]North/ East Side. 1:30 [b] South/ West Side. 1:30
23	Road alignment (straight/Curve)	[a] North/ East Side: Straight [b] South/ West Side: Straight
24	Provision of height gauges	Provided
25	Type of barriers	Lifting
26	Length of check rails	9.50 m
27	Road surface in between level crossing gates.	C.C.Block
28	Length of rumble strip/ speed breakers.	8.50 m
29	Road signs	Yes
30	Speed breakers indication board	Yes
31	TVU	4947 on August - 2012
32	Census next due on	August - 2015
33	Demarcation for placement of detonators.	Available
34	No. of gateman working	Three
35	Nearest Railway Medical Assistance	Paradeep
36	Nearest Private Medical Assistance available (if any)	Manijanga
37	List of equipment available (Yes/No)	Yes

**1.2. EQUIPEMENT TO BE AVAILABLE AT THE GATE :**

1.	LED tri-color hand signal lamp	3
2.	Hand Signal Flag Green	1 mounted on stick
3.	Hand Signal Flag Red	3 mounted on sticks
4.	Banner Flag Red	3
5.	Posts for exhibiting red banner flag	2
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.	Rammer	1
13.	Pick Axe	1
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 level crossing gate diagram in case of obstruction on gate	1
20.	Basket	1
21.	Whistle	1
22.	Wall clock	1
23.	Small Chain with padlock	2

**B. RECORDS TO BE KEPT AT GATE LODGE**

In addition to the above equipment, following records shall also be kept at the Gate Lodge.

- 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 Gatemen, including date of passing vision test, initial/refresher course, safety camp, etc.
- viii) Accident Register.
- ix) Record of last census of road traffic at Level Crossing gate.
- x) Public Complaint Book.
- xi) Inspection Book.

**5.3. INTIMATION TO GATEMAN**

- Before taking off reception/departure/Shunt signals, station master shall inform the gateman, the number, description and direction of the train.
- The gateman shall close the gate and transfer the key to the station master. ( the detail procedure is described below)
- The reception/departure/shunt signal will be taken "OFF".

- In order to ensure that road traffic is not held up for a long time, the station master must ensure that the train is ready for departure in all respects before he advises the gateman for closing the gate.
- When a train has to be piloted to and from the station yard or any shunting movement is to be done, the staff deputed to pilot the trains or to perform the shunting across the gate shall be personally responsible to ensure that the gate is closed against road traffic before allowing any movement across the gate.

#### **INTERLOCKING AND NORMAL WORKING:**

This gate is interlocked with all UP & DN reception signals and UP dispatch signals. The interlocking is achieved by means of Electrical Key Transmission System. The normal position of the gate is open. A two-lever ground frame is provided at the gate lodge. The key of the L.C.Gate remains in the winch when the gate is opened. When it is necessary to close the gate for taking off signals or for shunting operation the Station Master on duty shall inform the Gateman to close and lock the gate.

The Gateman on duty shall then close the barriers of the L.C.Gate by operating winch. The key 'M' is to be extracted from the winch, which will be inserted in GF-2. When GF-2 reversed locks the booms of the gates and releases Key 'N' and lever GF-1. This key 'N' will be inserted in the EKT and transmitted to panel in conjunction with GF-1 reversed for taking "OFF" 1-A/B, DN 2/C2-A/B/C, SH12A/B and UP Starter Signal No.3 & 5. Station Master on duty will press level crossing control button No.29 (Chocolate) and group button (release), L.C.Gate closed indication will appear in the panel and concerned signals automatically get released.

After the passage of train or completion of shunting the Station Master on duty shall inform the Gateman and press L.C.Gate controlling button No.29 and group button (Trans) and keep it pressed till such time the Gateman extracts the gate control key 'N' from the EKT instrument. After getting the Key 'M' the Gateman will open the L.C.Gate by normalizing the levers.

Emergency gate release operation facility is provided in the panel when the route gets locked due to some failure. For emergency release of gate, the SM on duty shall press signal cancellation button and then emergency gate release button and gate button No.29. A red flashing (Gate lock) indication will appear and after a lapse of 120sec gate lock indication will disappear and a white light will glow over the emergency gate release button indicating that the operation is matured. The SM on duty shall then operate push button no 29 for gate and group Trans button to release the key from EKT in gate Lodge. All such operation will be registered in the emergency gate operation counter. All such emergency operation shall be recorded in the station diary and in the register meant for it.

Lever No.1 is provided in the gate lodge to put back concerned signals to danger in case of emergency.

To avoid the detention to the road traffic at the Level crossing gate, the gate signals should not be taken off too early in advance and LC gate should not be kept closed for more than 10 minutes at a stretch.

#### **5.4 DUTIES OF GATEMAN:**

(A.SENAPATI)  
DSTE/KUR

(SHYAMAL NATH)  
Sr.DEN(E)/KUR

(B.PANDA)  
DOM/KUR

- (1) **ALERTNESS:** The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.
- (2) **POSITION 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 day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
  - iii) In night time, 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 place red banner flag across the track during emergency and obstruction on the track.
  - (ii) Gateman shall ensure that gate lamps and lamps of all gate signals 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 reliever arrives and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and 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 / train / 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 Loco Pilot on walkie – talkie or in any other way.
  - (vii) If lifting barriers / leaf gates 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 SM, Gangmate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
  - (ix) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.
  - (x) At the gate whose signal have become defective, the gateman shall close and lock and lifting barriers / leaf gates on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot to report the defect at the next station.
  - (xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
  - (xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
  - (xiii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
  - (xiv) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
  - (xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
  - (xvi) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.



- (xvii) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- (xviii) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- (xix) Gateman shall prevent trespassing by persons or cattle to the maximum extent.

(4) **ACTION IN CASE OF UNUSUAL OCCURRENCE ON 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, 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 Station Master, if connected on telephone, 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, if connected on telephone, to take appropriate action, under exchange of private number.

(5) **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:**

- (i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.
- (ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, if connecting by telephone, regarding the defects/obstructions at the gate, under exchange of private number.
- (iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.

The gateman shall protect the line as under:-

- (a)
  - (i) If both lines are obstructed the 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 line on 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 on the other line 5 meters away from the site of obstruction.
  - (iii) Gateman shall then proceed to protect the gate along with detonators, LED tri-color hand signal lamp 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 on the line on which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 on BG from the level crossing gate and place 3 detonators on the track 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.

- (v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para (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 light up the LED tri-color hand signal lamp to 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 ACTION 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 para (a) above.
  - (ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers / leaf gates 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 nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

#### 5.5 **FAILURE OF TELEPHONIC COMMUNICATION:**

When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted:

- i) Station Master on duty shall send written advice to the gateman through the porter with full details of number, description and direction of the train.
- ii) Gateman on receipt of such advice shall close the gate and transmit the key to the Station Master which will enable them to take "OFF" reception/ departure signals.
- iii) When sufficient time is not available because of greater frequency of train service, Station Master will issue written authority to the train Loco Pilot to pass the signal at "ON" position.
- iv) In addition Station Master shall also issue a caution order advising the Loco Pilot to whistle continuously and approach the gate cautiously.
- v) The train Loco Pilot shall be instructed to pass the gate cautiously, on being hand signaled by the gateman. If hand signal is not seen, Loco Pilot should be prepared to stop short of the gate and ensure that gate is closed following GR 3.73 (2) (b).
- vi) In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- vii) The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- viii) He should also advise S & T staff responsible for maintenance of the telephone to rectify the defect at the earliest.
- ix) Normal working will be resumed only after S & T staff rectify the telephone and issue reconnection/ fit memo for the same.

#### 5.6 **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, under exchange of private number, and ensure the lifting barriers or leaf gates 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, gateman shall show green hand signal flag by day and green light to the Loco Pilot of the approaching train.
- (v) Station Master on duty shall issue caution order to the Loco Pilot of departing trains.
- (vi) He shall also advise the Station Master 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. Station Master shall advise maintenance staff responsible for maintenance of lifting barriers/ leaf gates to repair the defect at the earliest.
- (vii) Normal working will resumed only after maintenance staff repair the lifting barrier/ leaf gates and issue reconnection/ fit memo for the same.

**NOTE:**

Authority to pass signals at "ON" position as per rules shall also be issued to the Loco Pilots of both departing and arriving trains.

**5.7 FAILURE OF GATE KEY WITH THE GATE IN CLOSED POSITION, WHEN GATE KEY CANNOT BE EXTRACTED FOR OPENING THE GATE:**

- i) If the gate key cannot be extracted from the winch, the gate lever or the key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange private number.
- ii) If Emergency Key is available at the gate lodge/Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic (Emergency key is not provided at this gate lodge).
- iii) The record of the date and time of breaking the sealed cover of Emergency Key Box shall be recorded and signaled with reasons.
- iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception/ dispatch of trains as prescribed for non-interlocked gates, should be adopted.
- v) Station Master on duty shall issue a caution order to the Loco Pilot of a departing train.
- vi) He shall also advise the Station Master 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.
- vii) Station Master shall advise S & T staff responsible for maintenance of winch/gate lever/key transmitter to rectify the defect at the earliest.
- viii) Normal working will be resumed only after S & T staff repairs the winch/gate lever/key transmitter and issue reconnection/ fit memo for the same.
- ix) After rectification, the Emergency Key shall be replaced by S&T maintainer.

**5.8 FAILURE OF GATE KEY WITH THE GATE IN OPEN CONDITION:**

- (i) If the gate key cannot be extracted from the winch, gate lever or key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.
- (ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/ dispatch of trains as prescribed for non-interlocked gates should be adopted.
- (iii) Gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- (iv) Station Master on duty shall issue caution order to the Loco Pilot of a departing train.
- (v) He shall also advise the Station Master 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) Station Master shall advise S & T staff responsible for maintenance of winch/gate lever/key transmitter to rectify the defect at the earliest
- (vii) Normal working will resumed only after S & T staff repair the winch/gate lever/key transmitter and issues reconnection/ fit memo for the same.
- (viii) After rectification, the Emergency Key shall be replaced in the Emergency Key Box and resealed by the S & T maintainer.

### **5.9 OBSTRUCTION AT THE GATE:**

- (i) If the gate is broken by a road vehicle which is fouling the track or if lifting barriers/ leaf gates 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 on duty, regarding the defects / obstructions at the gate, under exchange of private number.
- (iii) Station Master 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 after two or three attempts, he shall first protect the gate and then inform on phone.
- (v) Gateman shall then rush with detonators, LED tri-color hand signal lamp and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect gate vide GR.16.07.
- (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 relay these details to the Station Master who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers/ leaf gates are not fouling the track.
- (viii) The Station Master shall also inform the Station Master 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 cleared 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 shall then issue a caution order to Loco Pilot of all trains to proceed cautiously, and pass the reception/departure 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 there after exhibit green hand signal, if the gate is not obstructed.
- (xii) Station Master shall advise maintenance staff responsible fir maintaining the lifting barriers/leaf gate to repair the same at the earliest.
- (xiii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers/ leaf gates and issue reconnection/ fit memo for the same.

### **5.10 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 will adopt the procedure given under item No.5.9 above. If the obstruction fouls the Level Crossing Gate, gate man must keep the gates closed against road traffic till the track is cleared of the obstruction.

## **SYSTEM OF SIGNALLING, INTERLOCKING AND COMMUNICATION ARRANGEMENTS AT RAHAMA STATION.**

This is a class 'B' Standard-III Panel Interlocked station with Route setting type panel. The points and Signals etc. are power operated from composite miniature central panel installed in the Station Master's Office. The Station is equipped with Multiple Aspect Colour Light Signaling.

### **1. DESCRIPTION OF PANEL:**

The yard layout is depicted on the panel. All the points and Signals of station are operated from the Control Panel located at the station. The Control panel consists of an inclined console on which there is a clear geographical representation of the entire track layout with signals and points. The track layout is subdivided according to the track circuits configuration with distinctive colours for each track circuit on the track line adjacent to each signal. There exists an entrance Push Button at the center of the berthing of each route. The entrance Push Button (Signal Button) is coloured with 'RED' for running signals with the number of relevant signal printed just by the side of the button. The entrance Route Push Buttons are coloured with "WHITE". The signal buttons are to be operated in conjunction with Route buttons. All the various Push buttons on the panel are spring loaded and required Push buttons are pressed for operation. Common Route buttons for taking 'OFF' starters and individual Route buttons for taking of Advanced Starters are provided.

1.1 UP and DN Home Signals are interlocked with DLBI respectively in such a way that unless the relevant Home Signal is put back to 'ON' position after the preceding train has arrived inside all the facing and trailing points at that end, the Block Instrument Cannot be normalised.

1.2. All UP and DN Advanced Starters are Interlocked with DLBI respectively in such a way that unless respective "Block Proving Axle Counter section is clear and "Line Clear" is received for a train on the respective Block instrument, the concerned Advanced Starter Signal cannot be taken 'OFF'

1.2.1. 'ON' aspect of First Stop Signal and Last Stop Signals in UP and DN directions are proved in the interlocking of respective Block Instruments in such a way that it is not possible to close the line and grant or receive 'Line Clear' unless these signals assume 'ON' aspect and relevant Block proving Axle Counter section is clear.

### **1.3 TRACK CIRCUITS:**

The entire station yard is continuously track circuited between respective UP & DN Home Signals and Advanced Starters in UP and DN directions except machine stabling line.

1.3.1 Track circuits between FM to FM on berthing tracks are:-

L1T1, L1T2, L1T3, L2T1, L2T2, L2T3, L3T1, L3T2, L3T3, L4T1, L4T2 & L4T3.

1.3.2 Point Zone track circuits are: - 20AT,20BT,22/24AT,22/26BT  
21AT, 21BT, 23/27AT, 23BT, 25/27BT & 26AT.

1.3.3 FM to BSL track circuits are: -  
7AT & 10AT.

1.3.4. Home Signal to FM straight portion are: -  
1T, 1T1, 2T & 2T1.

1.3.5. Raise back of Advanced Starter track circuits are: -  
7T & 10T.

1.3.6. Raise back of UP main and DN Main Starter track circuits :-  
23/27 AT & 26 AT.

1.3.7. Calling on approach track circuits are: -  
1AT & 2AT.

1.4 **AXLE COUNTERS:**

The station is provided with Block Section Proving Axle Counters with adjacent stations on UP & DN lines for section BDBA-RHMA and GRKN-RHMA on Double Line to carryout operation for Last Vehicle Verification.

1.5 **PUSH BUTTONS:**

Various coloured Push Buttons are provided on the panel to carryout operations which are mentioned in Appendix –B1.

1.6 **POINT PUSH BUTTON:**

Points are normally operated automatically during route setting operation. However, required points can be operated individually also. For this point, point push buttons, which are BLACK in colour are fitted over the point layout in 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 (Black with Red Dot) (N) or (R) as per requirement. These 'N' and 'R' positions are indicated on a small name plate below point buttons. On the name plate three luminous indications are provided for each point as follows:-

1.6.1 When a point is set and locked in NORMAL position, a 'Yellow' indication appears suggesting that the point is in NORMAL position.

1.6.2 When a point is set and locked in REVERSE position, a 'GREEN' indication appears suggesting that the point is in REVERSE position.

1.6.3 When the points of any route have been correctly set and relevant signal taken 'OFF', RED indication appears indicating that the concerned points are locked either in NORMAL or REVERSE position as the case may be.

1.6.4 When the points are either not set or not locked either in NORMAL or in REVERSE correctly, the normal and reverse indication will not be there but the RED indication will start flashing till such time the point is set & locked properly in one of the positions. This RED indication will flash during operation of point also.

1.6.5 **OPERATION OF POINTS:**

Points are operated for NORMAL to REVERSE or vice versa by operating concerned point push button along with common point group (N or R) buttons. When the points are required to set to reverse, the point buttons along with point group (R) push buttons to be pressed simultaneously. The Red indication will start flashing till the point is set to reverse and locked. Then the Green indication will glow. Only one point can be operated at a time. Red indication glows when the points are electrically locked i.e. after taking 'OFF' signal for the set route. In this position points can not be operated unless, special recourse is taken for operation through emergency crank handle.

1.6.6. All points over running lines are operated by electric point machines and controls for siding points are provided for manual operation(HPL).

1.6.7. The cause for not setting of the point in the desired position shall be checked up by the Station Master on duty according to GR & SR 3.68.01 (c). If there is a defect other than obstruction, then point shall be considered defective and action shall be taken for clamping and pad locking of these points in the desired position by Station Master on duty himself for all trains according to SR 3.69.30 (c).

**2. SIGNALS AND ROUTE PUSH BUTTONS:**

- i) Each stop signal is provided with a RED coloured push button very close to the signal and on the track route to be operated in conjunction with route button.
- ii) Each route push button (WHITE COLOURED) is provided on the track layout and to be operated in conjunction with signal button.
- iii) Each aspect of each signal is repeated on the panel.
- iv) All signals will however go back to danger automatically on occupation of the track circuit ahead of the signal by a train.

**3. TRAIN ARRIVAL INDICATION THROUGH AXLE COUNTER:**

The system provides for automatic check for last vehicle arrival through provision of Block Section axle counters. Axle counters are provided on UP & DN lines with adjacent stations BDBA & RHMA on double line to check the complete arrival of trains. The system is interlocked with respective DLBI. When the axle counter section indication provided on the top side of the panel individually for either side direction indicates (R) RED i.e. occupied even after the complete arrival of trains, the Block Instrument of respective section can only be normalised after ensuring complete arrival of the trains by physical verification of Last Vehicle either for stopping or through train (Refer reset procedure).

**5. SIGNAL LAMP FAILURE/POINT FAILURE ACK.BUTTON (RED WITH WHITE DOT):**

- 5.1. Whenever there is failure of point due to non setting, point failure indication flashing RED appears near the point name plate and a RED light on the panel besides AUDIBLE BUZZER. The buzzer stops when the point muting button is pressed, but the flashing RED of the concerned nameplate and a RED light above the muting button shall continue to glow. The defective point can be identified by the flashing RED light at the concerned point nameplate. After the failure is rectified, the flashing RED and the RED light above the muting button will disappear.
6. An 'AUDIO VISUAL' indication is provided on the panel to indicate that the main filament or Main and Auxiliary filaments of the signal lamp is fused or a point has failed. In such case, flashing RED indication appears on the panel with an audible alarm. When the muting button is pressed for 2 to 3 seconds and released, the alarm stops but the common flashing RED indication continues to glow till the particular signal lamp is replaced or the aspect of the signal is changed or point is rectified. The concerned signal on the panel/the RED light on point nameplate will start flashing in order to indicate the failure. In addition, Common 'RED' indication for Main filament failure below the panel for UP and DOWN distant signals and Home Signals are provided. All signals except shunt signals and Calling On signals are provided with TRIPLE POLE lamps.

**7. EMERGENCY ROUTE RELEASE COUNTER:**

This counter is provided to register the number of operations made for emergency cancellation of route. The Station Master must record the last number registered on the counter while taking over/handling over duty.

**8. EMERGENCY ROUTE RELEASE INDICATION (WHITE)/EMERGENCY 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 in the top of panel to be

pressed and subsequently the concerned signal button pertaining the route is to be pressed. A 'WHITE' light will glow (UP or DN) indicating that the timer is working. After 120 seconds, the 'WHITE' light along with the WHITE strip of light will disappear suggesting that the route has been released.

In the event of normal passage of train, the route gets released automatically and the route lights disappear. 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 sealed 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.

**1.10 SEQUENTIAL (AUTOMATIC) ROUTE RELEASE :-**

The Signal routes are automatically released by the passage of train over the route. All the routes will be released on occupation of the berthing track circuit and clearance of the track circuit behind except Calling-on signal and advanced starter signals for which concerned signal button & Signal cancellation button are to be pressed in addition.

**1.10 EMERGENCY GATE RELEASE OPERATION(CHOCOLATE WITH RED DOT):**

Emergency gate release operation facility is provided in the panel when the route gets locked due to some failure. For emergency release of gate, the SM on duty shall press signal cancellation button and then emergency gate release button and gate button No.29. A red flashing (Gate lock) indication will appear and after a lapse of 120sec. Gate lock indication will disappear and a white light will glow over the emergency gate release button indicating that the operation is matured. The SM on duty shall then operate push button for gate and group Trans button to release the key from EKT in gate Lodge. All such operation will be registered in the emergency gate operation counter. All such emergency operation shall be recorded in the station diary and in the register meant for it.

**9. EMERGENCY POINT OPERATION:**

Emergency point operation facility is provided to operate point in the event of failure of point controlling track circuit. 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 SM's emergency point key is 'IN' and no vehicle is standing on the concerned point track circuit, shall push the emergency point operation button and then operate the required point button and the point group button (Normal or Reverse). All such operations will be registered in the emergency point operation counter. Each operation of emergency point operation shall be recorded in the Station Diary and in the Register meant for this purpose.

**10. BUTTON HELD ACK:**

All push buttons are self-restoring type. A button held acknowledgement push button (White with Red Dot) along with a White indication 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. Station Master on duty shall try to find out the pressed button for normalisation or otherwise inform the maintenance staff for rectification.



**11. OVERLAP TIME RELEASE (WHITE LIGHT) :**

There are two indications (WHITE LIGHTS). For UP overlap time release and DN overlap time release to indicate the release of overlap.

**12.1 STATION MASTER'S PANEL CONTROL KEY:**

The panel is fitted with Station Master's lock up key to prevent any unauthorised operation of the panel. The Station Master on duty is the only authorised person to operate the panel and the panel key must always remain in his personal custody vide Subsidiary Rule 3.36.03 and General Rules 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 inserting the SM's key. However, the provisions of Subsidiary Rule 3.36.02 shall be followed while replacing the signals to 'ON'.

**12.2 CRANK HANDLES:**

When any point fails to operate normally by the route setting operation or through the concerned point button through panel, it is inevitable to operate the points with crank handle. Station Master on duty shall depute the TPM on duty to the concerned location box at site with Crank handle, Location Box key & Flap key with proper entry in the concerned register. Station Master on duty shall personally ensure clamping and padlocking of all facing and trailing points enroute. Crank handles are interlocked with signals and interlocking system. Normally the crank handle is locked in the RKT instrument in the Station Master's room and in the location boxes provided on either end of the yard. These crank handles are for all motor operated points of the station. The CH push button Nos. CH1/CH2/CH3/CH4 and group button (White with Black Dot) are provided at the top of the panel board.

<u>CRANK HANDLE</u>	-----	<u>CONTROL POINTS</u>
CH-1	-----	22, 23, 24, 27
CH-2	-----	25, 26
CH-3	-----	20
CH-4	-----	21

Each button has two indications, viz. GREEN and RED. The Green 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 handles key is locked and not free for extraction from RKT. This is called 'Crank Handle Key Locked Indication'. When the 'CRANK HANDLE' key is extracted from RKT, there will be no indication; this is called 'KEY OUT' indication. The key out indication of the crank handle locks all reception and departure signals in their normal position. The crank handles are kept in the custody of SM on duty at Station Master's room. The Station Master has to press CH1/CH2/CH3/CH4 buttons along with Group Trans button. Then one indication (Yellow) will appear just below the RKT. On getting yellow indication on the RKT instrument, SM on duty shall press the switch provided beside the RKT. The indicator provided on the RKT show diagonally. This will enable the Station Master to extract the Key from RKT Instrument. After extracting the key from 1<sup>st</sup> RKT, he shall insert it in the 2<sup>nd</sup> RKT Instrument and turn to right. One indication will appear in the RKT of concerned location box. On getting indication the TPM on duty at site shall press the switch provided beside the RKT and extract the key from the RKT rotating towards left direction. Then he shall proceed towards the defective motor point with the crank handle key. On reaching near the concerned defective point he shall open the flap through the flap key. There after he shall insert the crank handle key in the motor point to open the flap for enabling crank handling. Then he shall insert the crank handle and rotate to the desired direction as per requirement for proper setting of the points. After setting the points correctly he shall

extract the crank handle and key with proper locking. Then he shall clamp & padlock both end points and intimate to the SM on duty regarding correct setting, clamping & padlocking of the concerned point. The SM on duty shall ensure personally the same before handing over the Piloting IN/OUT memo. After completion of crank handling operation, the crank handle key is to be inserted in the RKT at site and rotate it towards right direction. One Yellow indication will appear beside the 2<sup>nd</sup> RKT provided in SM's Room. On getting the yellow indication the SM on duty shall press the switch and extract the key by turning to left.

After extracting the key he shall insert it in to the 1<sup>st</sup> RKT and turn towards right. There after key IN flashing indication will appear on the panel. On getting flashing indication on the panel SM on duty shall press concerned CH. Button & Group release button simultaneously. Then Key IN indication will be steady in the panel and yellow indication in the 1<sup>st</sup> RKT will be extinguished.

If the Crank Handle is in locked condition and it is necessary to operate the concerned point by Crank Handle due to whatever reason then the concerned signal should be put back to "ON" position then Crank Handle Key can be taken out after two minutes by pressing common 'TRANS' push button and concerned Crank Handle control push button simultaneously.

The cases of failure of motor operated points should be promptly reported to the concerned Signal Maintainer/Signal Inspector for immediate rectification. Station Master shall maintain an Emergency Crank Handle Register as per Operating Manual 20.06 (d). The procedure for use of crank handle for motor operated points shall be followed in terms of Operating Manual 20.06.

After any non-signalled movement has taken place over a point/points operated by an electric point machine, whether in the facing or trailing direction, the SM on duty shall operate point/points to "NORMAL" or "REVERSE" settings for the purpose of testing the points and after ensuring correct indications of "NORMAL" or "REVERSE" setting of points, the facing and trailing points shall be clamped and padlocked thereafter further movement shall be permitted over the points.

### 12.3 **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. For route setting operation, as soon as the required points are set to the required position, the concerned signal of the route will clear and a White strip of light will appear on the entire route confirming that the route is set and locked. The signal 'OFF' indication will appear on the panel. The indication turns to RED when track is occupied. When train movement is completed, the WHITE route indication comes back and remains to lit till signal push button in question or Signal cancel push button is pressed and after this operation, WHITE route light disappears.

### 12.4 **SETTING OF ROUTE AND TAKING OFF DEPARTURE SIGNAL:**

For setting a particular route for departure of a train, all the concerned points must be set by operation of point button and group button one at a time in the desired position or by operating signal button and route button. To take 'OFF' Advanced Starter, respective block proving Axle Counter section must be clear and '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 to be pressed for two to three seconds and released. This will clear the Advanced Starter signal and a White strip of light will appear on the panel.

To take 'OFF' 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.

**12.5 TAKING OFF CALLING ON SIGNAL:**

Miniature Colour Light Calling-on signal is provided below Up and Dn. Home signals in terms of General Rules 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 it 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 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/C2 (Red with White Dot) (as the case may be) shall be pressed simultaneously along with the concerned route button for 2-3 seconds and release. After a lapse of 120 seconds the calling on signal clears and a White light glows at the concerned Calling on signal on the panel. Each operation will be recorded in the common calling on counter by registering next higher number.

**12.6 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.

**12.7 REPLACEMENT OF SIGNALS TO 'ON'**

Signals are replaced to 'ON' automatically by the passage of a train past the signals. It will not be possible to re-clear the signals 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.

**12.8 INTERLOCKING OF SIGNALS/POINTS**

All the running line points are fitted with facing point locks in the point machine and are electrically detected by the relevant Home signal and starters.

12.9.1 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.

**12.10 PILOTING OF TRAINS IN TO STATION YARD.**

Whenever Home signal becomes defective, trains can be admitted by taking off Calling-on signal. Whenever both Home signal and Calling-on signal failed, all trains will be piloted in vide SR. [Refer SR 3.69.03(a) & (c)].

The SM on duty shall nominate a clear line and shall advise the TPM on duty at station to set the nominated route with the help of crank handle if the points cannot be set from the panel. Then the TPM shall set the facing and trailing points and clamp and padlock the same under the supervision of SM on duty.

The SM on duty shall then hand over the written authority (T/369(3b)) to the TPM for piloting the train. While going towards Home signal, the TPM shall check the points and satisfy him self that the route is correctly set.

After the train has brought to a dead stop at the Home signal the TPM shall hand over the pilot memo to the Loco pilot, board the engine and display proceed hand signal to pass the Home signal.

**NOTE:**

- (1) The Station Master on duty shall personally supervise the correct setting, clamping and padlocking of both the facing and trailing points, if any and ensure clearance on the nominated route vide SR 3.69.03(c).
- (2) The keys of padlock of the clamps put ON to the points on the route for piloting In or piloting OUT shall be in the personally custody of the SM on duty or any other authorised operating officials till such time the train / engine / vehicle has utilized the route or alternatively such movement is cancelled.
- (3) SM on duty shall ensure closure of the traffic interlocked L.C. Gate from the gateman on duty under exchange of private number.

**PILOTING OF TRAINS - OUT OF STATION YARD:**

When the starter signal has become defective, the Station Master shall set the points correctly from the panel or advise the TPM to set the concerned points correctly for the outgoing train with help of crank handle. The TPM on duty shall clamp and padlock both the facing and trailing end points under the supervision of SM on duty in both cases. The SM on duty shall then authorize the TPM on duty to hand over the pilot memo T/369(3b) along with other authorities if any t the Loco pilot of the Train. There after he shall display proceed hand signal at the foot of the starter signal vide SR 3.70.01.

In case of Advance starter signal becomes defective such signal shall be passed on the written authority on the form T/369(3b) proceed hand signal shall not be displayed vide SR 3.70.02. The TPM shall hand over the pilot memo in form T/369(3b) to the Loco pilot after the train stopped.

**NOTE:**

- (1) The Station Master on duty shall personally supervise the correct setting, clamping and padlocking of both the facing and trailing points, if any and ensure clearance on the nominated route vide SR 3.69.03(c).
- (2) The keys of padlock of the clamps put ON to the points on the route for piloting In or piloting OUT shall be in the personally custody of the SM on duty or any other authorized operating officials till such time the train / engine / vehicle has utilized the route or alternatively such movement is cancelled.
- (3) SM on duty shall ensure closure of the traffic interlocked L.C. Gate from the gateman on duty under exchange of private number.

13. **NON-RUNNING LINE:**  
 a. **ENGINEERING SIDING:**

The Engineering siding at PRDP end of the yard with one side entry is taking off from UP Main. The entrance point and corresponding out point are coupled and operated by an arc lever at site. The entrance is fitted with hand plunger locks. These hand plunger locks are unlocked by the Engineering siding key 'S' released by pressing the button No.30 with trans button provided on Panel at SM's office. For unlocking the HPL the SM on duty shall press control button-30 & group trans button on the panel. One indication will appear beside the RKT instrument provided in the SM's office. The TPM on duty shall press the switch provided beside the RKT instrument and simultaneously turn it towards left direction for extraction. After extracting the key he shall proceed towards the concerned HPL of Engineering siding. On reaching at site he shall unlock the plunger key and operate the HPL towards desired position as per requirement. There after SM on duty shall allow movement over the said points. Reception signal (1A, C1A in UP direction and SH9A & SH12A and starter signal No.3) are electrically interlocked in such a way that these signal cannot be taken 'OFF' if the siding S is taken 'OUT' from the RKT provided at SM's office. After completion of work he shall normalize the HPL and take out the key with him. On reaching at station he shall insert the key in the RKT instrument and turn towards right direction. Then flashing indication will appear on the panel beside control button No.-30. Thereafter SM on duty shall press control button-30 & group release button simultaneously. Then steady indication of control 30 will appear on the panel.

**b. HOT AXLE SIDING:**

The Hot Axle siding at PRDP end of the yard with one side entry is taking off from DN Loop. The entrance point and corresponding out point are coupled and operated by an arc lever at site. Both the entrances are fitted with hand plunger locks. These hand plunger locks are unlocked by the Hot Axle Siding Keys 'Q' released by pressing the button No. 28 with trans button provided on Panel at SM's office. For unlocking the HPL, the SM on duty shall press control button-28 & group trans button on the panel. One indication will appear beside the RKT instrument provided in the SM's office. The TPM on duty shall press the switch provided beside the RKT instrument and simultaneously turn it towards left direction for extraction. After extracting the key he shall proceed towards the concerned HPL of Hot Axle siding. On reaching at site he shall unlock the plunger key and operate the HPL towards desired position as per requirement. Reception signal (2C, C2C in DN direction, SH9D and starter signal No.4) are electrically interlocked in such a way that these signal cannot be taken 'OFF' if the siding Q is taken 'OUT' from the RKT provided at SM's office. After completion of work, he shall normalize the HPL and take out the key with him. On reaching at station he shall insert the key in the RKT instrument and turn towards right direction. Then flashing indication will appear on the panel beside control button No. 28. Thereafter, SM on duty shall press control button-28 & group release button simultaneously. Then steady indication of control 28 will appear on the panel.

**15. LEVEL CROSSINGS:**

- (a) There is a 'C' class midsection manned non-interlocked level crossing gate No.CP-31 situated at Km. 455/1-3(UP) & 455/4-2 (DN) between GRKN-RHMA Station. Telephone communication is provided between the Gate lodge and the Station Master on duty at GRKN Station.
- (b) There is a 'B2' class midsection manned non-interlocked level crossing gate No. CP-34 situated at Km. 458/11-13(UP) & 458/14-12 (DN) between GRKN-RHMA Station. Telephone communication is provided between the Gate lodge and the Station Master on duty at GRKN Station.
- (c) There is a 'C' class midsection manned non-interlocked level crossing gate No.CP-35 situated at Km. 460/33-461/1(UP) & 461/2-460/34 (DN) between GRKN-RHMA Station. Telephone communication is provided between the Gate lodge and the Station Master on duty at GRKN Station.
- (d) There is a 'C' class mid section manned non-interlocked level crossing gate No. CP-36 situated at Km. 463/1-3 (UP) & 463/4-2 (DN) between GRKN-RHMA Station. Telephone communication is provided between Gate lodge and Station Master on duty at RHMA.
- (e) There is a 'B' class mid section manned interlocked level crossing gate No.CP-38 situated at Km. 465/9-11 (UP) & 465/12-10 (DN) between GRKN-RHMA Station. Telephone communication is provided between Gate lodge and Station Master on duty at RHMA.
- (f) There is a 'C' class mid section manned non-interlocked level crossing gate No.CP-39 situated at Km. 466/17-19 (UP) & 466/20-18 (DN) between GRKN-RHMA Station. Telephone communication is provided between Gate lodge and Station Master on duty at RHMA.
- (g) There is a 'C' class mid section manned non-interlocked L.C. Gate No. CP-41 situated at Km. 467/27-29 (UP) & 467/30-28 (DN) between GRKN-RHMA Station. Telephone communications is provided between Gate lodge and SM/RHMA.
- (h) There is a 'C' class mid section manned Interlocked L.C. Gate No. CP-42 situated at Km. 469/19-21 (UP) & 469/22-20 (DN) at BDBA end of the yard and directly operated by means of a winch from the Gate lodge. Telephone communications is provided between Gate lodge and SM/RHMA.
- (i) There is a 'C' class mid section manned non-interlocked L.C. Gate No. CP-43 situated at Km. 472/27-29 (UP) & 472/30-28 (DN) between BDBA-RHMA Station. Telephone communications is provided between Gate lodge and SM/BDBA.

- (j) There is a 'C' class manned interlocked level crossing gate No. CP-48 situated at Km. 479/5-7 (UP) & 479/8-6 (DN) between BDBA-RHMA. Telephone communication is provided between the Gate lodge and the Station Master on duty at BDBA Station.

16. **VERIFICATION OF LINE CLEARANCE BY STATION MASTER ON DUTY FOR RECEPTION OF TRAIN IN STATION YARD:**

In the station yard, a route on the running line comprises of entrance, berthing and despatch portion of the yard and this portion of the yard should be clear of any obstruction for the passage of any train or for any other movements. The clearance of the route including overlap must be ensured by the Station Master 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 the points etc.

16.1 **CRANK HANDLING IN EMERGENCY OPERATION OF POINTS:**

Crank handles are interlocked with the Signalling and Interlocking System at this station. Crank handles which are normally locked inside the RKT instrument at the station, can be taken out only when all the signals are in the 'NORMAL' position and the route is not locked for whatever reasons. Crank handles can be released by operating common 'TRANS' push button and control push button No. CH1/CH2/CH3/CH4 simultaneously. When the key is taken out, no Signal can be taken 'OFF' in the yard. This key can be electrically transmitted at both ends of the yard.

- 16.2 On account of the doubtful operation of any track circuit by a light vehicle including self propelled vehicle such as Motor Trolley or Light Steam/Diesel shunting engine or Tower Wagon, indicating the occupancy of track, it is necessary that the Station Master on duty satisfies himself that the said vehicle has cleared the point zone track circuits by observing the track indications or the track on either side of the cross over by positively checking the 'Entrance' and 'Exit' track circuits are showing occupancy or clearance in accordance with the train movement.

16.3 **INSTRUCTIONS REGARDING STABLING OF TRAINS ON RUNNING LINES:**

When a train is stabled on a running line for 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. Station Master 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 the Station Master on duty is not satisfied with the proper functioning of the track circuits on which the train was earlier stabled, the signals leading on the line shall be suspended and the S&T maintenance staff be informed for attending to this.

17. **EMERGENCY OPERATIONS:**

The following are the instructions for emergency operations.

17.1 **CANCELLATION BUTTON AND VEEDER COUNTER:**

For the purpose of the emergency operation, there is an emergency route release. There is a 'VEEDER COUNTER' for the purpose of the emergency operations involving operation of the emergency route release button (Provided at the left of the panel). The Station Master on duty must press the emergency route release button conforming to the section for which emergency route release is desired. An indication will appear indicating that the timer has started operation and after lapse of 120 seconds, the desired route will release provided all other conditions are favourable for route release.

- 17.2 The Veeder counter registers the number of such emergency release operations. Station Master 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.
18. **EMERGENCY OPERATIONS-CANCELLATION OF THE LOCKING OF POINTS NOT RELEASED AFTER THE PASSAGE OF THE TRAIN FOR WHATEVER MAY BE THE 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 signal is in the 'NORMAL' position.
  - (b) Operations as detailed above is to be followed.
  - (c) 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.
20. **MAINTENANCE OF S&T INSTALLATION & ADHERENCE TO MAINTENANCE SCHEDULES:**
- 20.1 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 satisfactory working of these installations at this station.
- 20.2 The tests, checks and replacements etc. including overhauling shall confirm 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.
21. **PROCEDURE TO BE FOLLOWED INCASE OF FAILURE OF A SIGNAL INTERLOCKING INSTALLATION:**
- 21.1 In case of failure of any interlocking gear at the station, the Failure Report should be communicated by the Station Master to the Sectional Maintainer, the Section Engineer/Signal of the section and others through a Memo as per General and Subsidiary Rules 3.51.04 and 3.68.04 and documents of all such transactions.
- 21.2 **INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:**  
However, before declaring a signal as defective, the setting of the point on the route to which it applies shall be inspected by the Station Master on duty irrespective of the position of the buttons.
- 21.3 **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 Station Master on duty shall personally check this 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 subsidiary Rules 3.68.04(c) & (d).
22. **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 Section Engineer/Signal should give to the Station Master in writing advance intimation about this work in terms of General and Subsidiary Rule 15.08.01

**23. EMERGENCIES:**

Notwithstanding anything contained in the aforesaid Paras when equipment is found to be defective and unsafe for passage of trains, the Signal and Telecom staff must at once suspend the working of the equipment and associated installations and issue 'Suspension Memo' explaining the seriousness of the defect or damage to the interlocking installation to the Station Master and take the Station Master's acknowledgement. After this, the usual practice of exchange of Disconnection Memo and Reconnection Memo can follow. The Station Master must act promptly on such messages and take adequate precaution treating the S&T installation as defective and pass trains over the affected interlocking equipments according to Extant Instructions as contained in General and Subsidiary Rule 3.77.

**24. WORKING OF POINTS-POSITION OF POINTS:**

The normal position of all points is shown in the Station Working Rule Diagram and also in the panel provided in the Station Master's Office.

24.1 All cross over points are independent points on the running line and are worked by electric point machines. The point machines have in built locking and detection arrangements. Those points are remotely controlled from the panel installed in the Station Master's Office.

24.2 The operation and indication on the point and the route locking over them is already explained in earlier Para's of Appendix 'B2'.

**25. PROCEDURE TO BE FOLLOWED IN THE CASE OF FAILURE OF SIGNALS AND POINTS AND USE OF EMERGENCY CRANK HANDLE:**

25.1 Whenever a signal or a point becomes defective, any movement over the points on the running lines should be made after clamping and padlocking of both the facing and trailing points supervised by Station Master on duty personally for all trains at this station.

25.2 In case of failure of a signal or a point and in case the point can not be operated from the panel, the emergency crank handle which is interlocked with the interlocking system is to be extracted and the following procedure has to be observed.

25.3 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 the common push buttons CH1/CH2/CH3/CH4 and TRANS BUTTON. All signals will be locked in the NORMAL position as soon as this key is released from the RKT. The Station Master on duty in case of point motor failure, will take out the key and transmit to each end of the yard to operate the point manually by inserting crank handle on the motor.

25.4 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.

25.5 The cases of failure of motor operated points should be properly reported to the concerned Signal Maintenance/Section Engineer/Signal for immediate rectification.

25.6 Whenever an Emergency Crank Handle is required to be used by 2 signal officials for maintenance work or attending to failure, the Signal Official will give a Disconnection memo to the Station Master on duty and after making necessary entries in the Emergency Crank Handle Register.

The Station Master 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. After completion of the work, the S&T staff will give a Reconnection



- Memo and return back the Emergency Crank Handle to the SM on duty with due signature to that affect in the Emergency Crank Handle Register.
- 25.7 Before parting with the Emergency Crank Handle either for attending failure or for maintenance work by Signal Maintenance Officials, the Station Master on duty will ensure that the reception and departure signals are put back to 'ON' position. The points for the affected line should be treated as non-interlocked. The Station Master on duty is responsible for introduction of non-interlocked working and the trains to be piloted 'IN' and 'OUT' duly clamping and pad locking both facing and trailing points over which the train is to pass, as per General Rules 3.69 and 3.70 with relevant Subsidiary Rules. The Station Master on duty will be personally responsible for setting and locking of points for reception or dispatch of all trains.
- 25.8 The emergency Crank Handle Register is to be maintained vide Operating Manual 20.00 Note (d) by the Station Master on duty wherein the particulars of the usage of the Emergency Crank Handle must be recorded.
26. **SUSPENSION OF LAST STOP SIGNALS:**  
When the Block Instrument is suspended with its handle in "LINE CLEAR" Position for whatever reason, the concerned Last Stop signal controlled by the Block Instrument must be treated as suspended and trains shall be piloted 'OUT'.
- 26.1 The Station Master 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 Station Master on duty before giving 'LINE CLEAR' shall initiate action in accordance with the procedure prescribed in General Rules 3.61 to 3.72 and relevant Subsidiary Rules vide General Rule 3.40 (4).
- 26.2 The Station Master 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.
27. **SIGNAL LIGHTS:**  
The Station Master on duty at 00.00 hours (2<sup>nd</sup> night shift) must also ensure from panel that all the signal lights are glowing properly and brightly. This fact must be recorded in the diary under a separate entry and confirmed to the Section Controller on duty.
28. **CORRECTING TIME IN STATION CLOCK:**  
The Station Master shall set the time in the clock according to the time signal given by the Section Controller on duty at 16.00 hours every day according to General and Subsidiary Rules 4.01.01 and 4.01.02.
- 28.1 The Station Master on duty shall verify the visual indication of the correct setting of the required route on the panel and thereafter he shall receive and replace the emergency crank handle to its normal position locked in the RKT instruments.
29. Axle Counters are provided on Up and Down lines between GRKN- RHMA and BDBA- RHMA Double Line section for functioning as Last Vehicle Checking Device. These axle counters have the control on the Up and Down Last Stop Signals at rear station as well as Block Instruments at advance station of the respective Block Section. Receiving station will initiate for resetting after obtaining permission granted from the rear station.
- 29.2 The occupation and clearance of the axle counter section will be indicated on the panel by 'RED' and 'GREEN' light.
- 29.3 If any Block proving Axle Counter section fails, the Last Stop Signal at the rear station cannot be taken 'OFF' and Block instrument at Advance Station cannot be turned to 'Line Closed' position after arrival of a train and in such case, resetting of last vehicle Checking Device is to be resorted to either for Double Line Section or Single Line Section as the case may be.
- 29.4 Even after completion of reset operation, LVCD Axle Counter will show clear only if next train is passed. The next train is to be piloted and caution order shall be issued to the Loco Pilot for sharp lookout and to stop short of any obstruction.

- 29.5 No train should be allowed on signal to leave a station in any particular direction unless :-  
Track clear indication is available for the relevant Axle Counter track circuited portion and Last Stop Signal is taken OFF.
- 29.6. A resetting arrangement for the resumption of the track circuit by means of Axle counter under failure condition through co-operative feature of both the SMs on duty at either end Station of the Block section is provided, which should only be resorted to after the train that was lastly sent, arrives fully at the receiving station and is certified in this respect by the SM at the receiving station through exchange of Private Number.
- 29.7. Reset arrangements are provided in the operation cum indication panel in the SM's office for sections BDBA-RHMA and GRKN-RHMA with DLBI. The resetting key and reset permission granting button on the resetting Panel should normally be kept sealed by the Maintainer and SM will inform the Maintainer for resealing the same for every such operation of the resetting button and shall be recorded giving details of date of use, train number, time, number registered on the counter and reasons for resetting and initial each such entry.
- 29.8 The procedure for resetting of the equipment should be as follows:-

**Action to be taken by the SM on Duty at despatching Station**

01. On advice from receiving station for resetting, the sending station will then unseal the "Permission Granted" push Button and press keeping for some time. An indication lamp provided on the panel for Granting Permission will lit up. Simultaneously the Veeder counter will also record the next higher number.
- 2.
3. Release the permission-granting button.
- 4.
5. The next train to be piloted 'OUT'.
- 6.

**Action to be taken by the SM on duty at the receiving Station**

01. Shall call the attention of the Station in rear through magneto-phone provided with the operating panel for resetting and shall establish communication with the said station if resetting of equipment is considered necessary giving details of last train that left his station into the Section.
- The receiving station shall inform the sending station as to whether the last train that entered in to the section has arrived or not. And, if arrived fully shall so intimate verified by exchanging Private Number with the sending station and ask for granting permission for resetting the Axle Counter.
- An Indication lamp in the panel for permission to receive shall lit up.
- Shall unseal reset key and turn the same and keep it for some time simultaneously with the pressing of the permission button by the receiving/sending station.
- Release and normalise the reset key. veeder counter also will record the next higher number.
- He will make entries in the Resetting Register.
- Even after completion of reset operation, LVCD Axle counter will show clear only after next train is passed.
- The "Line Clear" on the Lock & Block Instrument for the next train to be given after resetting axle counter.

7. The SM shall record in the Train Register the resetting operation giving details of train number, time, Private Number exchanged with the receiving station for the operation, counter number on the veeder counter and reasons for use of axle counter.

8. The SM shall record in his Train Register the resetting operation giving details of train number, time, Private Number exchanged with ASM in rear, number on the counter recorded giving reasons for the resetting operation.

9. If the axle counters functioning properly now, then Block Section cleared indication 'G' will exhibit on the panel and the concerned Block Section is to be normalised.

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

29.9 **TELECOMMUNICATIONS:**

- a) Telephone attached to Block Instrument for section RHMA–GRKN & RHMA-BDBA.
- b) Railway Auto telephone is provided at this station.
- c) The station is connected to CTC-PRDP, BRAG-KIS (VIA-NQR), BRAG-KIS (VIA-CTC) Control Circuit.
- d) The station is connected to CTC-PRDP traction Control Circuit.
- e) VHF set is provided at this station.
- f) Telephone is provided between Station Master's office and both end crank handle locations.
- g) Telephones are provided with L.C. Gates at Km. 463/1-3 (UP) & 463/4-2 (DN), Km. 465/9-11 (UP) & 465/12-10 (DN), Km. 466/17-19 (UP) & 466/20-18 (DN), Km.467/27-29 (UP) & 467/30-28 (DN), Km. 469/19-21 (UP) & 469/22-20(DN) and SM's office separately.
- h) BSNL phone is provided at the station.

**NOTE**

- a. For obtaining line clear VHF should be used as a last alternative and not as a sole means of communication.
- b. VHF & Walkie Talkie sets should not be used for unnecessary discussion with Loco Pilot /Guards and any other staff.

**30. DESCRIPTION OF PANEL**

SL. No.	PUSH BUTTON	COLOUR OF PUSH BUTTON	FUNCTION
1.	S1	RED	Press to take 'OFF' UP Home Signal No. S-1 A/B (3-Aspect signal with route) along with respective Route Button (From CTC end.).
2.	C1	RED with WHITE DOT	Press to take 'OFF' UP Calling-on signal No.C-1A/B along with Route Button (from CTC end).
3.	S2	RED	Press to take 'OFF' DN Home Signal No. S-2A/B/C (3-Aspect Signal with route) along with respective Route Button (From PRDP end).
4.	C2	RED with WHITE DOT	Press to take 'OFF' DN Calling-on Signal No.C-2A/B/C along with Route Button (From PRDP end.).
5.	S3	RED	Press to take 'OFF' UP main line Starter Signal No. S-3 (3-Aspect signal) of line No.1 along with respective Route Button.
6.	S4	RED	Press to take 'OFF' DN Starter Signal No.S-4 (2-Aspect signal) of Line No.4 along with Route Button.
7.	S5	RED	Press to take 'OFF' UP common Loop Starter Signal No.S-5 (2- Aspect) of Line-2 along with Route Button.
8.	S6	RED	Press to take 'OFF' DN Common Loop Starter Signal No. S-6 (2-Aspect) of Line No.1 along with Route Button.
9.	S7	RED	Press to take 'OFF' Up Advanced Starter Signal No S-7 (2-Aspect Signal) along with respective Route Button.
10.	S8	RED	Press to take 'OFF' DN Main Starter Signal No. S-8 (3-Aspect) along with respective Route Button.
11.	SH9	YELLOW	Press to take 'OFF' UP Shunt back Signal No.SH-9A/B/C/D along with Route Button.
12.	S-10	RED	Press to take 'OFF' DN Advanced Starter Signal No.S-10 (2- Aspect) along with respective Route Button.
13.	SH-12	YELLOW	Press to take 'OFF' DN Shunt Back Signal No.SH-12 along with respective Route Button.

**RECEPTION ROUTE BUTTONS:**

14.	UMUN	WHITE	Press to receive an UP train on Signal/Calling-on Signal OR on Shunt Signal No.SH-9 or 12 on Line No.1 UP Main along with respective Signal Button.
15.	CLUN	WHITE	Press to receive an UP train on Signal (set to common Loop Line) OR a DN train on Signal/Calling-on signal(set to DN Main) on Line No.2 along with respective Signal Button.
16.	CLUN1	WHITE WITH BLACK DOT	Press to receive an UP train OR a DN train on Signal/Calling-on Signal (set to over run line) OR on Shunt Signal No.9 or 12 on line No.2 along with respective Signal Button.
17.	DMUN	WHITE	Press to receive a DN train on Signal / Calling-on Signal OR on Shunt signal No.SH.9 on Line No.3 along with respective Route Button.
18.	DLUN	WHITE	Press to receive a DN train on Signal on Line No.4 along with respective Signal Button.
19.	DLUN1	WHITE with BLACK DOT	Press to receive a DN train on signal (set to over run line) or Shunt Signal No.SH.9 on Line No.4 along with respective Signal Button.

**DESPATCH ROUTE BUTTON :**

20.	7ATUN	WHITE	Press to take 'OFF' UP Starter Signal No.S-3 of Line No.1 OR S-5 of Line No.2 along with respective Signal Button.
21.	7UN	WHITE	Press to take 'OFF' UP Advanced Starter Signal No.S-7 along with respective Signal Button.

22.	10ATUN	WHITE	Press to take 'OFF' DN Starter Signal No.S-4 of Line No.4 OR S-6 of Line No.1 OR S-8 of Line No.3 along with respective Signal Button.
23.	10UN	WHITE	Press to take 'OFF' DN Advanced Starter Signal No.S-10 along with respective Signal Button.
<b>POINT PUSH BUTTONS:</b>			
24.	20A/B	BLACK	Cross over point to be pressed for operating the points to normal or reverse position along with point group normal or reverse button between UP & DN Main lines at PRDP end.
25.	21 A/B	BLACK	Crossover Point to be pressed for operating the Points to 'NORMAL' OR 'REVERSE' position along with Point Group 'NORMAL' OR 'REVERSE' Button between UP & DN Main Lines at CTC end.
26	22 A/B	BLACK	Crossover Point to be pressed for operating the Points to 'NORMAL' OR 'REVERSE' position along with Point Group 'NORMAL' OR 'REVERSE' Button between DN Main Lines & Common Loop line at PRDP end.
27	23 A/B	BLACK	Crossover Point to be pressed for operating the Points to 'NORMAL' OR 'REVERSE' position along with Point Group 'NORMAL' OR 'REVERSE' Button between DN main and DN loop at CTC end.
28.	24 A/B	BLACK	Crossover Point with D/S to be pressed for operating the Points to 'NORMAL' OR 'REVERSE' position along with Point Group 'NORMAL' OR 'REVERSE' Button between DN Main and DN Loop at PRDP end.
29.	25 A/B	BLACK	Crossover Point to be pressed for operating the Points to 'NORMAL' OR 'REVERSE' position along with Point Group 'NORMAL' OR 'REVERSE' Button between UP Main and Common Loop at CTC end.
30.	26 A/B	BLACK	Crossover point to be pressed for operating the points to 'NORMAL' OR 'REVERSE' position along with point group 'NORMAL' OR 'REVERSE' Button between UP main and Common Loop at PRDP end.
31.	28	BLACK	Press to release point Control Key "Q" (HPL) for Hot axle siding Line on Line No.4.
32.	30	BLACK	Press to release point controlling 'S' (HPL) for Engineering siding line on line No.1.
<b>CRANK HANDLE PUSH BUTTONS:</b>			
33.	CH-1	BLUE	To be pressed to extract Crank Handle key for operating Point No.22, 23, 24 and 27 along with 'TRANS' Push Button.
34.	CH-2	BLUE	To be pressed to extract Crank Handle key for operating Point No.25 and 26 along with 'TRANS' Push Button.
35.	CH-3	BLUE	To be pressed to extract Crank Handle key for operating Point No.20 along with 'TRANS' Push Button.
36.	CH-4	BLUE	To be pressed to extract Crank Handle key for operating Point No.21 along with 'TRANS' Push Button.
<b>MISCELLANEOUS PUSH BUTTONS:</b>			
37.	SM's Emergency Point Key.	---	This key is to be inserted and operated in the event of emergency point operation.
38.	SM's Panel Key	---	To lock the Control Panel to prevent un-authorized operation.
39.	Emergency Point operation Push Button	BLACK with RED DOT	To be pressed for emergency operation of points in association with SM's key when Point track circuits fail.

40.	Point Group Normal Push Button	BLACK with RED DOT	To be pressed to initiate 'NORMAL' setting of point along with concerned point button.
41.	Point Group Reverse Push Button	BLACK with RED DOT	To be pressed to initiate 'REVERSE' setting of point along with concerned point button.
42.	Emergency Route Release Push Button	WHITE with RED DOT	To be pressed for emergency Route release.
43.	Signal Cancellation Push Button	RED	To be pressed for canceling a signal which is already taken 'OFF' OR to release the route after passage of a train.
44.	Button Held Acknowledgement push button	WHITE with RED DOT	To be pressed to silent button held buzzer (In case of any Push Button remains pressed after the button is released.)
45.	Emergency Gate Release button for L.C. Gate at Km. 469/19-21(UP) & 469/22-20 (DN)	CHOCOLATE with RED DOT	To be pressed for emergency gate release at Km. 469/19-21(UP) & 469/22-20(DN), when route gets locked.
46.	L.C. Gate control Push button 29	CHOCOLATE with RED DOT	To be pressed for extending control to open L.C. Gate at Km. 469/19-21(UP) & 469/22-20(DN)
47.	Signal Lamp Failure/Point Failure Acknowledgement Button	RED with WHITE DOT	To be pressed for acknowledging Signal lamp failure/Point failure buzzer.
48.	Group Trans Push Button	WHITE with BLACK DOT	To be pressed to initiate slot or Crank Handle operation along with concerned Slot/Crank Handle Button
49.	Group Release Push Button	WHITE with BLACK DOT	To be pressed to with draw/normalise a Slot OR Crank Handle operation along with concerned Slot OR Crank Handle Push Button.
50.	UP Block Release Push Button	CHOCOLATE with WHITE DOT	To be pressed for releasing UP Block Instrument Handle / Commutator after arrival of an UP Train.
51.	DN Block Release Push Button	CHOCOLATE with WHITE DOT	To be pressed for acknowledging DN Train arrived buzzer.
52.	Power Acknowledgement Push Button	RED	To be pressed for acknowledging the Power Failure Buzzer.
53.	Reset permission granting to RAHAMA Push Button	RED	To be pressed for granting permission to RHMA for resetting the Axle Counter section GRKN-RHMA.
54.	Reset Key (Rahama end)	---	Reset key to be inserted on the panel for resetting the Axle counter section of DN Line after getting the Permission received indication GRKN-RHMA.
55.	Reset permission granting to GRKN push button.	RED	To be pressed for granting permission to GRKN for resetting the DN Axle Counter section GRKN - RHMA.

**APPENDIX 'C' TO STATION WORKING RULES OF RAHAMA STATION**

**ANTI COLISION DVICE (RAKSHA KAVACH)**

=== NIL ===

(A.SENAPATI)  
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(B.PANDA)  
DOM/KUR

## **APPENDIX 'D' TO STATION WORKING RULES OF RAHAMA STATION**

(Operating and Commercial duty amalgamated)

### **1. STATION SUPERINTENDENT:**

He is in-charge of the Station. He performs day shift duty for train passing duties in turn with his assistants. He is responsible for the efficient discharge of duties devolving upon all the staff employed at the station according to rules, Station Working Rules & safe working instruction issued from time to time. He shall see that all signals, points, L.C. Gates and whole machinery at the station are in proper working order. He shall report all defects to the concerned officials. He shall satisfy himself that the staff employed under him at this station are thoroughly conversant with Station Working Rules and perform their duties correctly. It is his personal responsibility to maintain the station working rules, other rule books and the Assurance Registers up to date.. He shall see that all records of the station are properly maintained and due statements returns and other corresponding documents are up-to-date. He shall see that the staff are civil courteous and help full to all users of railway. He shall see that all station premises are kept neat and clean. He is responsible for booking off all Group-'C' and Group-'D' staff for PME and refresher course/safety camp in their due time.

His special attention is drawn to Chapter-II of GR and SR and GR 5.01 to 5.08 with relevant SRs, Chapter-XXII of operating Manual. He shall follow the instructions laid down in SR 3.68.01(c) & (d) and SR 14.07.01 Para 2.09(e) of Block Working Manual. He shall supervise the works of staff and conduct night inspections. Safety meetings and fire drills and report lapses of staff working under him. He shall also ensure that the safety equipments in the station and gate lodge as mentioned in the station working rules are supplied in full and they are good working order with necessary relief stock.

He shall satisfy himself that the staff employed under him at this station are well conversant with SWRs and perform their duties correctly. He is responsible for maintaining SWR and other Rule books.

The SS's special attention is drawn to the GR 5.01 to 5.23 where details are indicated.

### **1.1 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 the safety of the public unless the SS. 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 well conversant with the Station Working Rules of the Station 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 Class-IV staff, their

(B.PANDA)  
DOM/KUR



signature/thumb impression must be obtained after explaining fully about their duties and responsibility.

The SS is personally responsible for maintaining the Assurance Register and for obtaining declaration from the staff working under him. The Assurance Register must be maintained in two parts one for Class-III staff and other for Class-IV staff. A duplicate copy of the Assurance Register must be maintained and kept in the personal custody by the SS.

The declaration is to 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 and over

1.2 **USE OF PRIVATE NUMBER BOOKS AND IDENTIFICATION NUMBER SHEETS:**

Sufficient private number books and identification number sheets in sealed covers shall always be kept in stock by SS., under lock and key by maintaining one register for this purpose.

1.3 **ACCIDENTS:**

Accidents shall be reported and immediate action shall be taken by the SS, in accordance with the instructions laid down in the Accident Manual. Whenever the SS, 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 and reports and follow up all safety principles without delay.

- 1.4 The SS shall test the working of the reception signal and emergency cross overs daily during the day when there is no train due to arrive/leave the station and record the results in the SM's diary.

2. **STATION MASTER/ASSISTANT STATION MASTER:**

He shall work train passing duties and booking of traffic, coaching returns and other statements shall be prepared and submitted by him in time. The Station Master on duty shall record in the diary the condition of all the running lines, siding, the caution orders in force at the time of handing over charge. These entries shall be countersigned by the Station Master coming on duty and taking over charge. The SM on duty shall ensure the clearance of the line of the yard by physical verification while taking/handling over charge. The Station Master on duty who makes an entry in the train signal register shall continue till all the entries pertaining to the trains are completed vide SR 14.07.01. 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 duty of SS will devolve on him. His special attention is drawn to Chapter-II of G & SR 1976 (Revised-2012) and GR 5.01 to 5.08 with relevant SRs as an assistant to SS, given to him by the SS/SM

**3. TRAFFIC POINTSMAN:**

He shall work under the instructions of SM on duty and follow the GR 02.05 to 2.11 and other relevant rules laid down in GR and SR.

He shall remain responsible for:

- (a) Correct setting and locking and crank handling of points for reception/dispatch and shunting operation.
- (b) Coupling and un-coupling of vehicles.
- (c) Protection of line in an emergency
- (d) Piloting and hand signaling of trains of trains when necessary and handing over caution orders/or any other line clear authorities to the Loco Pilot and guards of the trains.
- (e) Attending off side to observe safe running of run through trains at stations and correct display of hand signals and ringing the station bell.
- (f) Securing of vehicles, as directed, protection of vehicles of a train.
- (g) Being conversant with the layout of the yard and compliance of rules relating to shunting operation.
- (h) Observing General Rules 5.13 to 5.21 and relevant subsidiary Rules during shunting.
- (i) Cleaning and lighting of hand signal lamps if required and oiling of clamps and padlocks if necessary.
- (j) Loading and un-loading of parcels and luggage's, packages goods and guards boxes to and from the trains and watching the packages and other materials by properly stocking in the station premises.
- (k) Cleaning and Dusting of SM's office room furniture and equipments Office.
- (l) Working as fog signal man as and when required.
- (m) Filling up the fire buckets with sand.
- (n) Getting train intact arrival register (T/1410) signed by the Guard as and when required.
- (o) Any other duties entrusted to him by the SM on duty from time to time.
- (p) Ringing the station bell as and when required.

**GENERAL**

1. A set of flags and LED tri-color hand signal lamp will be part of the essential equipment of the staff while on duty. He shall not leave the station except when required by the SM on duty or with his permission and shall comply with Subsidiary Rules 4.42.02(b) (i) and (d).
2. Staff working at the station must be able to distinguish UP and DN line clear tickets and educated in distinguishing other operational forms and documents, delivered to Loco Pilots and Guards and must also know how and when to ring the station bell.

## APPENDIX-‘E’ TO STATION WORKING RULE OF RAHAMA

### ESSENTIAL EQUIPMENTS

Below is the list of Essential Equipments which should be readily available in good working orders with necessary relief stock.

<b>Sl. No.</b>	<b>Description</b>	<b>Quantity</b>
01.	Detonators	20
02.	LED tri-color hand signal lamp	04
03.	Hand Signal Flags	04 pairs
04.	Safety chain with Pad locks	06 + 06
05.	Clamps with Pad locks	02 at station and 03 at each goomty
06.	Skids	05
07.	Fire and Sand Buckets	05
08.	Reminder Collar	8
09.	Motor trolley on line Board	2
10.	Block Suspension Board	2
11.	First aid Box	01
12.	Stretcher	01
13.	Fire extinguisher	02
14.	Power block collar	03

(A.SENAPATI)  
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(B.PANDA)  
DOM/KUR

**APPENDIX 'F' TO STATION WORKING RULES OF RAHAMA STATION**

**RULES FOR WORKING OF DK STATIONS HALTS, IBH, IBS AND OUTLYING SIDINGS**

1.1 **MID-SECTION OUTLAYING SIDING:**

There is no mid-section siding on either end of block section.

1.2 **IBH, IBS/DK STATION:**

There is no IBH or IBS or DK station on either end of block section.

1.3 **HALT STATION:**

JHANKAD-SARALA ROAD P.H. (Code: JSRD) is situated at Km. 458.30 from Howrah between GRKN and RHMA Station.

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(B.PANDA)  
DOM/KUR