

GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)

No. 2013/CE-II/CS/1

New Delhi, dt. 8.04.2013.

The General Managers (Engg.)-CR, ER, ECR, ECoR, NR, NCR, NER, NFR, NWR, SR, SCR, SER, SECR, SWR, WR, WCR and Metro Railway/Kolkata.

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The CAO/Const. All Indian Railways.

FA & CAO, All Indian Railways.

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The Director General (Track), RDSO/Alambagh, Lucknow.
Chief Commissioner of Railway Safety, Lucknow.

Managing Director, IRCON, New Delhi.

Managing Director, RITES, New Delhi.

Managing Director, DMRC, Metro Bhawan, Barakhamba lane, New Delhi.

Managing Director, CONCOR, New Delhi.

Managing Director, RVNL, August Kranti Bhawan, Bhikaji Cama Place, New Delhi.

Managing Director, DFCCIL, Pragati Maidan, Metro station, New Delhi.

Managing Director, PIPAVAV Railway Corp. Ltd., Ist Floor Jeeven Tara Building, Gate No.4, Parliament Street, New Delhi.

Managing Director, MRVC, Church Gate station Building 2nd Floor, Mumbai – 400020.

Managing Director, RLDA, IRCON Office Compound, Next to Safdarjang Rly. station, Motibagh-I, New Delhi.

Managing Director, Konkan Railway Corporation Ltd, Belapur Bhawan, Sector-11, CBD Belapur. Mumbai. Pin - 400614.

Director, IRICEN, Pune.

Director, IRIEEN, Nasik.

Director, IRISSET, Secunderabad.

Director, IRIMEE, Jamalpur.

Director, IRITM, Vill. Kanausi, Hardoi, Manik Nagar, Lucknow.

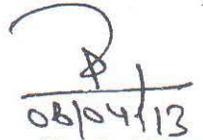
Director General, Railway Staff College, Vadodara.

Genl. Secretaries, AIRF, NFIR, IRPOF, FROA, AIRPFA, DAI (Railways) Rail Bhawan, New Delhi.

Sub: Advance Correction Slip No.132 to the Indian Railways Permanent Way Manual.

Ministry of Railways (Railway Board) have decided that correction/addition as indicated in the enclosed Advance Correction Slip No.132 dated 08.04.2013, to relevant para of the IRPWM, be made.

Receipt of this letter may please be acknowledged.


08/04/13

(Pankaj Tyagi)
Director Civil Engg.(P),
Railway Board.

No. 2013/CE-II/CS/1

New Delhi, dt. .04.2013.

Copy to :

Sr. PPS/PS to CRB, ME, ML, MS, MM, MT, FC, Secretary.

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Director/C&IS - for uploading on Railway Board website.

INDIAN RAILWAYS PERMANENT WAY MANUAL
ADVANCE CORRECTION SLIP No.132 dated 08.04.2013

1.0 The existing para 238(1) (b) (5) of Indian Railways Permanent Way Manual shall be replaced with the following:-

Para 238(1) (b) (5) – Deep screening of Track shall be done after 500 GMT or 10 years, whichever is earlier. However, deep screening shall also be carried out if the existing clean ballast cushion is less than 150 mm to ensure proper machine tamping.

2.0 The existing para 107 of Indian Railways Permanent Way Manual shall be replaced with the following:-

107 Inspection of Permanent Way – The important inspections to be carried out by the Assistant Engineer are summarized below:

(1) **Trolley Inspection** - The entire sub-division should be inspected by trolley once in two months on pro-rata basis systematically covering from one end to other end of his jurisdiction, as much inspection as possible being done by push trolley. Unimportant branch lines having less than 2 GMT traffic should be inspected once in 3 months. On sections having multiple lines running closely parallel, trolley inspection may be carried out on any of the lines. The inspection by trolley should be intensive, which should include checking of attendance of gang, gang work and equipment and examination of gang charts/diary books with reference to the prescribed schedule of track maintenance. During his inspection, he should check the work done by minimum one gang in each SSE/P.Way's jurisdiction every quarter and record the results of his inspection.

(2) **Fast Train inspection** - The entire subdivision should be covered either by Engine/Rear Window of a fast train or by TRC/OMS once in a month.

(3) **Inspection of Level Crossings** - He should inspect all the manned level crossings once in six months. He should examine the Gatemen's knowledge of rules, check the equipment, track, road approaches and all other safety aspects.

(4) **Checking of curves** - The Assistant Engineer shall check at least one curve in each SSE/P.Way's jurisdiction every quarter by verifying its versine and super-elevation. Priority shall be given for curves having persistent bad riding.

(5) **Checking of Points and Crossings** - He shall inspect once a year all points and crossings on passenger lines and 10 percent of the points and crossings on other lines.

(6) **Monsoon Patrolling** - When Monsoon Patrolling is introduced he should check the work of Patrolmen at night once in a month, either by Train or by Push Trolley or Motor Trolley.

(7) **Track on Bridges** - The track on Girder Bridges should be inspected as a part of the annual Bridge inspection, besides normal track inspections.

(8) **Review of Inspection by Sub-ordinates** - He should scrutinize the records maintained by SSE/P.Way, such as records for Creep measurement, Inspection of Curve, Points and Crossing, SEJ and Buffer rail, Gap Survey and Section register during his regular trolley inspection, to see

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whether the schedules of inspection are being adhered to by the JE/SSE's and whether the necessary follow up action has been taken.

He should also test check the work of SSE/P.Way/USFD at least once in each round of testing in his jurisdiction.

(9) **Inspections of LWR/CWR Track** - The Assistant Engineer shall inspect the SEJs/Buffer rails provided in the LWR/CWR track once in every six months. He shall check the creep records of LWR/CWR regularly. The duties of the Assistant Engineer with reference to the maintenance of LWR/CWR are detailed in **Manual of instructions on Long Welded Rails**.

(10) **Night foot plate inspection** - He should carry out night inspection once in a month to check alertness of Gatemen/Station staff, patrolmen, stationary watchmen, observance of speed limits by drivers, visibility of signals/ engineering fixed signals/hectometer posts, riding quality etc. Inspection should preferably be done between 00:00 hrs to 04:00 hrs.

(11) **Inspection of AT welding site** - The Assistant Engineer shall inspect AT welding site as much as possible but at least once in a month.

3.0 Existing Para- 108(2)(b) of IRPWM to be replaced by the following:

Para 108(2)(b) - Every sanctioned renewal work should be programmed in detail and labour organized in an efficient manner. Level and centre line pegs given by the JE/SSE should be test-checked by the Assistant Engineer. He should also inspect Track Renewal/Deep screening site in his section as much as possible but minimum once in a month.

4.0 New Para 108(2)(c) shall be added as following:

Para 108 (2)(c) - Inspection of ongoing works of construction and other organization e.g. RVNL, etc - He should inspect the works going on in his section as much as possible during Foot plate/Trolley inspection to check quality and safety of the running trains.

5.0 Existing Para – 123 shall be replaced by the following:

Para 123. Testing of Running Qualities of Track- (1) The SSE/P.Way shall devote sustained attention to Permanent way as regards safety, smooth running, economy and neatness.

(2) He should travel on the foot place of Engine/Rear brake-van/last Vehicle of fast trains at least once in a month, and take down notes of bad running kilometrages, and get them rectified.

(3) He should accompany each Track Recording/Oscillograph car runs over his section, take down kilometrages which are not running well and take action to rectify the defects.

(4) He should observe the behavior of track under passing trains to detect inadequate packing during routine inspections.

6.0 Existing Para- 124 shall be replaced by the following:

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124. Routine inspection of Track-

(1) Inspection of Gangs/Trolley Inspection: (a) The Senior Section Engineer/P.Way (SSE/P.Way) should inspect the entire section by Push Trolley/Motor Trolley at least once in a month or more often as necessary in a systematic manner in which all gangs shall be inspected.

(b) In sections where no separate inspection is being carried out by sectional Junior Engineer (JE/P.Way), the inspection should be carried out by the SSE/P.Way In-charge every fortnight.

(c) During such inspections the SSE/P.Way should -

(i) Check the quality of work done by gang earlier and ensure prompt action on items requiring attention;

(ii) Arrange to give the programme of work to the gang;

(iii) Record details of track maintenance work in gang chart and diaries;

(iv) Check the attendance of gang;

(v) Instruct men in methods of maintenance

(d) He should examine all the gang tools at least once in two months and arrange for repair and replacement as necessary.

(e) He should ensure that every man in the gang is aware of safety rules by examining them periodically at least once in two months.

(f) During his trolley inspection, he should also carry out the routine check and review of inspection done by his subordinates.

(2) Level Crossing Inspection- (a) He should ensure that all the level crossings are opened out as per schedule to examine the condition of rails, sleepers and fastenings and defects are rectified. (Refer Para 914).

(b) He shall ensure that all level crossings are inspected once in a month during push trolley inspection in a systematic manner by rotation with JE/P.Way. He shall see that the necessary stop boards, whistle boards, and other equipments are provided as laid down.

(c) He shall check the equipment with the Gateman during inspection.

(d) He shall examine their knowledge of safety rules during inspection.

(e) He shall arrange to take the census of all level crossings as per the schedules laid down.

(3) Points and Crossing Inspection- The SSE/P.Way in overall charge and his assistant should carry out the inspection of points and crossings in passenger and running lines once in three months by rotation and on other lines and yards lines once in six months by rotation. For Points and crossings laid on PSC sleepers, the detailed inspection as per Para 237/5 (Annexure2/6) should be done once in a year and all other in between inspections should be carried out as per proforma given in Annexure-2/6(A).

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- (4) Curve Inspection- The SSE/P.Way in overall charge and his Assistant should carry out checks of versines and super-elevations of each curve once in six months in systematic manner by rotation.
- (5) Foot Inspection- SSE/P.Way shall carry out foot inspection as much as possible, on prorata basis so as to cover entire section at least once a year.
- (6) Night foot plate inspection- He should carry out night foot plate inspection once in a month to check alertness of Gatemen/Station staff, patrolmen, stationary watchmen, observance of speed limits by drivers, visibility of signals/engineering fixed signals/hectometer posts, riding quality etc. Inspection should preferably be done between 00:00 hrs to 04:00 hrs.
- (7) Inspection Records- The SSE/P.Way will maintain proper record of all the inspections carried out during the month as per the schedules on the proforma laid down and submit the same to the Divisional Engineer through Assistant Engineer every month bringing out the reasons for shortfall in adhering to schedules of inspections, if any.

7.0 Existing Para 124 (A) shall be deleted.

8.0 Existing Para – 126 shall be replaced by the following:

Para 126. Check on Patrolling- He should arrange for patrolling of track as laid down, by deputing suitably selected men from gangs and arrange to supply them with Patrol books and equipments needed. The SSE/P.Way in overall charge will check the night patrolman once a fortnight by train and by trolley during the monsoon as per the schedules laid down by the administration.

9.0 Existing Para -127 shall be replaced by the following:

Para 127. Execution of Works affecting Track – (1) Before commencing any work the SSE/P.Way in overall charge or his Assistant shall ensure that he is in possession of all necessary materials and tools. He shall ensure that Engineering Signals are exhibited at the specified distances according to rules and Flagmen are posted with necessary equipment.

(2) He should programme the works by organizing the labour in an efficient manner. He should maintain detailed accounts of materials received and issued to the work. He should exercise as much as possible checks but minimum once in a month on quality and quantum of work and submit progress reports on works periodically as may be prescribed.

(3) Quality of welding and avoidable fractures- The direct responsibility for quality of AT welding being done in the section shall rest on the SSE/P.Way in-charge of the section. He should carry out inspection of AT welding site as much as possible but at least once in a month. Responsibility for avoidable fractures taking place in the section shall also rest with the SSE/P.Way in-charge of the section, except in cases where the USFD testing was done and found good up to three months before the fractures.

(4) **Inspection of ongoing work of construction and other organizations e.g. RVNL etc-** He should inspect the works going on in his section as much as possible during Footplate/Trolley inspection to check quality and safety of the running trains.

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10.0 The existing Para 129 shall be replaced by following:

Para 129. Inspection and Maintenance of LWR/CWR Track: The duties and responsibilities of the SSE/P.Way in overall charge is clearly laid down in Manual of Instructions on Long Welded Rails. All the LWRs should be inspected once in fortnight during two coldest and two hottest months, otherwise once in two months by rotation with JE/P.Way.

11.0 The word “Permanent Way Inspector” in Para No.118, 128, 130, 131, 132, 133, 134 and 135 shall be replaced by “SSE/P.Way”.

12.0 Existing Para -136 shall be replaced by the following:

Duties of JE/P.Way (not in overall charge)

Para 136. General responsibilities – The Junior Engineer (P.Way) is generally responsible for:

- (a) Inspection and maintenance of track in his jurisdiction (sub-section) in a safe and satisfactory condition for traffic, including execution of all works incidental to track maintenance.
- (b) Efficient execution of Special Works, such as Renewals, Directed Track Maintenance, Curve realignment and deep Screening, as per approved plans and specifications.
- (c) He should work in the SSE/P.Way office and assist the SSE/P.Way in overall charge as required.

13.0 Existing Para-139 shall be replaced by the following-

Para 139. Routine Inspection of Track- (1) The Junior Engineer (P.Way) should inspect the entire section in his charge by push trolley at least once in a fortnight systematically.

During Push Trolley inspection all gangs/MMUs, their work, equipments and knowledge about safety rules and other working instructions shall be checked. He shall spend as much time as possible with MMUs. Track patrolling by keymen shall be checked. He should carry out the inspection of gangs as detailed in Para 124(1) (b) & (c). He will spend as many days in the week as possible with the gangs. He should cover all the gangs within a fortnight. He should train the Permanent Way Supervisors, Mates, Key men, Gagmen and Gatemen in their duties. He should teach them the maintenance practices.

(2) He will carry out inspection of points and crossings on passenger and running lines once in three months by rotation and other lines and yard lines once in six months, by rotation with SSE/P.Way. For points and crossings laid on PSC sleepers, the detailed inspection as per Para 237/5 (Annexure 2/6) should be done once in a year and all other in between inspections should be carried out as per proforma given in Annexure-2/6(A).

He will arrange for the rectification of defects noticed during the inspection.

(3) He, along with the SSE(P.Way) in overall charge, will arrange to check the versine and super-elevation of all the curves once in six months by rotation. He should take action to correct the curves based on the readings.

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- (4) He will arrange to inspect all the Level crossings in his jurisdiction once in a month, during Push Trolley inspection, in systematic manner, by rotation with SSE(P.Way). All level crossings will continue to be inspected once in a month alternatively between SSE(P.Way) and JE (P.Way) and equipment be checked. He will examine the Gatemen in rules periodically.
- (5) JE/P.Way should inspect his entire section by loco/brake van/Rear window once in a month and take down notes of bad running kilometrages and get them rectified.
- (6) Junior Engineer (P.Way) should inspect entire section on foot at least once in six months in a systematic manner (every month on pro rata basis so as to cover entire length of running track).
- (7) JE/P.Way should accompany alternate run of TRC/OMS in his section.
- (8) He should carry out night inspection once in a month to check alertness of Gatemen/Station staff, patrolmen, stationary watchmen, observance of speed limits by drivers, visibility of signals/engineering fixed signals/hectometer posts, riding quality etc. Inspection should preferably be done between 00:00 hrs to 04:00 hrs.
- (9) He should carry out at least two inspection of AT welding site in a month.
- (10) He should inspect the ongoing work of construction and other organizations e.g. RVNL etc going on in his section as much as possible during Footplate/Trolley inspection, to check quality and safety of the running trains.

14.0 Existing Para 139 (A) shall be deleted.

15.0 Existing Para-144 shall be replaced by the following:

Para 144. Maintenance of LWR/CWR Track- Duties and the responsibilities of Junior Engineer (P.Way) in-charge of sub-section with reference to maintenance of L.W.R. are laid down in **Manual of Instructions on Long Welded Rails**. All the LWRs should be inspected once in fortnight during two coldest and two hottest months, otherwise once in two months by rotation with SSE/P.Way.

16.0 The word “Permanent Way Inspector” shall be replaced by “JE/P.Way” in Para No. 145.

17.0 Existing Para-223 shall be replaced by the following:

Para 223. Side drains, catch water drains and Water-ways: (a) The permanent way staff shall keep all side drains and catch water drain clear. They should ensure that the outfall of these drains and the water-ways of all Bridges and Culverts are kept free from obstruction. The spoils from cleaning drains or cuttings should not be deposited at a place from where it is likely to be washed back into the drains.

(b) The JE/P-way shall inspect all side drains, catch water drains, bridge waterways at least once in a year in the month of April prior to monsoon. The SSE/P-Way shall inspect all side drains, catch water drains, bridge waterways at least once in a year prior to monsoon.

(c) The Assistant Engineer shall ensure that all side drains, catch water drains, bridge waterways are properly inspected before onset of rains.

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18.0 Existing Para-237(5)(a) shall be replaced by the following:

Para 237(5)(a) - SSE/JE(P.Way)'s Inspection- The SSE/P.Way in overall charge and his Assistant should carry out the inspection of points and crossings in passenger and running lines once in three months by rotation and on other lines and yard lines once in six months by rotation. For Points and crossings on PSC sleepers, the detailed inspection as per Annexure 2/6 of IRPWM should be done once in a year and all other in between inspections should be carried out as per proforma given as Annexure-2/6 (A).

19.0 New annexure-2/6 (A) shall be added after annexure 2/6 of Para 237/5 (copy enclosed).

For intermediate inspections of points and crossings on PSC sleepers

Station: _____

Point No.: _____

Location: _____

Type of Rail: _____

Date of laying: _____

Date of laying reconditioned crossing: _____

1st 2nd 3rd 4th

Date of laying reconditioned switch:

LH 1st 2nd 3rd 4th

RH 1st 2nd 3rd 4th

Type of sleeper/assembly: _____

Angle of crossing: _____

Nominal gauge of turnout: _____

Left hand or right hand: _____

Laid on straight or on curve of radius: _____

Similar/contrary flexure: _____

Particulars	Details of inspection	Action with date and sign	Details of inspection	Action taken with date and sign
I. General				
1. Condition of ballast, packing and drainage				
II) Switch assembly and lead portion:				
2) Condition of Tongue Rail:				
a) Whether chipped or cracked over 200 mm length within 1000 mm from ATS LH RH				
b) Vertical wear Right hand.				
At point with 13 mm head width (as per Annexure 2/6/1)				
Left Hand				
1) At point with 13 mm head width (as per Annexure 2/6/1)				
c) Lateral wear:				
To be measured at 13 mm to 15 mm below top of stock rail (As per Annex. 2/6/1)				

LH RH				
3. Condition of stock rail: a) Right hand: i) Vertical wear ii) Lateral wear (To be measured at 13 mm to 15 mm below of stock rail (As per Annex. 2/6/1))				
b) Left hand: i) Vertical wear ii) Lateral wear (To be measured at 13 mm to 15 mm below of stock rail (As per Annex. 2/6/1)).				
4. Gauge and Cross level in switch portion: a) At ATS bet. The two stock rail. b) at 150 mm behind toe of switch (only gauge): i) For straight road ii) For turn out				
III. Crossing Assembly. 5. Condition of crossing. a) sign of propagation of				

crack (if any) in crossing assembly.				
6. Wear of CMS crossing: (wear to be measured with straight edge) i) On left wing rail (opp. A N C). ii) On nose actual wear for 52kg . section: measured wear: 2.0mm.				
Actual wear per 60 kg section measured wear: 2.5mm 3. On right wing rail (opp. ANC)				
7. Condition of check rail fitting bearing plate, blocks, bolts and elastic fastings.				
8. Condition of welding of slide chairs and lugs.				
9. Condition of gapless joint in CMS Xing.				
10. Any other special feature/defects				
11. Signature of Inspecting official with date.				