

SOUTH CENTRAL RAILWAY

Safety.387/Fly Leaf/03/2025

Fly Leaf No. 03 / 2025

REVISED JOINT PROCEDURE ORDER FOR LOADING & UNLOADING AND TRANSPORTATION OF BALLAST DEPARTMENTAL MATERIAL TRAINS (DMTs).

(Ref : Railway Board's letter No. 2023/CE-II/Safety/Instructions dated 19.12.2024.)
(Ref : JPO No. 2 / 2025 dated 13/18.03.2025 issued by CRSE/Freight/SCR, CELE/SCR,
CFTM/SCR and CTE/SCR.)

No.W.506/General/Track/Ballast loading-Unloading/JPO/2025 Date: 13/18.03.2025.

This Revised JPO is issued to curb the cases of derailments involving the Departmental Material Trains w.r.t. Railway Board's Lr. No. 2023/CE-II/Safety/Instructions dated 19.12.2024

Derailments of ballast trains occur primarily due to the following reasons :

- i. Obstruction of running rails with excess ballast / heaps during unloading of ballast.
- ii. Ballast between the running rail and check rail at the locations like Points & Crossings, Level Crossings, etc.
- iii. Partial unloading of wagons leading to uneven loading.
- iv. While backing of Ballast DMT during block without ensuring clear flange way clearance towards the gauge face side.

1. General :

- i. All the relevant rules given in G&SR chapter IV, GR No's. 4.62, 4.63, & 4.64 and the relevant SRs pertaining to Working of material trains and Para 806 (I) of IRPWM-2020 are to be scrupulously followed.
- ii. Sr. DEN / DEN / ADEN should counsel the P. Way staff responsible for loading/unloading of ballast hopper wagons. Trackmen with sufficient experience only should be deputed for DMT working.
- iii. In case Ballast is unloaded by contractual agency, ensure that contractor's supervisor is available with authorized photo identity card. Contractor's Supervisor / workmen should be trained to work on the ballast train and properly counselled about the safety measures to be followed during loading / unloading.
- iv. Staff overdue for Medical / refresher course should not be deputed to undertake the DMT work.
- v. Ensure proper planning and preparation before going for block working and ensure sufficient block before going for unloading.
- vi. Any defect noticed on the wagons which may endanger the safety should be brought to the notice of C&W department i.e., Control & Base depot for immediate attention by Engineering Department officials during the course of DMT (Departmental Material Trains) working.

2. Duties of SSE / (P. Way), Train Manager / Loco Pilot :

- i. Respective SSE / JE / P. Way supervising the unloading shall be responsible for efficient functioning of the unloading operation of ballast train.

- ii. The Guard & Loco Pilot shall observe the instructions contained in G&SR Para No. 15.09 for working of Ballast DMT.
- iii. The Sectional P. Way Engineer, not below the rank of JE/P. Way shall be responsible for :
 - a. Supervising safe unloading of ballast.
 - b. Clearing of unloaded ballast, so that ballast does not infringe the Standard Moving Dimensions.
- iv. The loco pilot of ballast train shall be vigilant and follow the instructions of P. Way Engineer available in loco driving cab, who shall be on constant look out for signals from sectional P. Way Engineer / Guard while unloading of ballast and follow the signals given from rear of the train or otherwise.
- v. A continuous proceed hand signal shall be shown by the Train Manager throughout the movement of the train during unloading.
- vi. During engine reversal, brakes of entire formation are to be released by P. Way staff.

3. Examination of rake before sending to ballast depot for loading :

- i. All ballast wagons / sleeper carrier wagons of material trains should have a nominated Base depot and name of the nominated depot should be clearly stencilled on these wagons.
- ii. These trains should be offered for examination at the Base depot at least once in a month where they will be thoroughly examined as per prescribed maintenance instructions.
- iii. Door operating mechanism of all the ballast wagons should be maintained properly to ensure smooth and trouble-free operation of doors.
- iv. The rake should be offered for checking in empty condition at the time of issue of BPC, train examination staff should ensure that all the doors are kept in working condition with door fittings & gears intact. All the doors should be properly closed. BPC should be clearly endorsed by hand or with Stamp as **"All unloading gears of hoppers have been lubricated, checked and doors found in working condition"**.
- v. The originating Brake power of these trains should not be less than 90%. The validity of the BPC for DMT is 30 days.
- vi. The SSE / JE / P. Way shall take over the rake at TXR depot and examine that all unloading gears are in working order to avoid any problem at loading point. A joint note will be prepared by both SSEs.
- vii. The SSE / C&W will keep stock of necessary fittings for maintaining rakes. The SSE / JE / P. Way will then be responsible for fittings available in the rake till the rake is in his charge. When the rake is sent for TXR examination after expiry of BPC, the list of missing fittings will be prepared w.r.t. previous joint note drawn between SSE / C&W and SSE / JE (P. Way) at the time of taking over.
- viii. The BPC is valid for movement of the rakes over SCR jurisdiction only.
- ix. It is the responsibility of SSE / P. Way in-charge of Ballast depot to move the rake to Base depot in Empty condition prior to expiry of BPC, so that running of these trains with invalid BPC is completely avoided.
- x. After loading / unloading, TMLP check should be conducted for ensuring safe running of DMT.

4. Pre-loading of the Ballast at depot :

- i. SSE / P. Way in-charge of Ballast Depot must ensure oiling and greasing of door operating mechanism in all the wagons of BOBYN rakes at Ballast Depot before loading of every trip and must keep a proper record in the form of a Log Book. The sectional ADEN and Sr. DEN during their inspection at ballast Depot should check the Log Book and ensure that the same is properly maintained.
- ii. Door operation of all the wagons should be checked before offering the rake for loading of ballast.
- iii. Wagon with defective doors should not be permitted for loading and prominently marked as **“Not to be loaded”** and the same to be informed to C&W control for attending repairs.
- iv. Defective wagon should be examined and attended by C&W staff. If it is not possible to attend the repairs, same should be booked to Base depot for attention.
- v. SSE / P. Way / In-charge of Ballast Depot will maintain a Log Book in the following pro-forma in which deficiencies observed before loading of rake should be entered :

| Date of Checking | Deficiencies observed | | | BOBYN Nos. in which Oiling and Greasing done and doors handles have free movement | Any other remark of the inspecting officials | Signature of the inspecting officials |
|------------------|--|---|---|---|--|---------------------------------------|
| | BOBYN Nos. in which doors are badly jammed and could not be opened | BOBYN Nos. in which gap observed even in closed position of doors | BOBYN Nos. in which door opening assembly is very tight and is not working smoothly and doors opened with a lot of extra effort | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

- vi. In case, any partially unloaded wagon is noticed after placement of empty rake for loading of ballast, the wagon(s) should be examined for defective doors.
- vii. If the left-over ballast is due to defective doors, the quality should be measure and record kept separately for adjustment / accounting of ballast at a future date by SSE / P. Way in-charge of Ballast Depot. The wagons with defective doors will not be loaded further.
- viii. While loading the ballast, it must be ensured that there is no uneven loading in any hopper.
- ix. Before entering into block section, opening of doors should be checked and if some of the doors of any BOBYN are not opening properly, unloading should not be done from that wagon and C&W staff should be booked on the next day to attend the same in the depot.
- x. The list of deficiencies should be handed over to TXR when rake goes for issuing BPC.

5. Action to be taken prior to departure of Ballast DMT from depot :

The In-Charge of the Ballast Depot should ensure that the BOBYNs are loaded & levelled up to the pre-determined paint mark depending on the Carrying Capacity of the BOBYN.

6. Action to be taken prior to departure of Ballast DMT before taking the block :

- i. When the rake arrives, it shall be checked by the concerned SSE / JE (P. Way) for jammed doors / defective door opening mechanism. If after making all efforts to open the door fails, all such wagons with defective / jammed doors shall be reported to C&W control through SM / Control message.
- ii. If the wagon cannot be attended at site, the wagon should be marked as "NOT FIT FOR UNLOADING". Such wagons should then accordingly be planned to be detached and sent to C&W depot by SM concerned for necessary attention.
- iii. The ballast train should be accompanied by a qualified Engineering Official in-charge not below the rank of JE (P. Way) and one efficient Blacksmith with required tools. He should be well conversant with the rules & regulations pertaining to the working of DMT. The Official-in-charge should have the details of exact location at which the ballast has to be unloaded, duly approved by SSE / P. Way or ADEN. Proper planning for unloading of ballast hoppers TP wise should be done by SSE / JE / P. Way in advance and clear signal should be shown to drivers to stop at exact required locations.
- iv. SSE / JE / P. Way should always be available during unloading of Ballast DMTs. SSE / JE should remain at site after completion of unloading and clear the track from heaps of ballast which obstruct DMT movement duly ensuring closing of the doors of empty hopper wagons.
- v. Adequate trained / competent experienced labour shall be made available during unloading of Ballast DMT.
- vi. Ballast train should not be taken in to section for unloading if any hopper is having uneven load. The unevenly loaded wagon should be adjusted before taking in to the section.
- vii. Ensure that the safety equipment and first aid boxes are available with supervisor and are in good working order and in updated condition.
- viii. In case of non-operation of doors detected after loading of ballast / movement of DMT, a message to be given to C&W control for arranging staff to attend.
- ix. Manpower Requirement:
 - a. 02 SSE / JE / (P. Way) should always be available during unloading of ballast DMT. One SSE / JE (P. Way) should remain at site after completion of ballast unloading for ensuring clearance of track and S&T gears from unloaded ballast.
 - b. Sufficient (minimum 12-15) labours should be available.
 - c. A Blacksmith for handling jammed gears of door flaps, if any, shall also accompany the ballast DMT.

7. Action to be taken during unloading of Ballast DMT by SSE/JE (P. Way) for unloading :

- i. Unloading should be done during daylight hours from sunrise to sunset.
- ii. Direct unloading of ballast on Platform lines should not be undertaken. Ballast may be first unloaded on the adjoining non-platform lines in phases and then taken to Platform lines.
- iii. DMT should not be moved at higher than 8 to 10 KMPH speed while unloading ballast. Also, DMT shall move only in one direction and no pushing back without clearing flange way is permitted.
- iv. Protection of the ballast train as per GR 15.09 and IRPWM Para 806 must be ensured.

- v. While ballast train is working, it should be ensured that all the doors are opened slowly to avoid sudden discharge and uneven spreading of the ballast. On curves, inner side door should be adjusted so that the required quantity of unloading is ensured on both the sides of the track.
- vi. While unloading ballast from hoppers, care should be taken in Point and Xing Zones, so that check rails and gap between tongue rail and stock rail are clear. (Motors of points be covered with any wooden / MS sheet to avoid dropping of ballast between point rods)
- vii. DMT should not be stopped while unloading is in process. If the ballast train has stopped during unloading, it should be ensured that the ballast is clear off the top table of rail and flange way before starting the train.
- viii. All TL JB (Track Lead Junction Box) should be kept clear off ballast. OHE mast should be clear off ballast so that it can be checked whether bonding of mast with rail is intact or not.
- ix. If for any reason one side door is not opened opposite door should also be closed so that uneven unloading is avoided.
- x. Due to poor visibility at the time of unloading, if it becomes difficult to exchange signal between LP and Train Manager / SSE / JE / P. Way, Walkie Talkie sets should be made available to the LP and Train Manager / SSE / JE / P. Way for proper and safe working of DMTs. Walkie-Talkie sets should have particular channel for Engg. staff so that loco pilot will not get disturbed and loco pilot will be advised of movements through the person available on engine orally. Sufficient Nos. of P. Way staff should be provided to exchange signal between driver and Guard / SSE / JE / P. Way.
- xi. Wagons which cannot be opened / unloaded even with the help of Blacksmith, empty rake with such unloaded wagons shall be taken to nearest yard / stabling lines for getting the door attended by TXR. After repair of defective doors, ballast from these wagons shall be unloaded at convenient locations, ballast accounted for and empty rake dispatched to loading depot. By mistake, if unloading is done unevenly those rakes should not be taken on to loop line via turnouts and also try to move such wagons on curves with restricted speed with all precautionary measures.

8. Action to be taken after unloading of Ballast DMT by SSE/JE (P. Way) :

- i. After unloading the ballast, it must be physically ensured that no ballast is left in the wagon. In case any ballast is left in the wagon for unloading during next block period, such ballast in the wagon shall be levelled manually duly taking care of OHE lines and the DMT must be taken to nearest station with speed restriction as considered necessary ensuring that speed is not more than 10 kmph.
- ii. SEJs should be cleared off stone ballast after unloading.
- iii. Ensure clearance of ballast heaps properly to avoid jamming of signal rods, gears and lock bars after unloading.
- iv. Ensure that unloaded ballast from train should be kept clear off moving dimensions. If required suitable SR may be imposed.
- v. SSE / JE / P. Way who is official In-charge of DMT will ensure before leaving the site that no stone is left inadvertently between the stock rails, tongue rail, Check rail & nose of crossings etc.

- vi. Ballast which has fallen between the running rail and check rail on curves & LCS should be cleared invariably before clearance of the block.
- vii. Ballast heaps should not obstruct the movement of wheel.
- viii. While giving the Memo to SM for clearing the block of unloading of ballast, it must be ensured by SSE / JE (P. Way) supervising the work that there is no infringement to moving dimension i.e. unloaded ballast does not infringe the Schedule of Dimensions (SOD) and shall further ensure that all Engg. and S&T gears / installations are free from any obstructions which may have been caused due to unloading of ballast.
- ix. Despite all precautions it is likely that some ballast may hit the foot board of the train resulting in rising of dust etc. It is therefore, recommended that a speed restriction of 45 KMPH be imposed for the first train which passes over the portion where the ballast had been unloaded. Caution order shall indicate the location where the ballast had been unloaded and also that the temporary engineering indicator Board are displayed at sites.
- x. SSE / JE (P. Way) / Mate with gang shall remain at site standing at gaps to cover entire unloaded length until first train has passed. Without ensuring unloaded ballast clear off running gears of train Track FIT certificate should not be issued.
- xi. After each unloading, SSE / P. Way in-charge of Ballast depot should ensure clearing of the ballast dust from gear wheels of door operating mechanism and then oiling and greasing of door operating mechanism should be carried.
- xii. In order to ensure complete unloading of ballast, the hopper doors must be in working order after unloading of ballast hoppers (BOBYN rakes), SSE / JE (P. Way) supervising unloading must also invariably record the unloading details in the following tabular form in a register.

| Nos. of Hoppers | | | |
|-----------------|-----------------|----------------|-------|
| Received Empty | Partly unloaded | Fully unloaded | Total |

9. (i) Mechanical staff dealing with BOBYN wagons should be well conversant with the "Technical Guidelines for maintenance of door opening mechanism in BOBYN Wagons" as issued and circulated by Mechanical Directorate of Railway Board vide Lr. No. 2005 / M / 204 / 3 (E-3346728) dated 08.11.2004.
- (ii) A copy of this JPO should be made available with the Supervisors handling ballast DMT in the field and engineering control of the Divisions. The Division engineering control should also be in touch with the supervisors handling the ballast DMT and keep them reminding time to time about the various provisions of the JPO. Any discrepancies noticed by engineering control should be immediately brought to the notice of branch officers positively.

Sd -/-
CRSE / Freight

Sd -/-
CELE

Sd -/-
CFTM

Sd -/-
CTE

SAFETY ORGANISATION

SOUTH CENTRAL RAILWAY