

## CE Circular no. 141

### LOADING & UNLOADING OF BALLAST DMT

A need was felt to issue comprehensive instructions for loading and unloading of ballast from DMTs. Therefore this circular is being issued to cover all aspects of ballast loading/unloading from DMTs. Earlier instructions issued in this regard vide letter dated 19.11.2024 and 17.07.2019 will be superseded by this CE Circular. There have been few cases of derailment of hoppers wagons on IR due to uneven loading of ballast, caused by uneven unloading and also due to offloading of wheel due to jamming of ballast. To avoid the recurrence of such incidents, following actions/precautions must be ensured:

#### 1. Action to be taken at ballast Depot SSE/JE( P-Way)/ In-charge of ballast depot:

- i. SSE/JE( P-Way)/ In-charge of ballast depot must ensure that oiling and greasing of all door opening assembly of BOBYN rake at ballast Depot has been completed before loading in 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 the ballast Depot should see the log book and ensure that the same is properly maintained.
- ii. All wagon doors should be checked for one complete cycle of opening and closing before starting loading of ballast to ensure proper working of gears.
- iii. Wagons with defective doors and handles should not be permitted for loading and prominent marking **"Not to be loaded"** to be done. These wagons should be attended during next TXR examination and repaired.
- iv. SSE/JE (P-Way) In-charge of Ballast depot will maintain a log book on the following Performa in which deficiencies observed during checking 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 remarks of the inspecting official	Signature of the Inspecting official
	Whether central doors permanently blocked (Yes/No)	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			

List of wagon numbers having central doors permanently blocked may also be provided so that **"CENTRAL DOORS NOT WORKING- DO NOT OPERATE"** may be stencilled on wagon.

- v. Before entering into block section, opening of doors should be checked and if all 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 Depot.
- vi. The list of defects during the course of BPC validity should be handed over to TXR when rake goes for issuing BPC.

#### 2. Action to be taken prior to departure of ballast DMT from depot by SSE/JE (P.Way) supervisor:

- i. The ballast train should be accompanied by a qualified Engineering official -in- charge not below the rank of JE (P.Way). He should be well conversant with the rules & regulations pertaining to the working of Ballast DMT. The official in-charge should have the detail of TP wise exact locations at which the ballast hoppers are to be unloaded



- ii. 02 SSE/JE (P.way) should always be available during unloading of ballast DMTs. One SSE/JE (P.way) should remain at site after completion of unloading and clear the track where ballast heaping occurs.
- iii. Minimum 12-15 labour should be available with Ballast DMT.
- iv. Ballast DMT must be accompanied by the railway black smith (Engg) with requisite tools for handling jammed gears of door flaps if any. He should also have oil to make door operation smooth on subsequent loading/unloading.
- v. Ballast train should not be taken into section for unloading if any hopper is having uneven load, the unevenly loaded wagon should be adjusted before taking it into the section.
- vi. Ensure that the safety Equipment and first aid boxes available with supervisor are in good working order and in updated condition.
- vii. Break van must be attached to the ballast DMT. Guard must work from his break van, when the DMT is worked.

**3. Action to be taken during unloading of Ballast DMT by SSE/JE(P.Way) supervisor.**

- i. The sectional P-Way Engineer, not below the rank of JE/P-Way shall be responsible for:
  - (a) Supervising safe unloading of ballast.
  - (b) Placement of unloaded ballast, in safe position, so that ballast does not infringe the standard Dimensions.
- ii. Direct unloading of ballast on platform loop line is not to be resorted to. Ballast may be unloaded on the adjoining non-platform loop line or Main lines in phases and then taken to platform loop lines.
- iii. Ballast DMT should not be moved at speeds higher than 8 to 10 Kmph while ballast unloading. Ballast DMT shall move only in one direction and no pushing back should be done.
- iv. Protection of the ballast trains as per GR15.09 and IRPWM Para no 806(1) 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 the ballast is spread uniformly. On curve inner side door should be adjusted so that the required quantity of unloading is ensured on both the sides of track.
- vi. If for any reason one side chute (Door) is not opening than opposite chute should also be closed so that uneven unloading is avoided.
- 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 rail table and flange way before movement of the train.
- viii. The ballast should not be unloaded on LCs and un-ballasted girder Bridges.
- ix. A continuous proceed hand signal shall be shown by the Guard/(J.E/SSE/Pway) throughout the movement of the train during unloading.
- x. Due to poor visibility at the time of unloading if it becomes difficult to exchange signal between driver and guard/ SSE/JE( P-Way). Walkie-Talkie set should be made available to the driver and guard/PWI for proper and safe working of DMTs. Sufficient nos. of P-way staff should be provided to exchange signal between driver and Guard/PWI.



**4. Action to be taken after unloading of Ballast DMT by SSE/JE (P-Way) supervisor unloading.**

- i. After unloading the ballast it must be physically ensured that no uneven unloading of ballast exists. In case of uneven unloading in rake is noticed and same cannot be attended to in the block, DMT should be moved on main line.
- ii. Left over Partially unloaded hoppers (due to Jamming of Doors) after traffic block should be emptied at first opportunity by tackling jamming of doors with the help of black smith. Wagons which still remain partially loaded should be taken with rake on main line to nearest station (under memo to operating department) for getting the door attended by TXR. After repair of defective doors, ballast from these wagons shall be unloaded on main line at convenient location & empty rake dispatched to loading depot.
- xi. SSE/JE (P.Way) 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 Crossing, SEJ, running rail and check rail on curve. Ensure clearance of ballast properly to avoid jamming of signal rods, gears and lock bars after unloading. Bond wire should be kept clear off ballast. These should not be embedded in ballast.
- iii. While giving Memo to the ASM 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 dimensions.
- iv. Before clearing the traffic block of ballast DMT at station, Engineering official in charge of Ballast DMT shall ensure that the all ballast hopper are completely empty. This aspect shall be confirmed by exchanging private number with divisional engineering control. Private number book shall be maintained by each SSE/P.Way and Divisional engineering control and this should be used only for Ballast DMT.
- v. 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 45Kmph be imposed for 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 mention in caution order that the temporary engineering indicator board are not displayed at site.
- vi. Mate with Gang shall remain at ballast unloading site until next two trains have passed.
- vii. SSE/JE(P-Way) unloading must also invariable record the unloading details in the following tabular form in a register:-

Nos. of Hoppers unloaded			
Fully emptied	Partly unloaded	Fully unloaded	Total

**5. General:**

- i. Ballast DMT unloading should be done during Daylight hours from **sunrise to sunset**.
- ii. Do not work DMTs on foggy/stormy days when visibility is poor.
- iii. Do not allow any safety category staff who is overdue for refresher course, to undertake the DMT work.
- iv. In case ballast being 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 the ballast train and counselled about






safety measures. Assurance should be obtained from the supervisor that he is well conversant with the rules & regulations pertaining to the working of ballast train.

- v. The Ballast trains should be moved with requisite brake power only.
- vi. It is the responsibility of DEN/Sr.DEN of the Division operating the ballast contract to impress upon the concerned Sr.DME/C&W to ensure proper checking of unloading gears of wagons at the time of TXR Examination before issuing fit to run certificate to BOBYN wagons.
- vii. Only one hopper should be unloaded at a time while train moves at walking speed.
- viii. The official-in-charge should walk on the side and instruct to labour as and when to open or close the hopper doors (so as to avoid uneven unloading of ballast).
- ix. Ballast train should not be stopped while unloading and if it is stopped due to any reason, the same should not be moved without ensuring the clearance of ballast from track under the wheels. Labour should not be allowed to move from the hopper, platform without first stopping the train.

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