

## EAST COAST RAILWAY

Office of the  
Pr. Chief safety officer  
Bhubaneswar.

No:- ECoR/SFY/Alert advice-38/2024/429

Date: 18.06.2024

To

The Divisional Railway Manager  
KUR, SBP & WAT

### ALERT MESSAGE-38

**Sub:- Detection of Hot Axle/Dangerous vehicles & Action therein.**

With the increase of freight service; detection of Hot axle cases is in an increasing trend in ECoR. In the year 2023-24 a total of 74 & in 2024-25 upto 31<sup>st</sup> May 16 hot axle cases were detected and wagons were detached prior to any incident. Out of these, some cases were detected early and some in serious stage (Smoke, Fire & Melting of metal).

Time and again it is reiterated that hot axles have a potential threat to safe train operation and should be dealt with seriously. A hot axle in a train is indicative of an impending accident of Consequential in nature in terms of derailment involving one or more trains which incurs heavy damage to Railway property and huge loss due to interruption of train services. The failures towards early detection of hot axle are corroborated to casual and relax approach by the train passing staff. Some derailments in ECoR due to hot axle are as under:

1. On 02.05.2024 at 17:25 Hrs, train No. E/NYET(Ld) while passing through main line at Muktaposhi station, of TMKA-BDPK BG electrified section in KUR Div derailed by 01 wagon due to hot axle & journal cut.
2. On 09.02.2022 at 16.40 hrs front trolley of wagon no ECR221012172759 of train No. ME/NY-JSWT after passing Solari Station derailed due to Hot axle.
3. On 09.07.2021 train No. HIMB BTAP while admitting on Mail line at NPD yard of SBP division, rear trolley of wagon no ECoR 46441220324, 14<sup>th</sup> from rear got derailed due to hot axle.

Responsibility of various categories of staff in respect of detecting hot axle wagons on train and action to be taken by them is incorporated in SR 4.29.01 to 4.29.03 , 4.42.02(d), & 16.04.01 & BWM 2.07(10).

Following are reiterated for better appreciation of existing instructions for strict adherence:

#### **A. Symptoms of Hot axle:**

Cartridge type Roller bearing (CTRB)	Cause
<b>Primary Stage:</b>	
a. Feeling Warm & hot while passing or by spraying water/ spitting or feeling by hand	➤ Uneven loading/ overloading
b. Smell of burnt oil and waste.	➤ Continuous brake binding, Improper use of Empty Load handle
c. Whistling sound.	➤ Wheel skidding
<b>Dangerous Stage:</b>	
d. Smoke & then flame from the axle box.	➤ Dry lubrication, Loose packing, Improper sealing & Deficient waste packing
e. Red hot condition of the axle and box.	➤ Foreign body in axle box during ROH.
f. Melting of metal & drops from the cover.	➤ Improper ROH.
	➤ Defective bearing
	➤ Shifting of bearing (rough shunting)

**B. Action to be taken by crew and guard:-**

1. On noticing the hot axle on train by themselves or being intimated through station staff or GKs/Patrolman, Engg. Gang/Keyman & Crew/Guard of other trains, LP to stop the train immediately and inform the condition to SM & Section controller & Crew controller.
2. The LP & Guard shall examine and decide the possibility to take the train at restricted speed up to the next block station where siding facility is available for detachment or to the nearest C&W base for necessary examination as per the condition of the vehicle.
3. While negotiating points, walking speed to be maintained.
4. During the journey between stations they shall look back and keep a good look out as per GR 4.41, 4.43 and SR 4.43.02 & 03 to see if any vehicle on the train running hot and in dangerous condition or any signal given by GKs or TM in section and take steps as the situation may warrant vide SR 4.29.02.

**C. Action to be taken by gate keepers, key men/Patrol men:-**

1. On noticing the hot axle or being informed, the Gate man shall at once show stop hand signal to attract the attention of Guard and LP to stop the train. He can also attract attention of LP by shouting, gesticulating and frequent whistling. Walkie-Talkie, if available can also be used to inform the Loco Pilot and Guard. (SR 16.04.01)
2. If guard is not seen outside, stones may be pelted on BV (with care not to injure the guard) and whistles used freely to draw his attention and if the train stops, he shall render such assistance as the Guard may require from him.
3. SM to be intimated immediately over telephone regarding the condition.

**D. Action to be taken by station staff:-**

1. On noticing or being intimated of a Hot axle in a train SM has to put back Last Stop Signal & reception signal other than Main Line immediately to stop the train.
2. Wave danger signal in a wide ark left to right across their chest to stop the passed through train.
3. In case a hot axle is detected after the train has already passed the station, the SM will try to attract the attention of Guard and LP by showing hand signal as indicated above, through VHF, by putting back LSS and shall advise the gateman to stop the train.
4. If not possible to stop - inform mid section GKs & SM of advanced station to stop and examine the train as per BWM 2.07(10). Section Controller has to be intimated.  
**Advantage may be taken by switching off power in consultation with Traction Power Controller in electrified section (SR 4.29.01)**
5. The SM of station in advance has to receive the train preferably on M/Line directly keeping LSS (Last Stop Signal) danger or by Indirect reception on loop line. Pre-intimation to LP & Guard regarding the train is running with Hot axle/Brake binding/Dangerous vehicle is to be given over WT or means of communication available.
6. At stations other than train examining station or attendance of C&W staff not possible within a reasonable period, SM in consultation with driver/guard and section controller, **take necessary step for detaching the vehicle vide GR 4.29 (2).** Prior to that a memo has to be received from LP that the culprit wagon cannot move and needs to be detached.

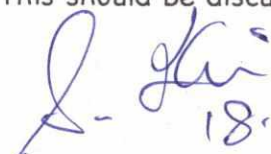


7. If the LP considers the wagon is fit to continue journey with/without speed restriction, the matter should be brought to the notice of Officer of Mechanical Dept/C&W controller through the section controller and his orders is to be obtained before the train is allowed to continue journey.
8. If on intimation of a train enters with dangerous vehicle in the block section in the D/L, triple line or parallel single line section, the SM of both stations will stop the train movement on the adjacent line/other line until the said train arrived complete or caution order to be issued to LP and Guard of the train waiting to proceed to keep a sharp look out. BWM 2.07 (10) ( C ).
9. Water must not be thrown/applied on a Hot axle box to put down fire/smoke when hot. Sand/earth may be used and station fire extinguisher (DCPT) may also be used for extinguishing the fire.
10. All effort is to be taken to detach & keep the hot axle wagon in siding/other line when it is in hot condition or otherwise advised by LP, Guard and C&W staff.

**E. Action by Section Controllers:**

1. Train must be stopped at first approaching station, if not possible action shall be taken to stop the train at the next station.
2. In case train allowed to proceed at restricted speed, he shall advise the SM of the concerned station to issue proper caution order besides advising the notice station/Crew changing station on the run of the train for issue of similar caution order.
3. He must coordinate in arranging attendance of C&W department at the spot in seeking advice of an officer of the Mechanical dept. & on receiving proper assurance certifying the safe ability of the culprit wagon to move, should permit the train to resume its run with/without speed restriction as the case may be, otherwise action shall be taken to detach the culprit wagon.

All section DTIs, CLIs, JE/SSE (C&W), JE/SSE (P.Way) & CHCs are advised to counsel the staff and monitor strict adherence of the instructions in letter & Spirit and ensure no short cut to be allowed under any circumstance. This should be discussed in monthly safety meeting.

  
18.6.24  
**Pr. Chief Safety Officer(I/c)**  
**Bhubaneswar**

**Copy to-**

1. Secy. to GM for kind information of GM.
2. Secy. to AGM for kind information of AGM.
3. PCE, PCME, PCOM, PCEE, PCCM, PCSTE, PCSC & CAO (Con) for information.
4. Sr.DSO/ KUR, SBP & WAT for information & necessary action.
5. Principal MDTC/VSKP & MDZTI/BBS for information & necessary action.