



No. ECoR/SFY/813

Date 04.11.2024

**Safety Circular No. 13/2024**

**Subject: Prevention and Timely Detection of Hot Axle in LHB Coaches.**

Recently a number of Hot Axle cases are reported for ECoR based LHB coaches in ECoR territory and other railways. Hot Axle is a potential threat to safe train operation and can cause serious accidents. Hot Axle in a coach occurs when there is an increase in temperature of the CTRB due to inadequate lubrication or failure of bearing. If remains undetected, it can cause lead to derailment. In view of this following instruction are being re-iterated for prevention and timely detection of Hot Axle in LHB coaches.

1. Maintenance of CTRBs during SS 1, SS 2 and SS 3 to be done with utmost care and as per extant guidelines. No shortcuts are to be allowed under any circumstances.
2. Maintenance work of CTRBs should be confined to a specific area. This area should be maintained clean and dust free.
3. Re-usable CTRBs and their components must be stored in an area that is clean and free from moisture.
4. Newly procured CTRBs and their components should not be removed from shipping package until they are to be installed onto an axle or assembled as a Bearing Assembly.
5. Axle Boxes to be examined and checked properly during D1, D2 and D3 schedules.
6. Work instructions related to maintenance of CTRBs and Axle Boxes are to be displayed clearly using pictures in the shop floor at workshops and depots.
7. Clear path to earth should be provided to the coaches while performing welding so that electric current does not pass through CTRBs. It can cause failure of bearing due to arc generation between rollers.
8. HABDs to be installed in desired location and should always remain in working condition.
9. Train Crew should look out for unusual symptoms while running on curves and to watch carefully for the signals exhibited by station staff and other railway staff. Train to be controlled immediately on observation of Hot Axle.
10. Line Staff to remain vigilant while a train is passing. If any symptoms of Hot Axles are observed it should be immediately signaled to Train Crew and to be reported to SS/SM of the next station for controlling train.
11. C&W Staff to remain attentive while performing rolling-in-examinations and to look out for symptoms of Hot Axle.
12. Below tabulated actions are to be taken on the basis of temperature difference of Axle Boxes in same Axle and absolute temperature of Axle Boxes.

Sl. No.	Difference in Axle Box Temperature in Same Axle (in °C)	Action
01.	≤ 10	Allow the coach in same condition.

02.	> 10 ≤ 15	Allow the coach in same condition with a message to next TRX Point for examination.
03.	≥ 16 ≥ 20	Allow the coach in same condition with accompanying C&W staff up to destination.
04.	> 20	Coach to be detached.
<b>Axle Box Temperature (in °C)</b>		
01.	Coach to be detached if Axle Box Temperature is more than or equal to 80 °C.	

13. Symptoms of Hot Axle are tabulated below for reference.

<b>Symptoms of Hot Axles</b>	
<b>Sl. No.</b>	<b>During Day Time (Stationary Train)</b>
01.	Smell of burning grease.
02.	Grease splashes on the surface of wheel disc.
03.	Smoke from Axle Box.
04.	Discoloration of Face Plate.
<b>Sl. No.</b>	<b>During Day Time (Running Train)</b>
01.	Smell of burning grease.
02.	Discoloration of Face Plate.
03.	Screeching sound.
04.	Skidding of wheel due to locked Axle.
<b>Sl. No.</b>	<b>During Night Time (Stationary Train)</b>
01.	Smell of burning grease.
02.	Axle Box cover becomes hot red in color.
<b>Sl. No.</b>	<b>During Night Time (Running Train)</b>
01.	Smell of burning grease.
02.	Screeching sound.
03.	Axle Box cover becomes hot red in color.
04.	Sparks from rail-wheel interface.

Officers and supervisors are advised to counsel staff and monitor the strict adherence of the instructions in letter and in spirit and ensure that no short cuts are allowed under any circumstances. Inspecting officers should cross-check the implementation of above instructions.

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PCSO/ECOR/BBS

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