SOUTH CENTRAL RAILWAY

Safety.387/Fly Leaf/20/2025

Fly Leaf No. 20/ 2025

Attention to all Concerned

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Attention in case of Brake Binding in LHB Coaches.

(RDSO's Letter No.MC/LHB/Brake, Dated: 18.08.2023, Maintenance of Air Brake System and analysis of Brake Binding Cases)

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General Check Points during Brake Binding.

a. Ensure that there is no cattle run over, broken air brake pipes / equipment and air leakages in system.
b. Check the DV isolating handle position.
c. In case of brake application, the brake indicator of the affected bogie will show red colour.
d. Brake indicator of bogie will change colour from red to green when the Brakes are released.
e. Check the availability of release wire/lever of DV.

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Annexure-A

Format for action taken and details to be recorded after Brake Binding in LHB Coaches.

A. Details to be noted at the time of Brake Binding:

Description	Details	Description	Details
Train No.		Primary Maintenance	
Engine No		Secondary Maintenance	
BPC details		Load	
BP & FP (in Loco) as per BPC		BP & FP (in Guard) as per BPC	
Driver		Section	
Station		Coach Details	
Whether Brake Binding involved multiple wheels/axles/bogies.			
Details of Coaches/ bogies / axles / Wheels.		Whether there is any change / reversal of Locomotive enroute	
BP & FP (in Loco) at the time of Brake Binding.		BP & FP (in Guard) at the time of Brake Binding	
Position of Coach		Whether repeated in the trip	
Primary Reason of Brake Binding			
Remarks on action taken			

B. Details to be provided at the PM/SM ends.

S. No.	Description	Remarks
1	Date of last schedule particulars of Coach (whether SS-1, SS-II, or SS-III) and workshop	
2	Dates of last D1 and D3 schedules of Coach	
3	Make of Distributor valve (DV) in affected coach/Coaches	
4	Date/place of Last schedule of DV	
5	Whether schedule of DV done by railway/OEM	
6	Last overhauling date of DV	
7	Previous history of brake binding of the coach (Details to be provided)	
8	Make of Calliper unit and condition of caliper arm movement.	
9	Whether bushes in brake caliper units are self-lubricating.	
10	Check for the cleanliness of breather plugs.	
11	Date of last overhaul/maintenance of Calliper	
12	Drain the AR of affected coach, check if moisture/water is present	
13	Check that the air filters in brake panel are clean and dirt & dust free.	
14	Abnormalities found in rake test carried out as per Annexure-A of Ch.-3 in revised CAMTECH manual [Vol.-ll).	
15	Abnormalities found in Single Car Test Air Brake Testing (Single Car Test) as prescribed in Annexure-B of Ch.-3 in revised CAMTECH manual for LHB Coaches (Vol.-ll)	
16	Any other Abnormality {if noticed)	
17	Final Conclusion on Brake Binding	

Note: If rake arrives first at secondary maintenance end, then all available information to the extent possible to be filled/recorded. However, information from S.No.7 to 16 is recommended to be filled.

Annexure-B

Actions to be taken in case of Brake Binding in LHB Coaches

A. Action to be taken at the site.

Case-1 : If both trolleys [all four axles) are affected (Brake indicators in red position) (This must be ensured by physical checking of brake pads of all wheels)

S. No.	Check	Observations
1.0	**Pull quick release valve wire/lever of DV**	
2.0	If brakes released (Both indicators in green position.)	

2.1	Isolate DV by lifting handle upward and tie with wire. Isolate FP connection to AR through isolating cock fitted in brake module panel & drain AR.	
2.1.1	Pull Quick release wire of DV again for release.	
2.1.2	Physically ensure the release of Brake Pads of all wheels by shaking & brake indicator green position, work the train up to destination.	
3.0	**If brakes are not released (Brake indicator in red position) after action at Para 1.0 above.**	
3.1	Close both trolleys B.C. isolating Cock fitted on brake container unit. **(Rotate the Isolating Cock of the affected Bogie provided on the Brake Panel in Anti- Clockwise direction by 90° to release and isolate the Brake Cylinder of the effected bogie)**	
3.1.1	If released, follow the procedure given in **Para 2.l to 2.1.2**	
3.2	If brakes do not release or brakes release only on one bogie.	
3.2.1	Open flexible pipe of B.C line of one/both the axles of one/both trolley having brake binding.	
3.2.2	Brake will release (Brake indicator in green position).	
3.2.3	Follow the procedure given in **Para 2.1, to 2.1.2.**	

Case-2 : Only one trolley is affected i.e. all pads of trolley are jam.

S. No.	Check	Observations
1.0	Isolate the affected trolley by isolating cock on brake container panel/unit.(for effective trolley) **(Rotate the Isolating Cock of the affected Bogie provided on the Brake Panel in Anti-Clockwise direction by 90° to release and isolate the Brake Cylinder of the effected bogie).**	
2.0	**If brakes released, follow the procedure given inPara 2.1 to 2.1.2 of Case-1.**	
3.0	**If brakes are not released**, loose the flexible pipe nut of BC line of affected trolley.	
3.1	Brakes will release (indicator in green position), **follow the procedure given in Para 2.L to 2.1.2 of Case-1.**	

Case-3 : Only one wheel of trolley is affected (Be sure by physical checking through brake Pads).

S. No.	Check	Observations
1.0	Cylinder of affected wheel in operated condition/brake pad jam.	
2.0	Increase the slack between brake pad and brake disc by slack adjuster nut on brake cylinder (Use spanner - AF24 /27-KB, AF43 for Faively).	
3.0	**If brakes released, follow the procedure given in Para 2.1 to 2.1.2 of Case- 1**	
3.1	**If brakes are not released**, crush the brake pads of affected caliper unit.	

3.1.1	Remove the Brake caliper pivot pin of affected trolley. **If brakes released, follow the procedure given in Para 2.1 to 2.1.2 of Case1**	
3.2	**If brakes are not released**, Remove the Brake caliper unit from trolley by removing the silent block pin engaged with bogie and pull the unit with force.	
3.2.1	Physically ensure for loosing of other caliper unit & Brake pads, **follow the procedure given in Para 2.1 to 2.1.2 of Case-l**	

B. Action to be taken at the time of Primary / Secondary maintenance:

C.1. Air Brake Testing of (Single Car Test) as prescribed in Annexure-B of CAMTECH Maintenance Manual for LHB Coaches:

S. No.	Check	Observations (OK / Not OK)
	Check before conducting SCTR	
1	Drain the AR of affected coach, check if moisture/water is present.	
2	Check for the cleanliness for breather plugs and free movement of brake calipers.	
3	Check that the air filters in brake panel are clean and dirt & dust free.	
4	Check that the wire rope mechanism is provided in QRV of M/s Faiveley make DV.	
5	Air brake hose connections (body to bogie and brake caliper units) are with conical end fittings.	
6	Self-lubricating bushes in brake caliper units	
7	WSP Dump Valve choke sizes as specified by RDS0.	
8	Modified WSP wiring and Junction Boxes with Milgrade connectors.	
	Checks during SCTR	
9	Verify brake application & release in brake cylinder (brake caliper unit) by physically shaking the brake caliper unit.	
10	QRV test should be conducted at least 3-4 times for ensuring the proper working of the same.	

C.2. Actions to be taken post above checks:

In case, any malfunction of DV or Brake calliper unit is noticed during tests, the item should be sent to workshop for further investigation.

C.3. Railways must ensure that relevant instructions/suggestions to avoid brake binding in coaches issued by RDSO vide letter no. MC/LHB/Brake dated 19.01.2017, are also followed.

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SAFETY ORGANISATION **SOUTH CENTRAL RAILWAY**

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