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Research Designs & Standards Organisation
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No. SV. FIAT Spring

Date: As Signed

Principal Chief Mechanical Engineer,

1. Northern Railway, Baroda House, New Delhi -110 001.
2. Western Railway, Churchgate, Mumbai - 400020.
3. Central Railway, CSTM, Mumbai - 400 001.
4. Eastern Railway, Fairly Place, Kolkata- 700 001.
5. Southern Railway, Park Town, Chennai - 600 003.
6. North Frontier Railway, Maligaon, Guwahati-781 001.
7. North Eastern Railway, Gorakhpur -273 001.
8. South Eastern Railway, Garden Reach, Kolkata -700 043.
9. South Central Railway, Secunderabad -500 071.
10. West Central Railway, Jabalpur-482 001.
11. South East Central Railway, Bilaspur - 495 004.
12. South Western Railway, Hubli - 580023.
13. East Coast Railway, Railway Complex, Bhubaneswar - 751 023.
14. East Central Railway, Hajipur - 844 101.
15. North Western Railway, Jaipur - 302 006.
16. North Central Railway, Allahabad -211 001.
17. Konkan Railway Corpo. Ltd., Corporate Office, Belapur Bhawan, Navi Mumbai - 400 614.
18. Integral Coach Factory, Chennai-600038
19. Modern Coach Factory, Lalganj, Raebareli-229 006

Sub: Provision of TPU rings in suspension arrangements of LHB coaches

Ref: (i) This office letter of even No. dated 07.06.2024
(ii) This office letter of even No. dated 04.02.2026
(iii) Railway Board's letter No. 2019/M(C)/137/13CS dated 17.02.2026

1. To address the problems of failures of coil springs, primary vertical dampers, control arm lugs, control arm bushes and primary rubber bump stops, RDSO has issued guidelines for provision of TPU rings in suspension arrangement of all Non-AC LHB coaches and all AC LHB coaches except LWACCN, LWACCW & LWFCWACA coaches vide letter under ref. (i).
2. In continuation to above, Railway Board had approved the trial provision of TPU rings in suspension arrangements of LHB 2nd AC, LHB 3rd AC & Parcel Van Variants coaches and nominated MTN/CR and KGP/SER workshops for the fitment of TPU rings in LHB 2nd AC, LHB 3rd AC & Parcel Van Variants.
3. Based on the encouraging results, RDSO vide letter under ref. (ii) had recommended for provision of TPU rings in primary suspension of all AC LHB Coaches including LWACCN, LWACCW & LWFCWACA Coaches and provision of TPU rings in primary suspension of LVPH Coaches and the same has been approved by Railway Board vide letter under ref. (iii) as under.


a. Provision of TPU rings in primary suspension of all AC LHB Coaches including LWACCN, LWACCW & LWFCWACA Coaches.

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b. Provision of TPU rings in primary suspension of LVPH Coaches.

4. Accordingly, TPU rings shall be provided in the suspension of all LHB coaches(AC&NAC) as detailed in Annexure-I of this letter during SS-I/SS-II/SS-III of the coaches.
5. It is emphasized that provision of TPU rings in suspension of LHB coaches is to be made with proper combination of bogie frame, coil springs, thickness of disc/compensating ring and type of bogie frame.
6. Further, RDSO is in process of development of vendors of TPU ring. Till development of vendors by RDSO, TPU rings as per enclosed drawings may be procured from vendors from BLW vendor directory for "Thermoplastic polyurethane Pads" (Happy pads) for Locomotives to RDSO Specification No . mp.0.40.99.01 Rev - Latest".

DA: As above


18.02.2026

(Anil Kumar Singh)
Executive Director (Std)/Carriage

Copy to:

1. **EDME/Coaching,
Railway Board, Rail Bhawan,
New Delhi** } For kind information please.
2. **PCME,
Rail Coach Factory, Kapurthala.** } For kind information and issuing primary
suspension arrangement drawings for LHB
coaches with TPU rings as detailed in Annexure-I

SUSPENSION COMPONENTS WITH TPU RINGS IN LHB COACHES

SN	Description of Coaches	Primary outer spring (Drg No. & colour code)	Primary inner spring (Drg No. & colour code)	Thickness of disc/CR between Primary rubber bump stop & bottom centering disc	TPU rings in primary suspension	TPU rings in secondary suspension	Type of Bogie Frames
Primary suspension of LHB AC coaches							
1.	LHB AC Chair car (LWSCZAC/ LWSCZAC2), LHB Executive Chair car (LWFCZAC / LWFCZAC2), LHB First AC coach (LWFAC/LWFAC2), LHB Air-Conditioned Railway Administration Coach (LRAAC), LHB Vistadome Coach (LWCTZAC), LHB AC Vistadome Dining Car (LWCTDAC), LHB AC Pantry cum dining car of Deccan Queen (LWCBACDQ), LHB AC pantry car with coil spring/Air Spring in secondary suspension (LWCBAC / LWCBAC2/LWCBACA/LWCBPP)	1267411 (Green)	1267412 (Green)	08 mm	#06 mm thick TPU rings only at bottom of primary outer & inner springs as per RDSO drawing no. CG-20049 Alt.1	None	Bogie frame having top metal primary stop of 242.5 mm nominal height (from bogie frame bottom in spring pot)
2.	LHB AC power car with two on-board DA set (LWLRRM /LWLRRM2/LWLRRMAA/LWLRRMU)	1277142 (Yellow)	1277143 (Yellow)	12 mm			
3.	AC 2-Tier Sleeper Coach with Coil Springs/ Air Springs in secondary suspension (LWACCW)/LWACCW2/LWACCWAA), LHB AC 3-Tier coach with Coil Springs/Air Springs in secondary suspension (LWACCN)/LWACCN2/LWACCNAA/ LWACCNE), LHB AC first cum two tier coach with Coil Springs/Air Springs in secondary suspension (LWFCWAC/ LWFCWACA)	LG01100 (Black)	LG01101 (Black)	08 mm	*06 mm thick TPU rings at both top & bottom of primary outer & inner springs as per RDSO drawing no. CG-20049 Alt.1		
4.	LHB AC GS Coach (LWSACAA)			04 mm			
Primary suspension of LHB Non-AC Coaches (With 140 KN &160 KN Air Springs in Secondary suspension of Bogie)							
5.	LHB Non-AC unreserved second class coach (LS-5/LWS/LS-5A/LWSPP/LWSAA), LHB Non-AC Three tier coach (LWSCNA/LWSCNAA/LWSCNPP), LHB Non-AC DSLR coach with underslung power pack & compartments for Divyangjan, second class passenger, Guard & Luggage (LDSLRA), LHB Non-AC Chair car (LWSCZA/LWSCZAA), LHB Non-AC SLRD coach (LSLRD/LSLRDAA/LSLRDPP), LHB Non-AC power car with single on board DG set and compartment for Divyangjan, luggage and Guard (LWLRRMD)	LG01100 (Black)	LG01101 (Black)	15 mm	*06 mm thick TPU rings at both top & bottom of primary outer & inner springs as per RDSO drawing no. CG-20049 Alt.1	None	Bogie frame having top metal primary stop of 227.5 mm nominal height (from bogie frame bottom in spring pot)
6.	High capacity parcel van with Air Spring in secondary suspension (LVPH / LVPHR)			12 mm	#06 mm thick TPU Rings only at bottom of primary outer & inner springs as per RDSO drawing no. CG-20049 Alt.1		
Primary suspension of LHB Non-AC Coaches (With Coil Springs in Secondary suspension) and provision of TPU Rings in secondary suspension							
7.	LHB Non-AC unreserved second class coach (LS-3), LHB Non-AC three tier coach (LWSCN (78 seats) /LWSCN 1 (80 seats)), LHB Non-Ac Chair Car Coach (LWSCZ)	LG01100 (Black)	LG01101 (Black)	04 mm	*6 mm thick TPU rings at top & bottom of primary outer & inner springs as per RDSO drg. CG-20049 Alt 1	\$6 mm thick TPU rings only at bottom of secondary outer & inner springs as per RDSO drg. CG-20057 Alt 1	Bogie frame having top metal primary stop of 242.5 mm nominal height (from bogie frame bottom in spring pot)

#One TPU ring below outer primary spring & one TPU ring below inner primary spring; both TPU rings above bottom centering disc are to be provided.

*One TPU ring each below & above outer primary spring and one TPU ring each below & above inner primary spring; 2 TPU rings above bottom centering disc & 2 TPU rings below upper centering disc are to be provided.

\$ One TPU ring below outer secondary spring & one TPU ring below inner secondary spring; both TPU rings above bottom centering disc are to be provided.

