



भारत सरकार - रेल मंत्रालय  
अनुसंधान अभिकल्प और मानक संगठन  
लखनऊ - 226 011  
EPBX (0522) 2451200  
Fax (0522) 2458500

Government of India-Ministry of Railways  
Research Designs & Standards Organisation  
Lucknow - 226 011  
DID (0522) 2450115  
DID (0522) 2465310



पत्रांक : एमसी/सीटीआरबी/डिफेक्ट

दिनांक : 11.02.2019

प्रमुख मुख्य यांत्रिक अभियन्ता,

1. मध्य रेलवे, छत्रपति शिवाजी टर्मिनस, मुम्बई- 400 001.	11. पूर्व तटीय रेलवे, बीडीए रेंटल कालोनी, रेलवे काम्प्लेक्स, चन्द्रशेखरपुरा, भुवनेश्वर, उड़ीसा- 751 016.
2. पूर्व रेलवे, फेयरली प्लेस, कोलकाता- 700 001.	12. उत्तर मध्य रेलवे, हास्टिंग रोड, इलाहाबाद-211 001.
3. उत्तर रेलवे, बड़ौदा हाउस, नईदिल्ली- 110 001.	13. उत्तर पश्चिम रेलवे, जयपुर- 302 006.
4. दक्षिण रेलवे, पार्कटाउन, चेन्नई- 600 003.	14. दक्षिण पश्चिम रेलवे, हुबली- 580 023.
5. दक्षिण मध्य रेलवे, रेल निलायम, सिकन्द्राबाद -500 071.	15. पश्चिम मध्य रेलवे, जबलपुर- 482 001.
6. दक्षिण पूर्व रेलवे, गार्डनरीच, कोलकाता- 700 043.	16. दक्षिण पूर्व मध्य रेलवे, आरई आफिस काम्प्लेक्स, बिलासपुर- 495 004.
7. पूर्वोत्तर रेलवे, गोरखपुर- 273 012.	17. आधुनिक रेल डिबा कारखाना, लालगंज रायबरेली-229 206
8. पूर्वोत्तर सीमान्त रेलवे, मालीगाँव, गुवाहाटी- 781 011.	18. इन्टीगरल कोच फैक्ट्री, चेन्नई- 600 038.
9. पश्चिम रेलवे, चर्चगेट, मुम्बई- 400 020.	19. रेल कोच फैक्ट्री, हुसैनपुर, कपूरथला- 144 602.
10. पूर्व मध्य रेलवे, हाजीपुर- 844 101.	20. कोंकण रेलवे कार्पोरेशन लि., कार्पोरेट आफिस, बेलापुर भवन, नवी मुम्बई- 400 614.

विषय : Drive to check maintenance practices of CTRB in LHB Coaches.

संदर्भ : This office letter No. MC/CTRB/Genl. dated 10.01.2019.

The frequent CTRB failures on LHB Coaches are a matter of great concern. In order to combat this problem, RDSO has already reiterated compiled instructions regarding maintenance of CTRBs and Control Arms of LHB design coaches vide letter referred above. It is requested to ensure that the instructions issued as above are fully adhered to. In addition to this, it is proposed to launch a drive by Zonal Railways to check maintenance practices of CTRBs in LHB coaches in order to ensure trouble free service. LHB coaches should be checked as per check list enclosed and consolidated report should be advised to RDSO periodically.

संलग्नक: उपरोक्त

  
11-2-19

(शोभित प्रताप सिंह)

उप निदेशक (वीडीजी)/सवारी डिब्बा  
कृते कार्यकारी निदेशक (मानक)/सवारी डिब्बा

प्रतिलिपि : निदेशक यांत्रिक अभियन्त्रण (कोचिंग), रेलवे बोर्ड, रेल भवन, नई दिल्ली-110 001.

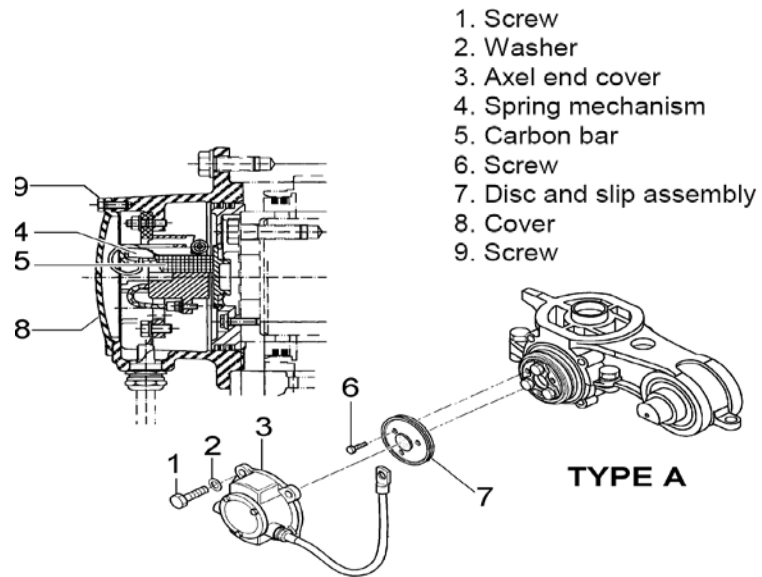
Diagram illustrating a 2D array structure with 8 columns and 2 rows. The top row is labeled "POWER PANNEL END" and the bottom row is labeled "NON POWER PANNEL END". The columns are numbered 1 through 8 at the bottom, and 2, 4, 6, 8 at the top.

- 
- Diagram illustrating a 2D array structure with 8 columns and 2 rows. The top row is labeled "POWER PANNEL END" and the bottom row is labeled "NON POWER PANNEL END". The columns are numbered 1 through 8 at the bottom. The top row has labels 2, 4, 6, 8 above it.

S. No.	Activities	Schedule	Specified Value/attribute	Observation				Action if found non conforming
1	Check the axle end cover mounting bolt missing /loose	D1 D2	M16x45  Tightening Torque 170 Nm					Must be attended
2	Check for Loose or Missing Axle End Screws.	D3	M20X60 Fasteners should be as per RDSO letter No. MC/CTRB/Genl. Dated 06.07.2015.	2.  1.	4.  3.	6.  5.	8.  7.	If one axle end bolt is found loose or missing, remove all of the bolts, fit new locking plates, refit all of the bolts and tighten to the correct torque i.e. 200Nm. Bend all tabs against the flats of the bolt heads. If two or more axle end screws of different pairs are found loose or missing, the wheel set must be removed from the bogie.
3	Check the control arm properly intact or not	D1,D2,D3	Visually observe	2.  1.	4.  3.	6.  5.	8.  7.	If not intact then to be attend
4	Check bearings for grease leakage or grease oozing. Check for any damage to grease seal.	D1 D3	Visually observe	2.  1.	4.  3.	6.  5.	8.  7.	If grease leakage or seal is damage noticed then replace the bearing
5	Axle end cover - inspection bolt is present or not.	D1	Visually observe	2.  1.	4.  3.	6.  5.	8.  7.	If missing attended it.
7	Whether Phonic wheel, mounting bolts & washers are as per assly.	D2, D3	Fasteners should be as per RDSO letter No. MC/CTRB/Genl. Dated 06.07.2015.	2.  1.	4.  3.	6.  5.	8.  7.	If not as per specified, replace the same.
8	Phonic wheel OD/teeth - wear/damage.	D2, D3	Visually observe	2.  1.	4.  3.	6.  5.	8.  7.	If teeth damaged, replace with the new one.
9	Axle end cover - physical conditions at the phonic wheel area any sign of rubbing.	D2, D3	Visually observe	2.  1.	4.  3.	6.  5.	8.  7.	check the phonic wheel ovality and free particle in the axle end cover if found, change the phonic wheel/ free particle

10	Tightening torque and Properties of M8 bolts	D2, D3	21Nm tightening torque. Fasteners should be as per RDSO letter No. MC/CTRB/Genl. Dated 06.07.2015.	2. 1.	4. 3.	6. 5.	8. 7.	Remove all of the bolts, use new spring washer with specified make & property class of bolts and tighten to the correct torque.
11	Check if locking plate tab is bent against cap screw (all 3 screws)	D3	Visually observe	2. 1.	4. 3.	6. 5.	8. 7.	Must be attended
12	Check for spring washer with M8 bolts	D2, D3	Spring washer to the IS 3063 type-B	2. 1.	4. 3.	6. 5.	8. 7.	Replace by new one having correct properties.
13	Check if sensor is present or not. Physical condition of speed sensor – visual check/damage/rubbing mark. All grounding cables for brake & damage	D1, D2, D3	Visually observe	2. 1.	4. 3.	6. 5.	8. 7.	If found damaged, replace it.
14	Check gap between speed sensor cable & phonic wheel by feeler gauge	D2, D3	Gap should be between 0.9 mm to 1.4mm	2. 1.	4. 3.	6. 5.	8. 7.	Adjust gap, as per maintenance instruction.
15	Check if sensor fixing bolts are present/damaged or not available.	D1	Visually observe	2. 1.	4. 3.	6. 5.	8. 7.	if sensor fixing bolts are damaged or not available, must be attend
16	WSP functional or not	D1	Visually observe					If not functional, then must be attend
17	Earthing device present and functional or not. Earthing cables available/missing/damaged	D1	Visually observe,	1.	8.			.If not functional or cable missing, then must be attend.
18	Check drain holes choked or open	D1	Visually observe	2. 1.	4. 3.	6. 5.	8. 7.	If choked, then open the drain holes.
19	Verify wear of the carbon bars (5 as per Fig. type A)	D2, D3	The carbon bar left is lower than 8mm.	1.	8.			Replace it in D3 & if carbon bar left is lower than 8mm replace in D2
20	Verify wear of slip assembly (7 As per Fig. type A).	D2, D3		1.	8.			As per maintenance manual
21	Monitor bearing temperature. Any bearing with unusual high temperature should be suspect	En-route/ Terminating station	Axle box temp. 80 deg. C or more	2. 1.	4. 3.	6. 5.	8. 7.	Coach should be withdrawn from service
22	Check for heat/ burn marks on the control arm/ covers	D1	Visually observe	2. 1.	4. 3.	6. 5.	8. 7.	Coach should be withdrawn from service,
23	Check for wheel flats and shelled wheels	D1	Wheel flat (Max)- 50mm(Ref: plate no 43 of IRCA part IV) Wheel shelling- (Ref:	2. 1.	4. 3.	6. 5.	8. 7.	To sent for turning

			MC/WA/Genl. Date 01.11.2017) Depth 1.5mm (max) Length 40mm (max) Depth of hollow tyre 3mm (max)		
--	--	--	--	--	--



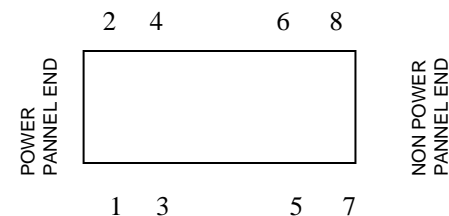
JE

SSE

ADME (Counter Signature)

## Check sheet of Cartridge Tapered Roller Bearing for Workshop.

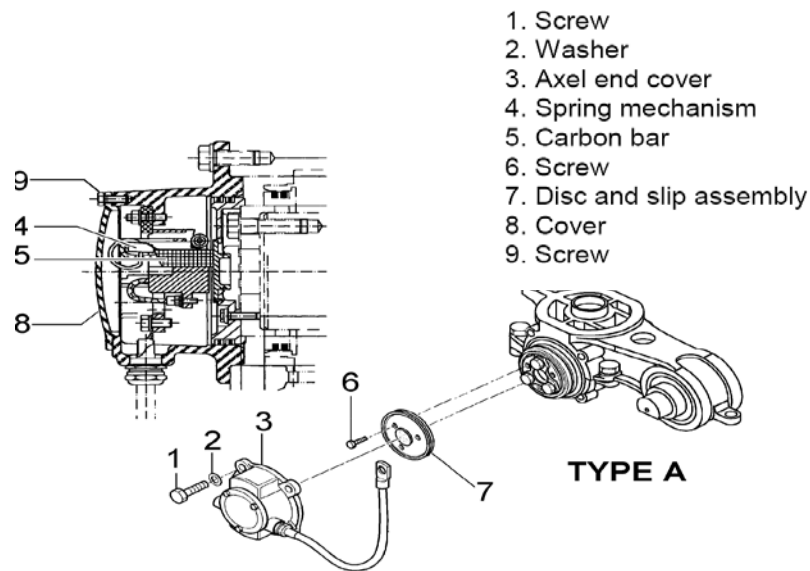
1. Railway:..... Date: .....  
 2. Workshop: ..... 3. Coach No.:.....  
 4. Newly Built/POH/IOH..... 5. Bearing Make:  
 6. New/Refurbished 7. Bearing no.:



S. No.	Activities	Specified Value/attribute	Observation	Action if found non conforming
1	Check the axle end cover mounting bolt for dimensions and loosening	M16x45 Tightening Torque 170 Nm		Must be attended
2	Check for Loose or Missing Axle End Screws.	M20X60 Fasteners should be as per RDSO letter No. MC/CTRB/Genl. Dated 06.07.2015.		If one axle end bolt is found loose or missing, remove all of the bolts, fit new locking plates, refit all of the bolts and tighten to the correct torque i.e. 200Nm. Bend all tabs against the flats of the bolt heads. If two or more axle end screws of different pairs are found loose or missing, the wheel set must be removed from the bogie.
3	Axle end cover - inspection bolt is present or not.	Visually observe		If missing attended it.
4	Axle end cover – physical conditions at the phonic wheel area any sign of rubbing	Visually observe		Check the phonic wheel ovality and free particle in the axle end cover if found, change the phonic wheel/ free particle
5	Place the control arm in the pair and check the control arm to see if it is misaligned or if there is a gap between the upper and lower control arm.	Follow RDSO instructions issued vide letter no. SV. FIAT dated 03.04.2018 & 15.05.2018.		Check for tightness of screws and condition of dampers. Replace misaligned control arms.
6	Check the excessive wear, irregular wear and corrosion of the control arm.	If the control arm bearing reach the diameter of 230.5 mm (i.e. wear out more than 0.5 mm). Refer CDE RCF's letter No. MD 44121 dated 13.08.08.		Whether locally or on the complete surface, the control arm should be considered worn out and rejected. In case, the dia. is between 230.5 mm and 230.312 mm, the control arm may be re-machined by providing a cut of 0.3 to 0.5 mm on the face of control arm. (This machining operation should not be carried out more than once). In case, the diameter is less than 230.312 mm, the control arm may be reused without re-machining.

7	Check damper for correct functionality, absence of deformation and lubrication.	Follow RDSO instructions issued vide letter no. SV. FIAT dated 03.04.2018 & 15.05.2018.		
8	Check bearings for grease leakage or grease oozing. Check for any damage to grease seal.	Visually observe		If grease leakage found more than 10% or seal is damage noticed then replace the bearing
9	Check the mounted end play of bearing.	It should be between 0.025 mm to 0.330 mm for new bearings and 0.025 mm to 0.500 mm for old bearings.		If not as per specified, replace the bearing.
10	Rotate the bearing assemblies to detect any abnormal condition and visually check the outside surfaces of bearing assembly for broken, loose or missing components.			Reject bearing and sent for refurbishment.
11	Whether phonic wheel, mounting bolts & washers are as per assembly.	Fasteners should be as per RDSO letter No. MC/CTRB/Genl. Dated 06.07.2015. Spring washer to the IS 3063 type-B.		If not as per specified, replace the same with new one.
12	Phonic wheel OD/teeth - wear/damage.	Visually observe		If teeth damaged, replace with the new one.
13.	Check phonic wheel ovality	Measure the inner diameter at least two perpendicular position.		If found ovality, replace with new one.
14	Tightening torque and Properties of M8 bolts	21Nm tightening torque. Fasteners should be as per RDSO letter No. MC/CTRB/Genl. Dated 06.07.2015.		Remove all of the bolts, use new spring washer with specified make & property class of bolts and tighten to the correct torque.
15	Check if sensor is present or not. Physical condition of speed sensor – visual check/damage/rubbing mark. All grounding cables for brake & damage Check gap between speed sensor cable & phonic wheel by feeler gauge	Visually observe and ensure Gap should be between 0.9 mm to 1.4mm		If found damaged, replace it. Adjust gap, as per maintenance instruction.
16	Check if sensor fixing bolts are present/damaged or not available.	Visually observe		if sensor fixing bolts are damaged or not available, must be attend

17	WSP functional or not	Visually observe		If not functional, then must be attend
18	Earthing device present and functional or not. Earthing cables available/missing/damaged	Visually observe,		.If not functional or cable missing then must be attend.
19	Verify wear of the carbon bars (5 as per Fig. type A)	The carbon bar left is lower than 8mm.		Replace it in D3 & if carbon bar left is lower than 8mm replace in D2
20	Verify wear of slip assembly (7 As per Fig. type A).			As per maintenance manual
21	Check drain holes choked or open	Visually observe		If choked, then open the drain holes.
22	Ensure that the wheel diameters are to be the required specification on the same axle, on the same bogie and coach.	Difference of 0.5mm for the same axle, 5mm for the same bogie and 13 mm for the same coach. Ref: IRCA Part IV.		If difference found more than specified value then rectify.
23	Check for wheel flats and shelled wheels	Wheel flat (Max)- 50mm(Ref: plate no 43 of IRCA part IV) Wheel shelling- (Ref: MC/WA/Genl. Date 01.11.2017) Depth 1.5mm (max) Length 40mm (max) Depth of hollow tyre 3mm (max)		To sent for turning



JE

SSE

AWM (Counter Signature)