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

MC/CTRB/Genl. **Date: 06.07.2015**

The General Manager (Mech.),

1. Central Railway, Chhatrapati Shivaji Terminus, Mumbai - 400 001
2. Eastern Railway, Fairlie Place, Kolkata - 700 001
3. Northern Railway, Baroda House, New Delhi - 110 001
4. Southern Railway, Park Town, Chennai - 600 003
5. South Central Railway, Rail Nilayam, Secunderabad - 500 071
6. South Eastern Railway, Garden Reach, Kolkata - 700 043
7. North Eastern Railway, Gorakhpur - 273 001
8. Northeast Frontier Railway, Maligaon, Guwahati - 781 011
9. Western Railway, Churchgate, Mumbai - 400 020
10. East Central Railway, Hajipur - 844 101
11. East Coast Railway, Chandrasekharpur, Bhubaneswar - 751 016
12. North Central Railway, Allahabad - 211 001
13. North Western Railway, Jaipur - 302 006
14. South Western Railway, Hubli - 580 023
15. West Central Railway, Jabalpur - 482 008
16. South East Central Railway, Bilaspur - 495 004
17. Integral Coach Factory, Chennai - 600 038
18. Rail Coach Factory, Hussainpur, Kapurthala, Punjab - 144 602
19. Rail Coach Factory, Lalganj, Raebareli – 229 120
20. Konkan Railway Corp. Ltd. Corporate office Belapur Bhawan Nawi Mumbai - 400 614

Sub: Hexagonal Head Screws/Bolt used for CTRB of FIAT bogies.
Ref: (i). ECoR's letter No. MCSW/IED/MM/M-14-1 (LHB)/1302 dated 27.05.2015.
(ii). WR's letter No. M 113/17/4 dated 20.04.2015.
(iii) This office letter no. MC/RB/Defect dated 06.06.2012.

In reference to above, RDSO have standardized the drawings of Hex. Head Screw for CTRB M20X60, Hex. Head Bolt for Phonic wheel of CTRB M8X35 and Hex. Head Screw for Earthing device of CTRB M8X25 by specifying tolerance on threads, property class and make. The following drawings of the fasteners are enclosed herewith.

i. Drawing No. of Hex. Head Screw for CTRB M20X60 (LHB Shell with FIAT Bogies) : CG-15067
ii. Drawing No. of Hex. Head Bolt for Phonic wheel of CTRB M8X35 (LHB Shell with FIAT Bogies): CG-15071
iii. Drawing No. of Hex. Head Screw for Earthing device of CTRB M8X25 (LHB Shell with FIAT Bogies): CG-15070

Railways are also advised to follow the procedure as below during locking/unlocking of the screws/bolt used for CTRB of FIAT bogies:

i. The axle end holes should be checked with GO – NO GO thread plug gauge for correct size and thread condition. If any of the tapped hole is worn out, the axle shall be detained in workshop for thorough examination and repair as per maintenance manual for LHB Coaches.
ii. End locking plates should be replaced every time its folds are opened to unscrew Hex. Head Screw for CTRB M20X60.

iii. The locking screws/bolt should be of high tensile steel and of reputed brands as mentioned in the applicable drawings. The condition of their threads should be checked with GO - NO GO thread ring gauges and worn out bolts replaced.

iv. The locking screws/bolt head should be free from any damages and should have proper spanner grip. The length of the bolt should be less than that of tapped axle end holes. The locking screws/bolt in service should not be reused unless they meet the above standards.

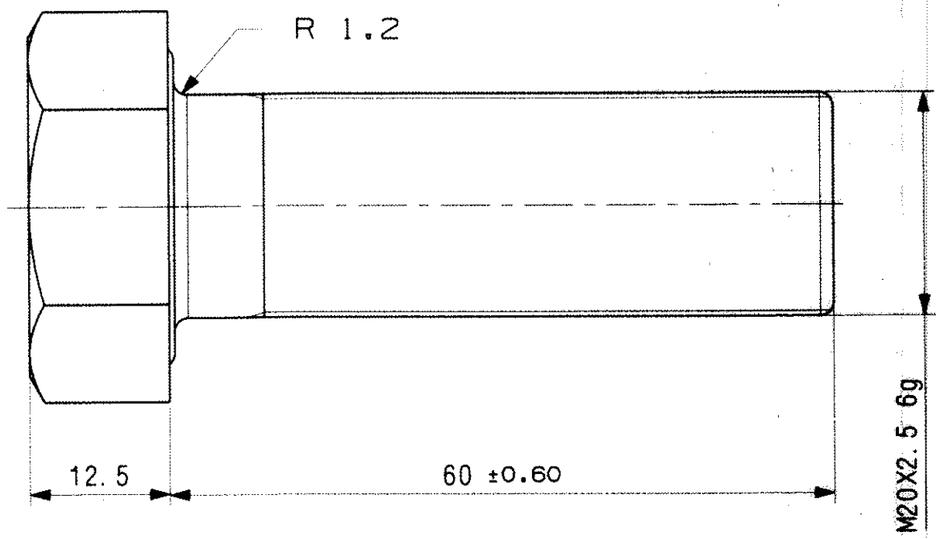
v. The locking screws/bolt while fitting should have no radial or axial play.

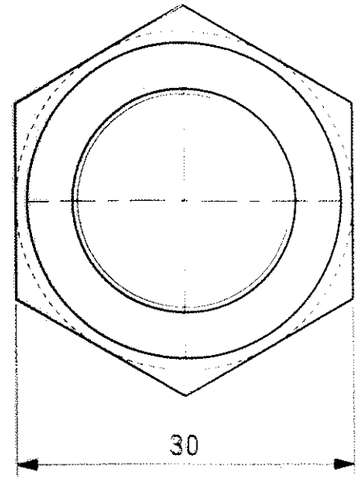
vi. Washers of M8X35 bolts of Phonic wheel of CTRB should be replaced in every unlocking of the bolts.

DA: As above

06/07/2015

(Deependra Kumar)
Director/Stds./Carriage
For Director General/ Carriage





NOTE:-

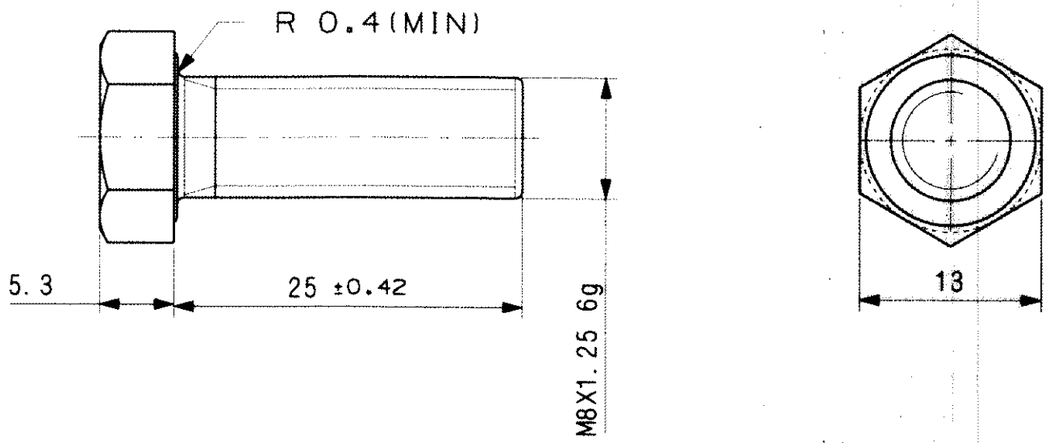
1. THE HEX. HEAD SCREW SHALL BE OF MAKE TVS OR UNBRAKO OR LPS ONLY.
2. FOR OTHER DIMENSIONS & GEOMETRY REFER IS: 1364 (PART-2) OR BSEN ISO 4017(LATEST VERSION).
3. HEX. HEAD SCREW THREADS SHOULD BE FORMED BY COLD ROLLING PROCESS AND THREAD PROFILE SHALL CONFORM TO IS: 4218 PART-IV. HEX. HEAD SCREW THREADS TOLERANCE CLASS SHOULD BE 6g(IS: 1364 PART-2/ IS: 4218 PART-IV) AND TO WORK IN AXLE END THREADED HOLES TO A TOLERANCE CLASS OF 6H(IS: 4218 PART-IV).
4. THE THREAD PROFILE SHALL BE CHECKED /MEASURED BY TRAVELLING MICROSCOPE OR PROFILE PROJECTOR IN ADDITION TO CONVENTIONAL THREAD GAUGE.
5. MATERIAL OF HEX. HEAD SCREWS SHALL BE STEEL TO IS: 1367 PART-3 OR BSEN ISO 898-I(LATEST VERSION) AND PROPERTY CLASS 8.8. THE MAXIMUM DEPTH OF COMPLETE DECARBURIZATION, SHALL BE 0.015MM.
6. MECHANICAL PROPERTIES OF STEEL SHALL BE IN ACCORDANCE WITH IS: 1367 PART-3 OR BSEN ISO 898-I (LATEST VERSION).
7. THE SURFACE TREATMENT OF HEX. HEAD SCREW SHALL BE PHOSPHATE COATING HAVING COATING WEIGHT 4.3 TO 5.5 G/M² (PHOSPHATING PROCESS CLASS-B) TO IS: 3618.
8. SAMPLING SHALL BE IN ACCORDANCE WITH IS: 2614.
9. MARKING AND MODE OF DELIEVERY OF HEX. HEAD SCREWS SHALL BE IN ACCORDANCE TO IS: 1367 PART-18.
10. IN REGARD TO REQUIREMENT NOT COVERED ABOVE, HEX. HEAD SCREWS SHALL CONFORM TO IS: 1367 PART-1.

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ALT.	ITEM	AUTHY.	DESCRIPTION	CKD.	DATE

	SUPERSEDED BY:-	INDIAN RAILWAY STANDARDS
ASSEMBLY DRGS.	SUPERSEDES:-	LHB SHELL WITH FIAT BOGIES
REFERENCE :-	SCALE 2:1 P C D J.S	HEX. HEAD SCREW FOR CTRB M20X60 (LHB SHELL WITH FIAT BOGIES)
CDIC NO. :-	B.G.	R.D.S.O. (CG) CG-15067

STD/13/15



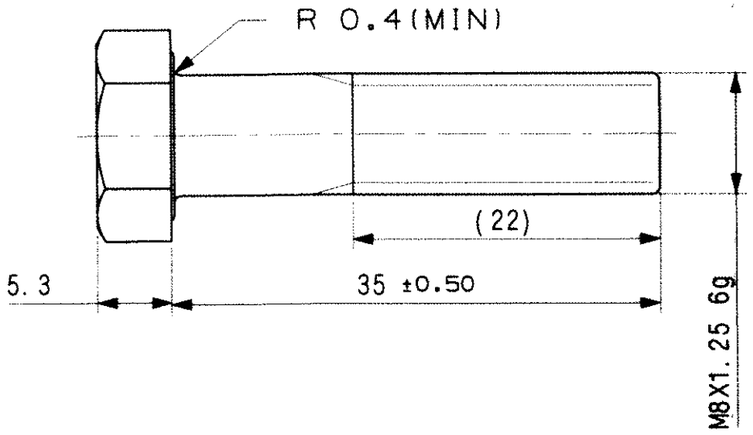
NOTE:-

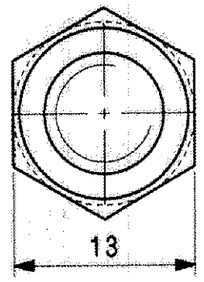
1. THE HEX. HEAD SCREW SHALL BE OF MAKE TVS OR UNBRAKO OR LPS ONLY.
2. FOR OTHER DIMENSIONS & GEOMETRY REFER IS: 1364 (PART-2) OR BSEN ISO 4017(LATEST VERSION).
3. HEX. HEAD SCREW THREADS SHOULD BE FORMED BY COLD ROLLING PROCESS AND THREAD PROFILE SHALL CONFORM TO IS: 4218 PART-IV. HEX. HEAD SCREW THREADS TOLERANCE CLASS SHOULD BE 6g(IS: 1364 PART-2/ IS: 4218 PART-IV) AND TO WORK IN SECURITY DISC THREADED HOLES TO A TOLERANCE CLASS OF 6H(IS: 4218 PART-IV).
4. THE THREAD PROFILE SHALL BE CHECKED /MEASURED BY TRAVELLING MICROSCOPE OR PROFILE PROJECTOR IN ADDITION TO CONVENTIONAL THREAD GAUGE.
5. MATERIAL OF HEX. HEAD SCREWS SHALL BE STEEL TO IS: 1367 PART-3 OR BSEN ISO 898-I(LATEST VERSION) AND PROPERTY CLASS 10.9. THE MAXIMUM DEPTH OF COMPLETE DECARBURIZATION, SHALL BE 0.015MM.
6. MECHANICAL PROPERTIES OF STEEL SHALL BE IN ACCORDANCE WITH IS: 1367 PART-3 OR BSEN ISO 898-I (LATEST VERSION).
7. THE SURFACE TREATMENT OF HEX. HEAD SCREW SHALL BE PHOSPHATE COATING HAVING COATING WEIGHT 4.3 TO 5.5 G/M² (PHOSPHATING PROCESS CLASS-B) TO IS: 3618.
8. SAMPLING SHALL BE IN ACCORDANCE WITH IS: 2614.
9. MARKING AND MODE OF DELIEVERY OF HEX. HEAD SCREWS SHALL BE IN ACCORDANCE TO IS: 1367 PART-18.
10. IN REGARD TO REQUIREMENT NOT COVERED ABOVE, HEX. HEAD SCREWS SHALL CONFORM TO IS: 1367 PART-1.

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ALT.	ITEM	AUTHY.	DESCRIPTION	CKD.	DATE

	SUPERSEDED BY:-		INDIAN RAILWAY STANDARDS
ASSEMBLY DRGS.	SUPERSEDES:-		LHB SHELL WITH FIAT BOGIES
REFERENCE :-	SCALE 2:1	P C D J.S STD/17/15	HEX. HEAD SCREW FOR EARTHING DEVICE OF CTRB M8X25 (LHB SHELL WITH FIAT BOGIES)
CDIC NO. :-	B.G.	R.D.S.O. (CG)	CG-15070





NOTE:-

1. THE HEX. HEAD BOLT SHALL BE OF MAKE TVS OR UNBRAKO OR LPS ONLY.
2. FOR OTHER DIMENSIONS & GEOMETRY REFER IS: 1364 (PART-1) OR BSEN ISO 4014(LATEST VERSION).
3. HEX. HEAD BOLT THREADS SHOULD BE FORMED BY COLD ROLLING PROCESS AND THREAD PROFILE SHALL CONFORM TO IS: 4218 PART-IV. HEX. HEAD BOLT THREADS TOLERANCE CLASS SHOULD BE 6g(IS: 1364 PART-1/ IS: 4218 PART-IV) AND TO WORK IN SECURITY DISC THREADED HOLES TO A TOLERANCE CLASS OF 6H(IS: 4218 PART-IV).
4. THE THREAD PROFILE SHALL BE CHECKED /MEASURED BY TRAVELLING MICROSCOPE OR PROFILE PROJECTOR IN ADDITION TO CONVENTIONAL THREAD GAUGE.
5. MATERIAL OF HEX. HEAD BOLT SHALL BE STEEL TO IS: 1367 PART-3 OR BSEN ISO 898-I(LATEST VERSION) AND PROPERTY CLASS 10.9. THE MAXIMUM DEPTH OF COMPLETE DECARBURIZATION, SHALL BE 0.015MM.
6. MECHANICAL PROPERTIES OF STEEL SHALL BE IN ACCORDANCE WITH IS: 1367 PART-3 OR BSEN ISO 898-I (LATEST VERSION).
7. THE SURFACE TREATMENT OF HEX. HEAD BOLT SHALL BE PHOSPHATE COATING HAVING COATING WEIGHT 4.3 TO 5.5 G/M² (PHOSPHATING PROCESS CLASS-B) TO IS: 3618.
8. SAMPLING SHALL BE IN ACCORDANCE WITH IS: 2614.
9. MARKING AND MODE OF DELIEVERY OF HEX. HEAD BOLT SHALL BE IN ACCORDANCE TO IS: 1367 PART-18.
10. IN REGARD TO REQUIREMENT NOT COVERED ABOVE, HEX. HEAD BOLT SHALL CONFORM TO IS: 1367 PART-1.

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ALT.	ITEM	AUTHY.	DESCRIPTION	CKD.	DATE

	SUPERSEDED BY:-	INDIAN RAILWAY STANDARDS
ASSEMBLY DRGS.	SUPERSEDES:-	LHB SHELL WITH FIAT BOGIES
REFERENCE :-	SCALE 2:1 P C D	HEX. HEAD BOLT FOR PHONIC WHEEL OF CTRB M8X35 (LHB SHELL WITH FIAT BOGIES)
	J.SST/0/18/15	
CDIC NO. :-	B.G. R.D.S.O. [CG]	CG-15071