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No. EL/3.2.85

Date: 20.8.2018

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| <p>प्रमुख विद्युत् अभियंता,</p> <ol style="list-style-type: none"> <li>1. मध्य रेलवे, मुम्बई सीएसटी –400 001</li> <li>2. पूर्व मध्य रेलवे, हाजीपुर-844 101</li> <li>3. पूर्व तटीय रेलवे, चन्द्रपेखरपुर, भुवनेश्वर-751 023</li> <li>4. पूर्व रेलवे, फेयर्ली प्लेस, कोलकाता-700 001</li> <li>5. उत्तर मध्य रेलवे, ब्लाक ए-2, सुबेदारगंज इलाहाबाद – 211 033</li> <li>6. उत्तर रेलवे, बड़ौदा हाऊस, नई दिल्ली-110 001</li> <li>7. उत्तर पश्चिम रेलवे जयपुर- 302006</li> <li>8. उत्तर पूर्व रेलवे गोरखपुर- 273001</li> <li>9. उत्तर पूर्व फ्रेन्टीयर रेलवे मालीगॉव गुवाहाटी-781011</li> <li>10. दक्षिण मध्य रेलवे, रेल निलायम, सिकंदराबाद-500 371</li> <li>11. दक्षिण पूर्व मध्य रेलवे, बिलासपुर – 495 004</li> <li>12. दक्षिण पूर्व रेलवे, गार्डेनरीच, कोलकाता-700 043</li> <li>13. दक्षिण रेलवे, पार्क टाउन, चेन्नई-600 003</li> <li>14. दक्षिण पश्चिम रेलवे हुबली-580020</li> <li>15. पश्चिम मध्य रेलवे, जबलपुर-482 001</li> <li>16. पश्चिम रेलवे, चर्चगेट, मुम्बई- 400 020</li> <li>17. चित्तरंजन रेल इंजन कारखाना, चित्तरंजन- 713331</li> <li>18. डीजल रेल इंजन कारखाना, वाराणसी-221004</li> <li>19. डीजल आधुनिकीकरण कारखाना, पटियाला, पंजाब</li> </ol> | <p>Principal Chief Electrical Engineer,</p> <ol style="list-style-type: none"> <li>1. Central Railway, Mumbai, CST-400 001.</li> <li>2. East Central Railway, Hazipur-844 101.</li> <li>3. East Coast Railway, Chandrashekharpur, Bhubaneswar-751 016.</li> <li>4. Eastern Railway, Fairlie Place, Calcutta-700 001.</li> <li>5. North Central Railway, Block-A, Subedarganj, Allahabad- 211 033.</li> <li>6. Northern Railway, Baroda House, New Delhi-110 001.</li> <li>7. North Western Railway, Jaipur- 302 006</li> <li>8. North Eastern Railway, Gorakhpur-273001</li> <li>9. North East Frontier Railway, Maligaon, Guwahati- 781011</li> <li>10. South Central Railway, Secunderabad-500 071.</li> <li>11. South East Central Railway, Bilaspur-495 004.</li> <li>12. South Eastern Railway, Garden Reach, Kolkata-700 043.</li> <li>13. Southern Railway, Park Town, Chennai-600 003.</li> <li>14. South Western Railway, Hubli- 580020</li> <li>15. West Central Railway, Jabalpur-482 001.</li> <li>16. Western Railway, Churchgate, Mumbai-400 020</li> <li>17. Chittaranjan Locomotive Works, Chittaranjan-713 331</li> <li>18. Diesel Locomotive Works, Varanasi-221 004.</li> <li>19. Diesel Modernization Works, Patiala, Punjab</li> </ol> |
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**Modification Sheet No. RDSO/2018/EL/MS/0472 (Rev '0') Dated 20.08.2018**

**1. Title:**

Modification in Hex. Socket CSK Head Screws for fixing of Traction motor Bellow plate to achieve adequate mechanical strength in Traction motor (TM) type 6FRA6068 for WAG9/WAP7 class of locomotives.

**2. Object:**

To modify the length of Hex. Socket CSK Head Screws to achieve adequate mechanical strength in Traction motor type 6FRA6068 TM for WAG9/ WAP7 class of locomotives.

**3. Existing arrangement with cross references of respective design document :**

- 3.1 Railways/PUs/TM manufacturers are using Hex. Socket CSK Head Screws (M10X20 mm) as per ABB drawing number 182-00573

*Handwritten signature*

- 3.2 Cases of breakage of Hex. Socket CSK Head Screws (M10X20 mm) for fixing of Traction motor Bellow plate on Traction motor type 6FRA-6068 have been reported by some of the Railways.
- 3.3 It is observed that for fixing of Traction motor Bellow plate on End Shield NDE, 8 numbers Hex. Socket CSK Head Screws (M10X20 mm) are used and threads goes only about 8 mm into End Shield body which could not provide adequate mechanical strength to bellow plate. Failures of these screws leads to failure of leather bellows.

#### 4. **Modified Instructions :-**

- 4.1. The length of M10 Hex. Socket CSK Head Screws has been revised from 20 mm to 25 mm in order to get more mechanical strength for fixing of Traction motor bellow plate.
- 4.2. Hex. Socket CSK Head Screws (M10X25 mm SS bolts grade A2-70 as per DIN 7991/ISO 10642 Gr. 304) as per CLW Drawing Number 1209-01.418-030 Alt '0' to be used for fixing of Traction motor bellow plate of 6FRA-6068.



**Pictures of Hex. Socket CSK Head Screws**

- 4.3. The existing M10X20 Hex. Socket CSK Head Screws to be replaced with M10X25 Hex. Socket CSK Head Screws as per CLW Drawing Number 1209-01.418-030 Alt '0', whenever TM is removed due to any reason.
- 4.4. During TOH/IOH/POH, Hex. Socket CSK Head Screws of M10X25 as per CLW Drawing Number 1209-01.418-030 Alt '0' to be provided.
5. **Application to class of Locomotives:**  
WAP7/WAG9/WAG9H class of locomotives.
6. **Material Required:**  
Hex. Socket CSK Head Screws (M10X25 mm SS bolts grade A2-70) 48 numbers/Loco as per drawing No.1209-01.418-030 Alt '0' or latest.

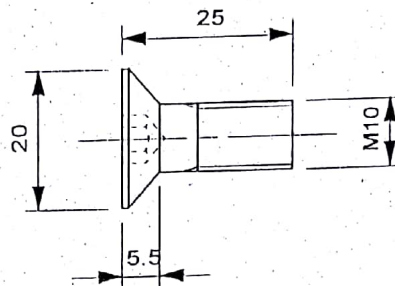
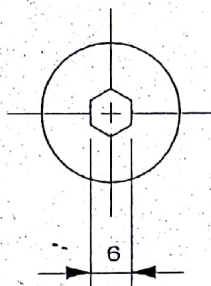
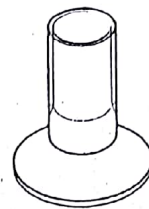
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7. **Material Rendered Surplus:**  
Hex. Socket CSK Head Screws (M10X20 mm SS bolts grade A2-70) 48 numbers/Loco
8. **Modification Drawing:**  
CLW Drawing No. 1209-01.418-030 Alt '0'.
9. **Agency of Implementation:-**  
CLW, Workshops carrying out POH of Electric locomotives, all Electric Loco Sheds and TM manufacturers.

**Encl: Above modified drawing**

4242-1  
20.8.18

**(P. K. Saraswat)**  
**for Director General/Electrical**



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|------------|----------|--------------------------|---------------|--|
|            |          |                          |               |  |
|            |          |                          |               |  |
|            |          |                          |               |  |
|            |          |                          |               |  |
| 1          | T205/044 | 1209-01.018-024<br>REF-8 | 48            |  |
| Sl.<br>No. | C&D No.  | ASSLY. DRG.<br>REF.      | Qty./<br>LOOC |  |

| परिवर्तन संख्या<br>ALT. NO. | प्राधिकार<br>AUTHY | वर्णन<br>DESCRIPTION   | दिनांक जारी<br>DATED INITIAL |
|-----------------------------|--------------------|--|------------------------------|
| सं 1                        |                    | अतिरिक्त सच - सीमा मा. मा. 1 2102 / अ. मा. सं. 1 2788<br>(REF. (CRU) TO CAPAME TO IS : 202 / ISU : 2768) |                              |
| सं 2                        |                    | धातु-संकेतन चिह्न मा. मा. 1 812 / अ. मा. सं. 1 2683<br>WELDING SYMBOLS TO IS.812 / ISO 2553              |                              |
| सं 3                        |                    |  |                              |
| सं 4                        |                    |  |                              |
| सं 5                        |                    |  |                              |
| सं 6                        |                    |  |                              |
| सं 7                        |                    |  |                              |
| सं 8                        |                    |  |                              |
| सं 9                        |                    |  |                              |
| सं 10                       |                    |  |                              |
| सं 11                       |                    |  |                              |
| सं 12                       |                    |  |                              |

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|---------------------------------|-----|
| अधिकृत<br>DCH                   |     |
| जांचा<br>(H)                    |     |
| अधीक्षक<br>SUPER                |     |
| समीक्षित व.अ.<br>REVIEWED SL    |     |
| अनुमोदित व.अ.<br>APPROVED BYCEL |     |
| दिनांक<br>DATE                  |     |
| पैकिंग अनुपात<br>SCALE          | 1:1 |
| संशोधन / HET                    |     |
| ALL                             |     |



चितरंजन रेलइंजन कारखाना  
CHITTARANJAN LOCOMOTIVE WORKS, INDIA

पदार्थ  
MATERIAL STAINLESS STEEL प्रति भार कि. घा.  
WT. TAKEN IN KG.

निर्माण  
SPEC. A2-70 TO DIN7991/ ISO 10642 Gr. 304

वर्णन  
DESCRIPTION HEX. SOCKET CSK HD.  
SCREW M10X25LG

आरेखण संख्या  
DRAWING NO. 1209-01.418-030

परिवर्तन संख्या  
ALTERATION NO. 0 पर्ण  
SHEET 1 OF 1 A4