

# **SPECIFICATION FOR DRIVER'S SEAT ASSEMBLY FOR WAG-9 3-PHASE ELECTRIC LOCOMOTIVE OF INDIAN RAILWAYS**

**SPECIFICATION No. CLW/MS/3/021 ALT.8**

**ISSUE DATE: 27.05.1997**

**ISSUED BY:**

**DY. CHIEF ELECTRICAL ENGINEER/D/CONV.**

**CHITTARANJAN LOCOMOTIVE WORKS**

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**ALTERATION RECORD SHEET**

ALT. No.	DATE	DESCRIPTION	REASON	SIGNATURE
1.	06.06.2000	ITEM ARM REST AND CLAUSES 4.7, 7.4.4., 7.4.5 DELETED, DRG. MODIFIED.	OBSTRUCTION EXPERIENCED DURING LOCO. OPERATION WITH ARM REST. ALSO ABB DESIGN CHANGED.	S/d-08.06.2000
2.	12.03.2001	ALT. 2 OF DRG. NO. 1209-08-131-010.	AS DRG MODIFIED.	S/d-12.03.2001
3.	22.03.2002	CLAUSES 6.3, 6.7 MODIFIED CLAUSE 7.7, 12 ADDED	AS DECIDED BY COMPETENT AUTHORITY.	S/d-
4.	01.03.2003	CLAUSE 3.1, 4.3 MODIFIED CLAUSE 7.7 A ADDED	AS DECIDED BY COMPETENT AUTHORITY.	S/d-01.03.2003
5.	14.07.2004	CLAUSE 13 ADDED. LATEST ALT. SHOWN IN CLAUSE 2.	AS DECIDED BY COMPETENT AUTHORITY.	S/d-
6.	02.12.2016	CL. NO. 4. 2, 4.4, 6.3, 7.2 revised and 7.7 (iv) added approved by CEE dt. 30-11-16.	RDSO Spec. No. RDSO/2013/CG-13 included.	S/d-03.12.2016
7.	02.11.2021	DELETED 'SEAT BACK RECLINE' FROM PARA 3.1, 'HORIZONTAL ADJUSTMENT' FROM PARA 3.2, PARA 4.6 & PARA 4.8.	TO SYNCHRONIZE DRAWING AND SPECIFICATION.	S/d-02.11.2021
8.	15.01.2024	Clause No.10 modified and at Clause No. 2 alteration No. of drawing changed from ALT.6 to ALT.7 or ALT. Latest	To update the warranty/ guarantee condition as per Para 3202 of latest IRS contract conditions September 2022 version 1.0 or latest	
9	-	Clause No.4.3 modified. Clause No.7.8 added.	To upgrade cover of Driver's seat to Vinyl coated upholstery fabric (Artificial Leather)	

**Specification have been digitized and all alterations have been incorporated**

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## TECHNICAL SPECIFICATION OF DRIVER'S SEAT ASSLY. FOR WAG-9, 3-PHASE ELECTRIC LOCOMOTIVES OF INDIAN RAILWAYS.

### 1. SCOPE:

This technical specification covers the minimum requirement of design, manufacture, testing and supply conditions of Driver's Seat & Pedestal Assy. used in WAG-9, 3-Phase electric locomotives of Indian Railways.

### 2. SCOPE OF SUPPLY:

04 Nos. of assembled Driver's Seat with Pedestal per loco to be supplied as per drg. No. 1209-08.131-010 ALT-7 or latest ALT..

### 3. GENERAL:

**3.1** The driver's Seat consists of pedestal, Double line contact, cushioned seat with suspension, spindle assly, height adjuster, swivel foot lever, squab assly.

**3.2** Two Nos. of this type of driver's seat are installed in each of the driver's cabin of the loco to enable Driver to take rest and operate the loco comfortably on the line. Pedestal having 115mm independent vertical and swivel action in foot operated lever with automatic positive lock in driving position. Height can be adjusted to suit the driver's need.

### 4. TECHNICAL REQUIREMENT:

**4.1** Driver's Seat Assembly complete including hardware items shall conform to appropriate specifications.

**4.2** Fire Retardant cellular silicon form cushion to be used.

**4.3** Vinyl coated upholstery fabric (Artificial Leather) of black colour for cover of Driver's seat shall conform to RDSO. Spec No. RDSO/2008/CG-07.

**4.4** Conditioning Temp.  $27 \pm 2$  °C &  $65 \pm 5\%$  relative humidity to be maintained.

**4.5** Pedestal assembly shall have height adjustment up to 115mm.

**4.6** Material used, shall withstand climatic and environmental conditions as mentioned in Para 5 with fungus conductive.

### 5. CLIMATIC AND ENVIRONMENTAL CONDITIONS

5.1	Ambient Temperature	0 °C to 60°C
5.2	Maximum Temperature	75°C
5.3	Humidity	100% Saturation during rainy season.
5.4	Rainfall	Very heavy in the continent
5.5	Coastal Area	High humidity, salt laden atmosphere.

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**6. MANUFACTURE:**

- 6.1 Driver's Seat assly. to be manufactured as per CLW drg.
- 6.2 Welding whenever required to be done properly as per IS: 813 with proper grade of electrodes, current etc.
- 6.3 RDSO Spec. No. RDSO/2013/ CG-13 for silicon foam cushioning material for Indian railways passengers.
- 6.4 Steel used in manufacturing in seat shall conform IS: 1079, IS: 1239, IRS-M-41 Gr. I and must have corrosive treatment.
- 6.5 Jig and Fixture to be used to maintain the geometry of the assembly.
- 6.6 Color and stitching of cushion cover, fittings etc to be of quality grade.
- 6.7 Total weight of seat assly. complete shall not exceed  $30 \pm 2$  kg including pedestal.

**7. INSPECTION AND TESTING:**

- 7.1 Nominated representative of the purchaser will carry out the inspection of prototype sample. All the necessary tests conducted during inspection shall be arranged and borne by the supplier.
- 7.2 The Cushioning Foam material shall conform to the parameters given in clause 2.7.1 in RDSO Spec. No. RDSO/2013/CG-13.
- 7.3 Smoke extinction time shall be greater than 25 minutes & Crib collapse time be 5 minute 50 Seconds.
- 7.4.1 Static Load test,  $F_1$  shall be of 1700N in seat back.
- 7.4.2 Load  $F_2$  be of 850N on top of seat back transversely.
- 7.4.3 Load  $F_3$  be of 1700N on top of cushion.
- 7.4.4 All load  $F_1$  to  $F_3$  shown in the attached diagram shall sustained for 5 minutes.
- 7.5 It shall be deemed to have passed the test without damage or permanent deformation to the seat fixings.
- 7.6 All the tests shall be witnessed by authorized representative of the purchaser.
- 7.7 (i) Prior to prototype inspection CLW's Representative will be deputed to seal the sample piece of the material specified for test in the Govt. approved/ RDSO approved test Lab. The lab test report should be produced at the time of prototype inspection.
- (ii) Standard fasteners of M/s TVS, M/s LPS and M/s UNBRAKO & KUNDAN only shall be used in the assly.
- (iii) The spring washers of M/s Forbes make only to be used.
- (iv) Fire Retardant Cellular Silicon foam Cushions to be procure from RDSO approved source only.
- 7.7 A. 250 Cycles of Endurance Test to be carried out during inspection, when the item is found otherwise suitable.
- 7.8 The cover material of Driver's seat shall conform to the parameters given in clause 2.9 of RDSO. Spec No. RDSO/2008/CG-07.

**8. SUPPLY OF DOCUMENT:**

- 8.1 Material Certificate indicating the specification.
- 8.2 All the test certificates as mentioned in Para 7 to be submitted.

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**9. LABELLING/MARKING:**

- (i) Name of the product.
- ii) Month and Year of Manufacture.
- iii) Name of the manufacturers with Trade Mark, Code No. and Batch No.

**10. WARRANTY/GUARANTEE:**

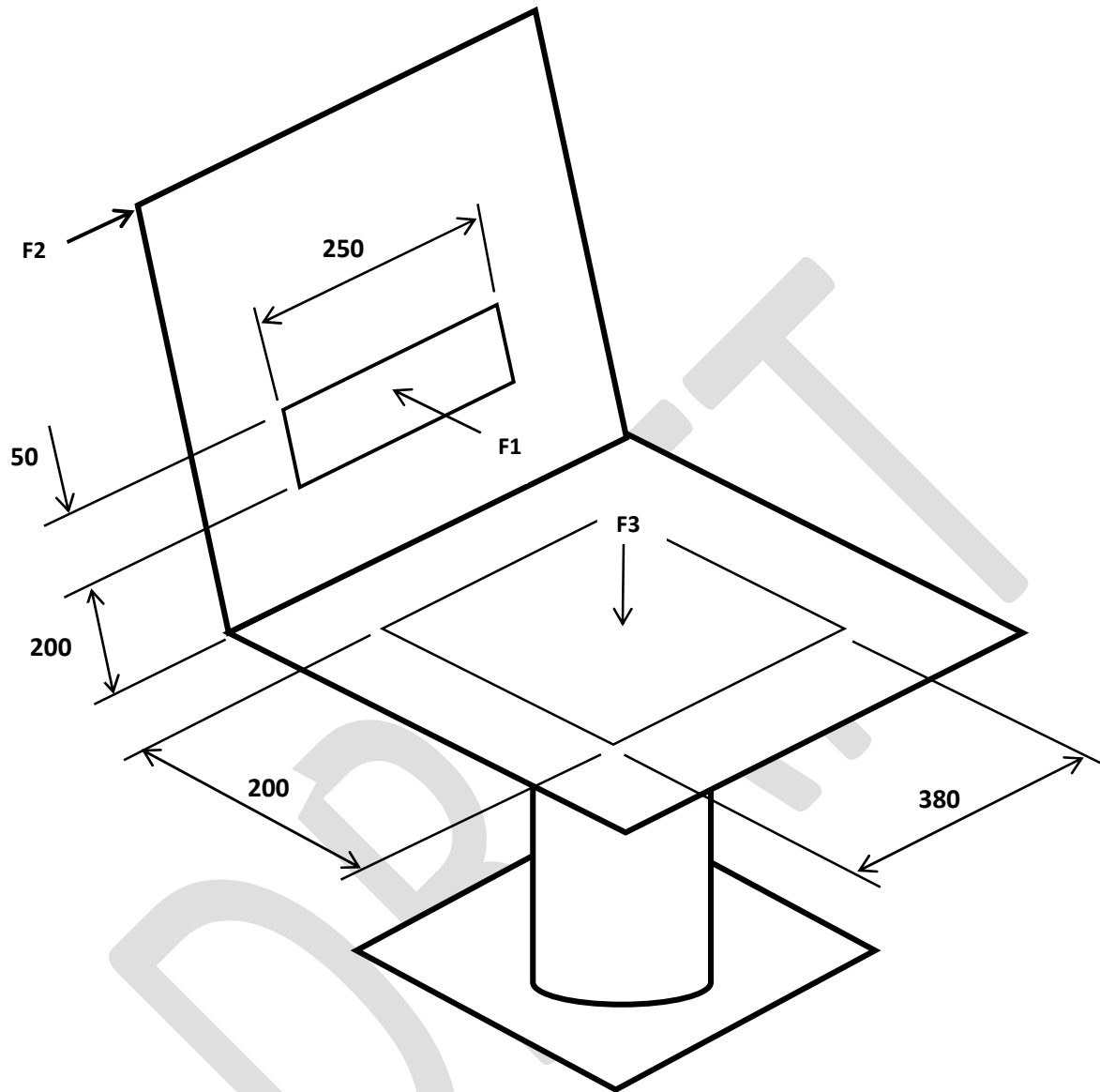
All aspects of design, workmanship and material quality will be covered by the warranty/guarantee of satisfactory performances of the product for 30 months from the date of supply or 24 months from the date of commissioning as per Para 3202 of latest IRS contract conditions September 2022 version 1.0 or latest.

**11. PACKAGING & DELIVERY:**

Protective packaging to be done which is suitable for the transport and storage under the climatic and environmental conditions mentioned in Para 5 and which will prevent any damage to the material during handle, transit and storage.

- 12. Any deviation with a view to improve the performance of the driver's seat may be given due consideration, keeping the overall dimension same, full particular with justification should be furnished for approval of CLW thereby. Only the successful tenderers will get detailed drawings.
- 13. This spec. is applicable for WAP-4 Loco also.

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**FIG: TEST LOADS****F1 – 1700 N \*****F2 – 850 N****F3 – 1700 N \***

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