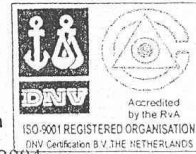


फैक्स/Fax : 91-0522-458500
तार : 'रेलमानक' लखनऊ
Telegram : 'RAILMANAK', Lucknow
टेलीफोन/Tele : 451200 (PBX)
450115 (DID)



सत्यमेव जयते

भारत सरकार - रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ - 226011
Government of India-Ministry of Railways
Research Designs & Standards Organisation
Lucknow - 226011



No.EL/3.2.13/1

Dated 06.01.2004

०३

Chief Electrical Engineer,

- Central Railway, Mumbai CST- 400 001.
- Eastern Railway, Fairlie Place, Kolkata- 700 001
- East Cost Railway, Chandrashekharpur, Bhubaneswar- 751 016.
- Northern Railway, Baroda House, New Delhi-110 001
- North Central Railway, Hasting Road, Allahabad-211 001.
- Southern Railway, Park Town, Chennai-600 003
- South Central Railway, Rail Nilayam, Secunderabad -500 071
- South Eastern Railway, Garden Reach, Kolkata -700 043
- South Western Railway, Hubli.
- Western Railway, Churchgate, Mumbai-400 020
- West Central Railway, Jabalpur-482001
- South East Central Railway, Bilaspur-495004
- East Central Railway, Hazipur-844101 (Bihar)
- North Western Railway, Jaipur-302006.
- Chittaranjan Locomotive Works, Chittaranjan-713 331 (W.B.)

Sub: Amendment to Modification Sheet No. ELRS/MS/0284, Rev. '1' -
2003 Dated 23.10.2003

Following amendments related to Modification Sheet No. ELRS/MS/0284, Rev. '1', - 2003 dated 23.10.2003 on Drg Nos. SKEL 4559-2/4, Alt. '1' and SKEL 4559 - 3/4 Alt. '0' are issued :-

(a) Drg. No. SKEL - 4559 - 2/4, Alt. '1'

- i) Trunnion (Part No. 1), the break up dimensions of 65 mm are (20 mm + 45 mm) in place of (20 mm + 43 mm).
- ii) Item 'A' hole dia is 8.5 mm

(b) Drg. No. SKEL - 4559 - 3/4, Alt. '0'

The total length of slack adjuster screw (Part No. 3) is 163 mm, break up of dimensions are (30 mm + 8 mm + 20 mm + 105 mm)

Encl: Nil

(S.K.Sinha)
for Director General/Elect.

Copy to : As per Standard Mailing List No.EL/M/0019, Ver. '2'.

~~ADE/DOE~~

Encl: Nil

(S.K.Sinha)
for Director General/Elect.

फैक्स/Fax : 91-0522-458500
तार : 'रेलमानक' लखनऊ
Telegram : 'RAILMANAK', Lucknow
टेलीफोन/Tele : 451200 (PBX)
450115 (DID)



भारत सरकार - रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ - 226011
Government of India-Ministry of Railways
Research Designs & Standards Organisation
Lucknow - 226011



No.EL/3.2.13/1

Dated 23.10.2003

Chief Electrical Engineer,

- Central Railway, Mumbai CST- 400 001.
- Eastern Railway, Fairlie Place, Kolkata- 700 001
- East Cost Railway, Chandrashekharpur, Bhubaneswar- 751 016.
- Northern Railway, Baroda House, New Delhi-110 001
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- North Western Railway, Jaipur-302006.
- Chittaranjan Locomotive Works, Chittaranjan- 713 331

MODIFICATION SHEET No. ELRS/MS/0284, Rev. '1' - 2003

1.0

Title :

Provision of modified trunnion for use on end brake hangers of flexi-coil mark-I bogies of WAP1/4 class of locomotives.

2.0

Object :

The weight of existing trunnion used in flexi-coil mark-I bogies of WAP1/4 class of electric locomotives is around 17.0 kgs. This overweight has been found as the main cause for excessive wear of pins and their bushes used on end brake hangers of flexi-coil mark-I bogies. The excessive weight of trunnion is also responsible for breakage of connection straps as on higher speeds, with play in the brake rigging, it swings resulting into hitting of connection straps with wheel face/guide assembly.

RDSO in their report No.EL/RM-201 of Feb.'97 on 'Problems of Flexi-Coil Mark-I Bogies' had suggested means for reduction in the weight of existing trunnion as well as a new lighter design of trunnion. Though, suggestion in the reduction of weight of the trunnion given in the above report was implemented by some of the sheds but new lighter design of trunnion was not tried at all by any of the maintenance units. In the co-ordination meeting held on 27.4.2000 with CLW/CRJ and Railways under the guidance of Board at ELS/CNB, a modified trunnion was demonstrated based on the design of existing trunnion but having a weight of only 8.5 kgs. The fitment and service trials of this modified trunnion were successfully done at Kanpur Shed.

This modification sheet finalises the design of above discussed light weight modified trunnion. In view this new development, the design suggested vide para no. C6 (ii) of report no. EL/RM-201 of Feb.'97 is being withdrawn.

The design of existing modified trunnion is being modified to suit the requirements of Railways as spelled out during 29th MSG meeting held at Nagpur.

3.0 Work to be carried out :

The existing trunnion in the flexi-coil mark-I bogie is to be replaced by modified light weight trunnion as per :-

RDSO's Drg. Nos. SKEL4559 -1/4, Alt. '1',
SKEL4559 - 2/4, Alt. '1'
SKEL4559- 3/4, Alt. '0' &
SKEL4559 - 4/4, Alt. '0'.

4.0 Application to the class of Locomotives:

Flexi-Coil mark-I bogies of WAP1/4 class of Electric Locomotives.

5.0 Material Required :

Modified light weight trunnion as per :-

RDSO's Drg. Nos. SKEL4559 -1/4, Alt. '1',
SKEL4559 - 2/4, Alt. '1'
SKEL4559- 3/4, Alt. '0' &
SKEL4559 - 4/4, Alt. '0'.

6.0 Material Rendered Surplus :

Existing heavy weight trunnion.

7.0 Reference :

Part – II (New Item) No. 17 of Minutes of 29th MSG meeting held in Nagpur on 7/8-04-2003

8.0 Modification Drawing :

RDSO's Drg. Nos. SKEL4559 -1/4, Alt. '1',
SKEL4559 - 2/4, Alt. '1'
SKEL4559- 3/4, Alt. '0' &
SKEL4559 - 4/4, Alt. '0'.

9.0 Agency for Implementation :

- i) All Electric Loco sheds.
- ii) All POH workshops
- iii) CLW/Chittaranjan


(S.K. Sinha)

for Director General/Elect.

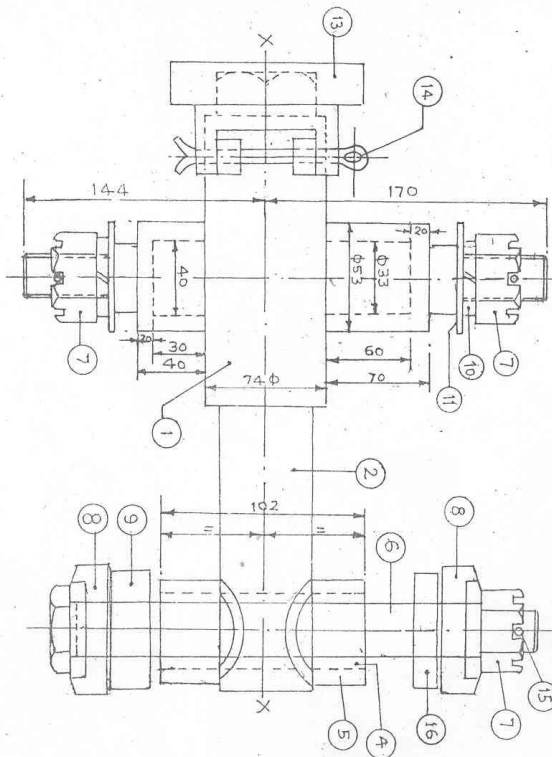
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SKEL4559 - 2/4, Alt. '1',
SKEL4559- 3/4, Alt. '0'
& SKEL4559 - 4/4, Alt. '0'.

Copy to : As per Standard Mailing List No.EL/M/0019, Ver. '2'.


(S.K. Sinha)

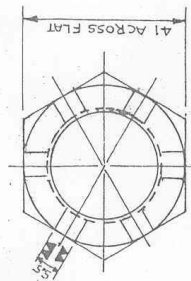
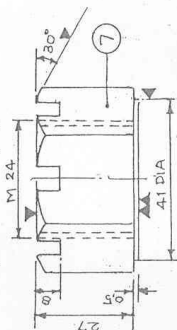
for Director General/Elect.

Encl: RDSO's Drg. Nos. SKEL4559 -1/4, Alt. '1',
SKEL4559 - 2/4, Alt. '1',
SKEL4559- 3/4, Alt. '0'
& SKEL4559 - 4/4, Alt. '0'.

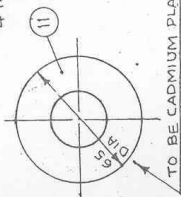
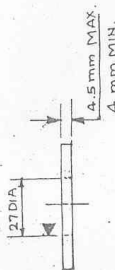


Dt	B. 8. 2000
D	Kay
C	J. J. J. J. J.
FILE	EL/3.2.13/11

16	-	SPACER FOR SLACK ADJUSTER PIN	SKEL-4559-4/A ALT-0'	12	STEEL	15:2062 1991
15	-	SPLIT PIN 5 DIA 56 LONG	-	36	STEEL	15:549 1991
14	-	SPLIT PIN 8 DIA 125 LONG	-	12	STEEL	15:549 1991
13	-	LOCK HINGE	SKEL-4559-3/4 ALT-0'	12	STEEL	15:2062 1991
12	-	LOCKING HEAD	SKEL-4559-3/4 ALT-0'	12	STEEL	15:2062 1991
11	-	PLAIN WASHER	SKEL-4559-2/4 ALT-1'	24	ST. STEEL GR3	15:1075 1994
10	-	SPRING WASHER M24, TY B	-	24	STEEL	15:2062 1994
9	-	SPACER FOR SLACK ADJUSTER PIN	SKEL-4559-4/A ALT-0'	12	STEEL	15:2062 1992
8	-	WASHER (SPECIAL) FOR SLACK ADJUSTER	SKEL-4559-4/4 ALT-0'	24	ST. CL4 G45	15:1875 1991
7	-	SLOTTED NUT HEX M24	SKEL-4559-2/4 ALT-1'	36	ST. CL4 G45	15:1283 1992
6	-	PIN FOR SLACK ADJUSTER	SKEL-4559-4/4 ALT-0'	12	ST. CL1	15:1875 1992
5	-	SPACER FOR NUT HOUSING SPINDLE	SKEL-4559-3/4 ALT-0'	24	STEEL	15:2062 1992
4	-	SLEEVE	SKEL-4559-3/4 ALT-0'	12	STEEL	15:2062 1992
3	-	SLACK ADJUSTER SCREW	SKEL-4559-3/4 ALT-0'	12	ST. CL4 G45	15:1875 1992
2	-	ADJUSTING NUT (SPECIAL)	SKEL-4559-3/4 ALT-0'	12	STEEL	15:2062 1992
1	-	TRUNNION	SKEL-4559-2/4 ALT-1'	12	STEEL	15:2061 1992
REF:	RDSO3 Dwg No. 20,08,10,ALT.3		SCALE: NTS	APPROVED BY:	F. RST ISSUED AUGUST-2000	
MODIFIED TRUNNION ASSEMBLY FOR WAP1 & WAP4 CLASS LOCOMOTIVES			SUPERSEDES			
RDSO ELECT. DTE.			SKEL-4559-1/4 ALT-1'	SUPERSEDED BY		



SLOTTED NUT HEX: M-24.



PLAIN WASHER

11.	—	PLAIN WASHER	—	24	ST. STEEL GR. 1 1934.	TS: 10719- 1934.
7.	—	SLOTTED NUT HEX M-24	—	36	ST. CL4 C45 1932.	TS: 7283 1932.
4.	—	TRUNNION	—	12	STEEL	TS: 2062 1932.
REF. NO.	PART NO.	DESCRIPTION	DETAIL DRG. NO.	Loco	MATL	SPEC.
REF. RDSO'S DRG. NO. 23.08.10	ALT. 3	—E—	SCALE: NTS	APPROVED BY: 	(FOR DRG.)	
MODIFIED TRUNNION ASSEMBLY FOR			FIRST ISSUED AUG. - 2000			
WAP, & WAP4 CLASS LOCOMOTIVES			SUPERSEDES			
RDSO.	— ECT.DTE	SKEL - 4559 - 2/4		SUPERSEDED BY.		
		ALT. '1'				

1	ITEM No. 17 OF XXIX MSG	TRANSMISSION DIMENSION 65 mm WAS S. n. *	h-11 DSE-21	9.9.03
STATUS	ALT.	REF. No.	APPROVED BY	DATE

ELRS/MS/0284 REV'D: 2000

DT	8.8.2000
D	Karav
T	Mahant
FILE	EL/3-2.13/1

