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भारत सरकार - रेल मंत्रालय  
अनुसंधान अभिकल्प और मानक संगठन  
लखनऊ - 226 011  
Government of India-Ministry of Railways  
**Research Designs & Standards Organisation**  
LUCKNOW - 226 011

No. EL/3.2.30

Dated : 20.10.1992

**SPECIAL MAINTENANCE INSTRUCTIONS NO. RDSO/ELRS/SMI/146**

**Breakage of Journal pin of SMGR Tap Changer No. 32 - ABB Make**

**1. OBJECT :**

Railways have reported cases of breakage of journal pin of SMGR. The probable reasons and remedial measures to overcome these failures are listed in the following enclosed instructions for compliance.

**2. INSTRUCTION :**

- a. Cause effect diagram (Ref. Annexure-1)
- b. Journal pin modification (Ref. Annexure-2)
- c. Check sheet for failure of journal pin (Ref. Annexure-3)

**3. REFERENCE**

Co-ordination meeting held on 8.1.1992 at ABB, Baroda

**4. INSTRUCTIONS DRAWING :**

HBB Drawing NO.SWT 435429 (Enclosed as Annexure 2)

**5. APPLICATION TO CLASS OF LOCOMOTIVE :**

All locomotives fitted with no 32 tap changer of M/s ABB make

**6. AGENCY OF IMPLEMENTATION :**

Sheds/shops

**7. PERIODICITY OF IMPLEMENTATION :**

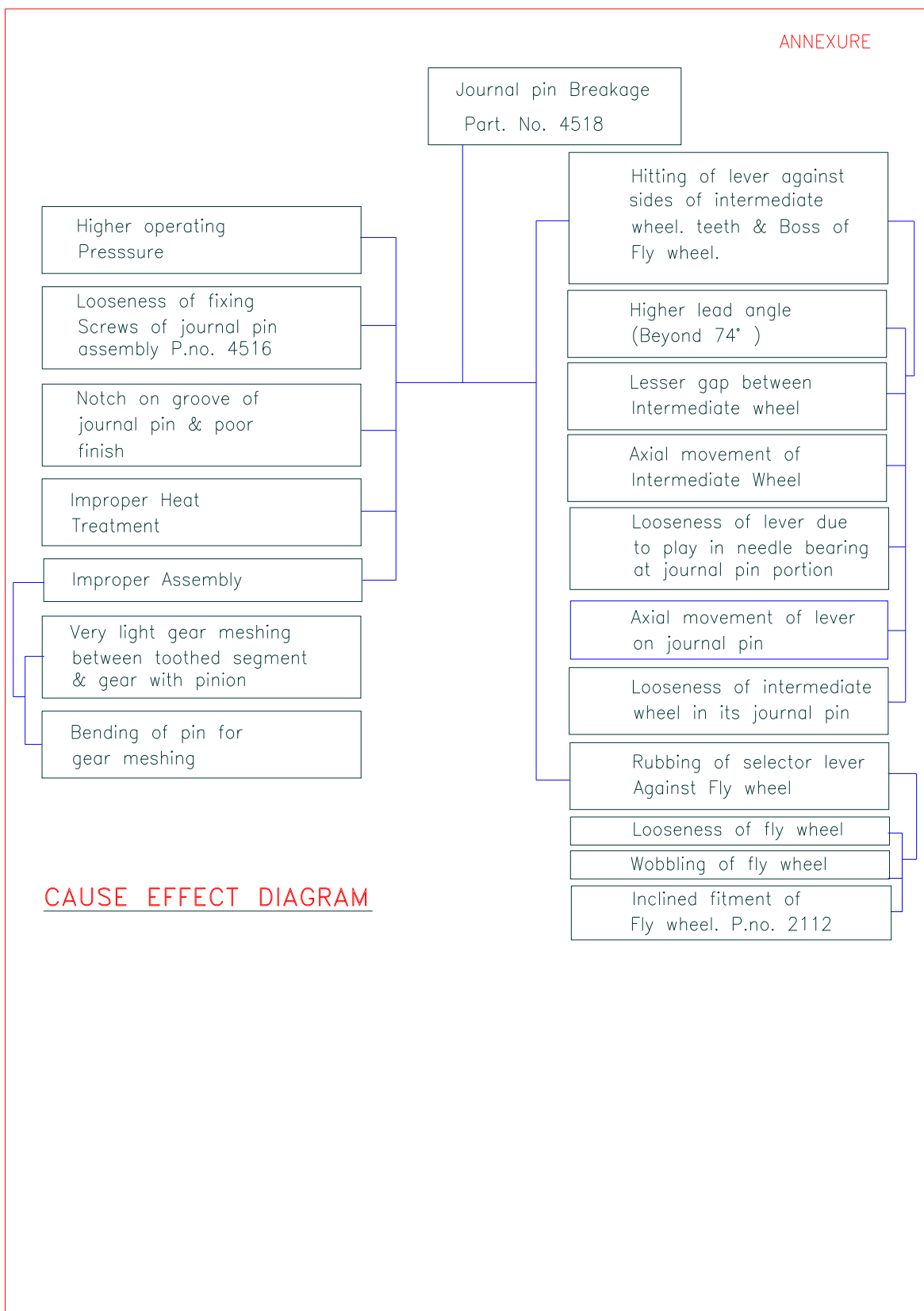
As per the instructions enclosed.

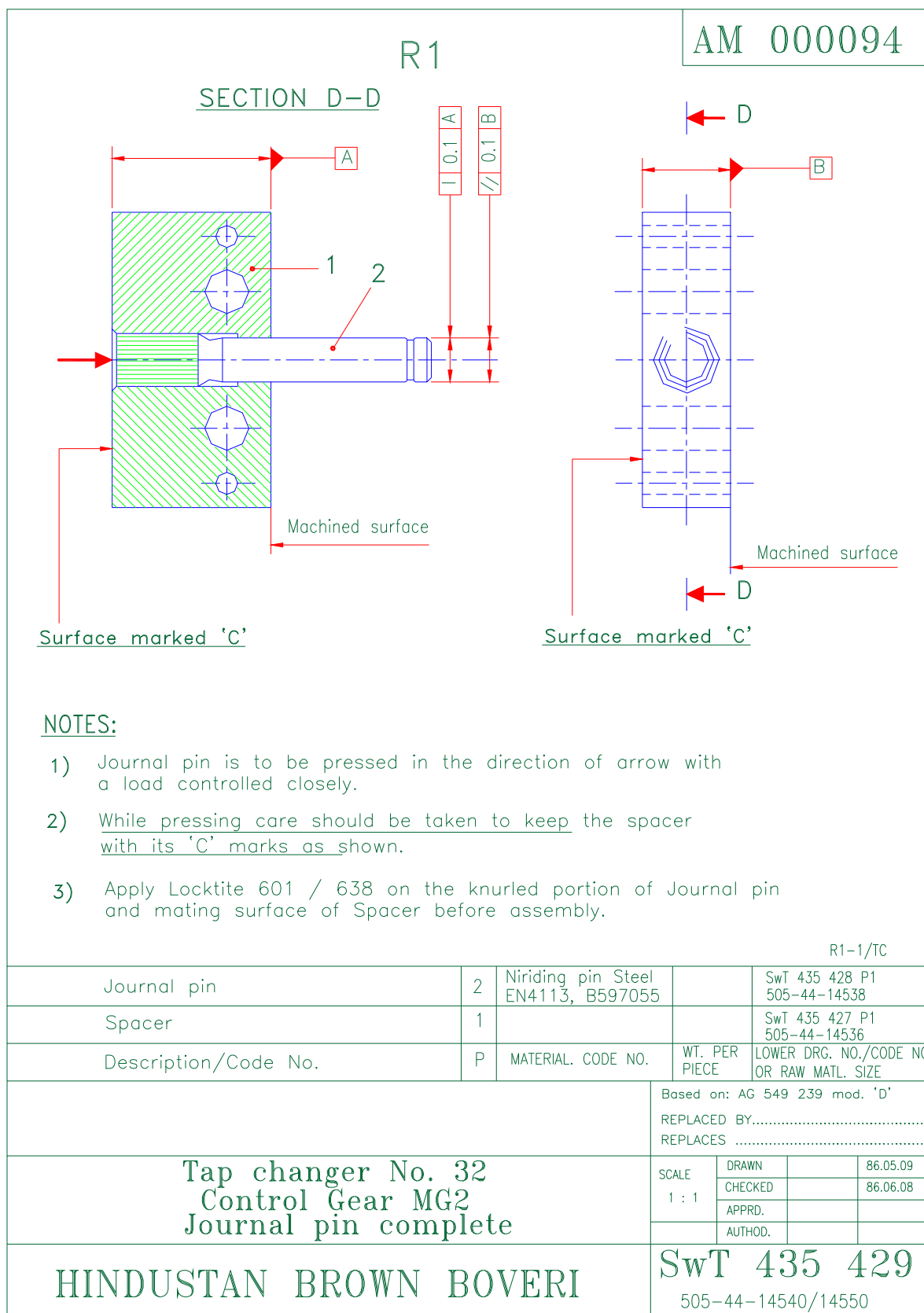
**8. DISTRIBUTION :**

All Chief Electrical Engineers.

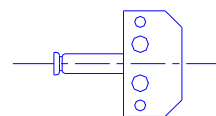
(Arun Srivastava)  
for Director General (Elec)

Encl :As above





CHECK SHEET FOR THE FAILURE OF JOURNAL PIN  
PART NO. 4518 OF TAP CHANGER NO. : 32

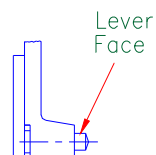


**I GENERAL**

1. Air Motor serial No.
2. Loco Sr. No. / Type
3. Loco commissioning date
4. Failure date
5. Whether it is a line failure
6. Whether Journal Pin is previously changed  
If yes when :
7. Last AOH/POH done
8. What is the oprating Air pressure

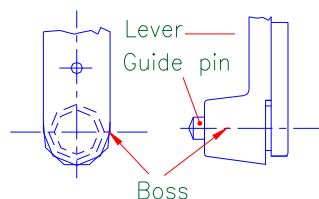

**II) Please take the appropriate column.**

1. Whether there is rubbing mark on the lever boss face at guide pin portion



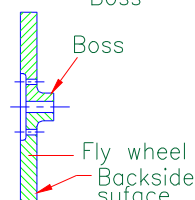
Yes	No.
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2. Whether there is hitting mark on the lever boss at the sides at the guide pin portion



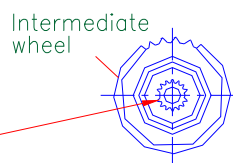
Yes	No.
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3. Whether there is rubbing mark on fly wheel backside surface caused by sector lever



Yes	No.
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4. Whether there is hitting mark on the boss of fly wheel

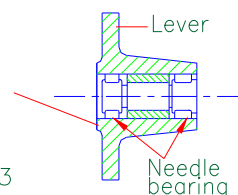


Yes	No.
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5. Whether there is hitting mark on the Intermediate wheel teeth.

Yes	No.
-----	-----

6. Whether Needle Bearing in Lever is loosely fitted.



Yes	No.
-----	-----

7. Whether there is axial play between circlip 6109 & Intermediate wheel 6103  
If yes what is the play

Yes	No.
-----	-----

8. Whether there is play (Lateral).  
Between bearing Pin 6105 & Intermediate wheel  
If yes, what is the play

Yes

No.

9. Whether the failure is at the groove portion.

Yes

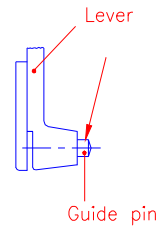
No.

10. What is the condition of groove

Good

Bad

11. Whether guide pin 4521 in-----  
getting stuck up when  
operated by hand.



Yes

No.

12. Whether there was sticking of  
Air Motor / GR reported earlier.

Yes

No.

13. Whether the Journal pin of new design.

Yes

No.

14. Whether there is grease on intermediate wheel.

Yes

No.

**Government of India  
Ministry of Railways  
Research Design & Standard Organisation  
Manak Nagar, Lucknow – 226 011**

EL\4.2.15

Date 18.07.00

**Modification Sheet No. RDSO/ELRS/MS/0292-2000 (REV-0)**

**Title : GR progression and regression valve emergency operation circuit  
modification in microprocessor based WAG-7 locomotive.**

**1. Object :**

The purpose of the modification is to avoid operation of GR from the rear cab during the emergency operation through BPP & BPR when operating from the leading cab.

**2. Work to be carried out :**

1. Wire no.700 is to be opened out from BPP, BPR and to be taped in both the cabs
2. A new wire is to be laid down from BL interlock to BPP and BPR switches from which the cable no. 700 has been removed in both the cabs.
3. A new wire is to be connected from BL interlock to wire no.700 in both the BL switches.

**3. Material Required :**

Two spare interlocks of each BL switch, 750 V grade 2.5 mm<sup>2</sup> cable of required length and suitable insulated lugs of required quantity.

**4. Application to class of locomotive :**

WAG-7 Microprocessor based Loco.

**5. Reference :**

As per suggestion by Railway in the past.

**6. Modified Drawing :**

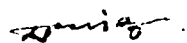
**SKEL- 4560 – 2000 (REV-0)**

**7. Agency Implementation :**

All Electric loco shed having WAG-7 (Modular) Microprocessor based Loco & Chittaranjan Locomotive Works / Chittaranjan.

**8. Distribution :** 1) CEE / CR ,2)CEE / ER, 3) Sr. DEE / CNB, 4) Sr. DEE / GMO, 5) CEE/CLW.

**Enclosure :** As above

  
For Director General Elect. :



STATUS	ALT.	REF. No.	DESCRIPTION	APPROVED BY	DATE
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