

Signature Not
Verified
Digitally signed by
ADELINE LILY JOHN
Date: 2025.07.08
09:39:07 IST
Reason: IREPS
Document
Location: IREPS-CRIS

28

SET OF SELF ILLUMINATED LED TYPE PRESSURE & VACUUM GAUGES FOR ALL TYPE OF CONVENTIONAL NON CREW FRIENDLY CAB LOCOS.

ALT 9

DESCRIPTION	RDSO DRG. No.	QTY / LOCO
01. 4" SINGLE AIR PRESSURE GAUGE (FLUSH MOUNTED) FOR MR	ALT-7 SKDP-3511, ALT-3 SKDP-3509 ALT-3 WITH LED	02 NOS.
02. AIR FLOW INDICATOR GAUGE (FLUSH MOUNTED)	SKDP-3518 ALT-2	02 NOS.
03. 4" DUPLEX AIR PRESSURE GAUGE (FLUSH MOUNTED) FOR MR-EP	SKDP-3510 ALT-3 WITH LED SKDP-3518 ALT-2	02 NOS.
04. 4" DUPLEX AIR PRESSURE GAUGE (FLUSH MOUNTED) FOR BCLP-2	ALT-8 SKDP-3512 ALT-3 WITH LED SKDP-3518 ALT-2	02 NOS.
05. 6" SINGLE AIR PRESSURE GAUGE (FLUSH MOUNTED) FOR HP	SKDP-3516 ALT-3 WITH LED SKDP-3518 ALT-2	02 NOS.
06. 4" SINGLE AIR PRESSURE GAUGE (FLUSH MOUNTED) FOR AR-EP	SKDP-3509 ALT-3 WITH LED SKDP-3518 ALT-2	02 NOS.
07. UNION NUT & TAIL PIPE	ELW/BSL/1/MAHA/FD4.049	12 NOS.

9	DESCRIPTION OF DRG. (MAIN TITLE) IS CHANGED VIDE OFFICE NOTE NO. ELW/BSL/PROG/F42, DTD. 30-7-12 APPROVED BY CELE	11-9-2012	2 t. CWM
ALT No.	DESCRIPTION	DATE	AUTHY

NOTE:- 1. SET COMPRISING OF 07 ITEMS = 24 NOS.
2. INSPECTION PLAN NO. MP TP 14 WITH AMMENDMENT No. 1 & 2.
3. WITH 110V OPERATING VOLTAGE FOR SR. NO. 1 TO 6.
4. ALL GAUGES SHOULD BE PROVIDED WITH LEADS RED & GREEN CONNECTIONS OF 1.5mm² 250 VOLTS CAP. LONG PVC INSULATED FLEXIBLE CORD CONFIRMING TO IS 694-64 PT 1 RED & GREEN WIRE TO BE CONNECTED TO TERMINAL POSITIVE & NEGATIVE RESPECTIVELY ON GAUGES BOTH END SHOULD BE CHIMPED WITH LUGS TO SUITABLE 3mm CONNECTION

All above items are to be Procured from Approved sources only.

8.	ALT-4 SHOWN AT SR. NO. 4 IN RDSO. AS PER O/N. No. ELW/BSL/PROG/F42, DT:- 9.3.2009	29.4.09	4 30/4/09
7.	DRG. NO. UPDATED AT SR. NO. (1) AS PER O/N. No. ELW/BSL/PROG/F-42, DT:- 24.11.08	8.12.08	8/12/08
6.	SKETCH RE-DRAWN & UPDATED AND NOTE No. 4 ADDED AS PER O/N. No. ELW/BSL/PROG/F42, DT:- 08.04.2007	12.04.2007	t. CWM
ALT. NO.	DESCRIPTION	DATE	AUTHY

PL NO 25 98.1936		Date	Sign.	REF: AS PER L. No ELW/- BSL/Relay/F02. Dt: 29.11.06	ELW / BSL
	DRN	11.04.07	JP		
	SSE/PROG	12.04.07	JP		
	CHD.	11.08.07	ML		

**SET OF SELF
ILLUMINATED LED
TYPE PRESSURE &
VACUUM GAUGES FOR
WAG ELECTRIC LOCO.
ALL TYPE OF CONVENTIONAL
NON CREW FRIENDLY CAB LOCO.**

ALT
9

ALT
9

SKETCH NO: ELW/BSL/SK NO. 9074 ALT-8, 9

8, 9

SK NO. 9074 ALT-8, 9



भारत सरकार
रेल मंत्रालय

GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS

**Inspection Plan for Vacuum and Air Pressure Gauges For
Diesel - Electric And Electric Locomotives**

Inspection Plan No. MP.TP-14

July-2000

(Revision-0.00)

with Amendment ^{NO.1} of JAN-2002 Added.
With Amendment NO 2 of June-2003 Added.

अनुसंधान अभिकल्प एवं मानक संगठन
लखनऊ - 226 011

**RESEARCH DESIGNS & STANDARDS
ORGANISATION
LUCKNOW - 226 011**

TOTAL SHEET ⁷ NOS.

Inspection Plan For Vacuum/Air Pressure Gauges For Diesel-Electric and Electric Locomotives

1. Scope

RDSO has standardised drawings of self-illuminated pressure and vacuum gauges fitted on diesel and electric locomotives. The standard drawings have already been circulated to Railways vide RDSO's letters No SD DFM M 1.2 dated 30.11.99 and 22.9.99 respectively. This test plan covers tests to be conducted during procurement of these vacuum / pressure gauges. The above mentioned drawings have been prepared for self-illuminated gauges for inspection plan which are also applicable for ordinary gauges fitted on locomotives. For ordinary gauges, tests related to LED and electrical connections will not be applicable.

2. Tests to be conducted

For procurement of vacuum / air pressure gauges the following tests are to be conducted.

- Visual inspection
- Dimensional check
- Endurance test
- Shock test
- Performance test
- Packing condition

3. Lot Size

The size of a lot should be 25 nos. or full quantity of purchase orders whichever is less.

4. Sampling Plan

Samples are to be selected randomly from the lot. Sample size should be as given in Table-1. If rejection number in a given sample is less than or equal to the acceptable limits, lot will be accepted. If rejection number is more than acceptable limits, second sample of same size as of first sample will be drawn from the lot. If combined rejection number is less than or equal to double the acceptable limits given in the table -1, lot will be accepted otherwise the lot will be rejected.

Table-1

Lot size	Visual Check		Physical check		Shock and Endurance test		Performance test	
	Sample size	Acceptable limit of rejection	Sample size	Acceptable limit of rejection	Sample size	Acceptable limit of rejection	Sample size	Acceptable limit of rejection
0-25	100%	0	3	0	1	0	5	0
26-50	100%	0	5	0	1	0	8	0
51-75	100%	0	8	0	2	0	10	0
76-100	100%	0	10	0	2	0	13	0

5. Visual check on the gauges

The following points are required to be checked

- Month and year of manufacturing
- Name of the manufacturer
- Tail should be marked with punch on both the sides to indicate the purpose for which it is used
- Rubber cap should be provided on shank to protect the threads
- Painting quality and finish of gauge should be checked
- The gauge should have white pointer and black dial marked with green fluorescent paint
- Glass should be properly fitted to ensure protection from environment
- Cables socket shall be crimped on each connection wire for LED gauges
- Wire connection for LED shall be 1.5 mm² PVC insulated flexible cord with identification
- Colour of LEDs should be green
- Pointer stop shall be provided
- Connector of gauges should be as given in RDSO standard drawings mentioned above
- Material of bourden tube should be as per RDSO standard drawings. For this suppliers certificate will be acceptable. However, purchaser should ensure that material is also tested frequently in a government recognised lab and test certificate is submitted by the supplier

6. Physical check

6.1 Dimensions of gauges will be checked as per drawing No. SK DP-3521 to 3530 for diesel locomotives and as per drawing No. SK DP-3508 to 3516 for electric locomotives. Although all the dimensions are to be checked but following dimensions are more important.

- Pointer top must cover 1/10 of length of the shortest line of the graduation
- Outside dia of gauge housing (insert)
- Mounting hole dimension and pitch circle diameter of mounting holes
- Shank diameter
- Distance of shank centre line from inside of mounting flange
- Height of gauge
- Length of tail

6.2 LED should be checked with RDSO standard drawing No. SK DP-3533 for diesel locomotives and SK DP-3518 for electric locomotives. During checking, following points are more important

- LED connections should be in parallel
- For internal connection multi standard wire should be used
- Terminal should be provided with 3 mm crimped cable
- Screened electronic components should be used. For this supplier's certificate will be acceptable
- Number of LED should be 12 for 6" gauges and 8 for 4" gauges
- Power supply for LED should be 72 V DC for diesel locomotives and 24 V AC/DC for electric locomotives