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अनुसंधान अभिकल्प और मानक संगठन
लखनऊ - 226011
Government of India - Ministry of
Railways
Research, Designs & Standards
Organization, LUCKNOW - 226011

No.EL/2.2.9/3

Date: 24-4-2000.

Technical Circular No. ELRS/TC/0060-Rev '0'

Chief Electrical Engineer,

Central Railway, Mumbai CST- 400 001
Eastern Railway, Fairlie Place, Calcutta - 700 001
Northern Railway, Baroda House, New Delhi-110 001
Southern Railway, Park Town, Chennai -600 003
South Eastern Railway, Garden Reach, Calcutta -700 043
South Central Railway, Rail Nilayam, Secunderabad-500371
Western Railway, Churchgate, Mumbai -400 020

**Sub: Measures to improve reliability of M/s Medha Servo
Drives Pvt Ltd's make speedometer.**

Failure data of last three years have been analysed. The analysis have indicated that the following items are affecting the performance of speedometers.

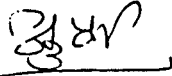
1. PSM, SDC, SMC card.
2. Paper sensor.
3. Water ingress in J. Box.
4. Watch.
5. Pulse generator.
6. P.G.wire.
7. Interference with walkie-talkie.

Details discussion were held with the firm to identify the problem and their solution. Some of the improvements incorporated are summarised below. All Railways are requested to get the items attended as indicated herein.

SN	ITEM NO	PROBLEM IDENTIFIED & REMEDIAL MEASURE	ACTION BY RLYS
1.	PSM Card	*Failure of series diode due to heavy surges. **Current rating of diode increased from SN. 1508. Cut-in-date 15-2-94. Firm's Service Engineer will be attending these cards in a phased manner.	To get the card modified by Service Engineer of the firm during their visit.
2.	SDC, SMC Card	*Due to the surges getting introduced in signal cables, the capacitors in SDC, SMC may become leaky. **The voltage rating of capacitor changed from SN 3066. Cut-in-date 20-11-96.	1. Use only shielded cable. 2. To get the card modified by Service Engineer of the firm during their visit.
3.	Paper Sensor Defective	*Gets damaged during loading of graph roll. Poor quality of transparency chart. **Design modified from SN 4408. Cut-in-date 5-5-98.	Paper sensor will be changed by firm in programmed manner.
4.	Water Ingress in Box	*Non-replacement of gasket after opening of electronic box cover. **Electronic box cover gasket, part no 912-82-2030 and back cover gasket, part no 912-81-1019 should be changed.	Change the gasket whenever electronic box is opened.
5.	Watch Defective	*Ni-cd battery was used earlier which had life of around 2 years. **New battery having minimum guaranteed life of 10 years is being used from SN 4506. Cut-in-date 24-11-97.	Firm will replace the battery and will provide new modified cards free of cost.

6.	<p>P.G. Defective.</p> <p>a) P.G. Body</p> <p>b) M.S. Round Connector pin(6pin)</p> <p>c) Optical sensor</p> <p>d) P.G. Wire</p>	<p>*Damage due to hitting.</p> <p>**To prevent damage from hitting, the projection is reduced in design type SST823.</p> <p>*M.S. round connector is breaking on line. **Design of the connector has been changed and now more robust connectors are used from SN 3135, cut-in-date 12-1-98.</p> <p>Problem under investigation & thereafter design review will be done by firm.</p> <p>- do -</p>	<p>Rlys to observe the performance and send the feedback.</p> <p>**Rlys to observe the performance and send the feedback.</p> <p>----</p> <p>----</p>
7.	Interference with walkie-talkie	<p>*Whenever the running staff uses walkie-talkie set the speedometer needle comes back to zero. ** MP Dte. RDSO vide letter no SD.DFM.1:3 dt 05-3-99 advised all Zonal Railways to get the equipment modified.</p>	Rly's to follow these instructions.

Encl: Nil


 (A.K. Gupta)
 for Director General/Elect Std

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