

Government of India



सत्यमेव जयते

Ministry of Railways

Research Design & Standards Organisation

Manak Nagar, Lucknow-226011

MAINTENANCE INSTRUCTION No. TI/MI/0058, Revision-1
Maintenance Instructions

For

SPECIAL MAINTENANCE INSTRUCTION (SMI) TO PREVENT
CONTACT WIRE PARTING AT RRA LOCATION

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Date	10.8.2021	10.8.2021		

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SPECIAL MAINTENANCE INSTRUCTION (SMI) TO PREVENT CONTACT WIRE PARTING AT RRA LOCATION

1. Objective to Prevent contact wire parting at RRA location.
2. BACK GROUND: On 25 KV AC Traction System, there have been many failures of Contact Wire parting at RRA clamp due to non- availability of curvature on sides of RRA clamp.
3. FAILURE PROCESS
 - a) Cantilever rotates (upto 550 mm depending upon tension length) front and back due to temperature variation.
 - b) Non availability of curvature results in groove formation on contact wire & results in failure in tensile mode.
 - c) Contact wire may part on either side of RRA clamp.
4. Maintenance Instruction:
 - a) Special Drive should be launched to identify locations where RRA Clamp sides are not having curvature.
 - b) Provide correct RRA clamp, i.e. RRA clamp having curvature on both sides.
 - c) Check for cracks/damages of contact wire & replace contact wire piece during RRA clamp replacement or otherwise.
 - d) Ensure stagger as per drawing (both Contact wire & Catenary wire have the same stagger).
 - e) Provide correct RRA dropper length as per drawing. Dropper is in single piece.
 - f) Ensure Proper gradient, relative gradient of contact wire.
 - g) Ensure correct Raised Register Arm Tube (RRT) length as per drawing.
 - h) The above points should also be checked during AOH & POH maintenance.
 - i) Railway should ensure provision of RRA clamp (RI No.1371-3) made of SGCI as per RDSO drawing No. ETI/OHE/P/1370-1, Mod-H in each overlaps locations in place of RRA clamp made of MCI (Drawing No. ETI/OHE/P/1370-1, Mod-E).
 - j) Inner diameter of RRA clamp should be measured before installation. The inner diameter should be equal to 13mm.

5. Provision of supporting contact wire:

a) It is advised that an additional piece of contact wire approximately 2m length may be provided across RRA clamp with 02 PG clamps on either side as a short term measure to avoid falling down of OHE in case of contact wire parting at RRA location. The both end of supporting contact wire should be bent in C shape to avoid slipping of PG. This arrangement should be provided at location where RRA clamps are not available as per drawing mentioned in para 4(i).

b) The arrangement for supporting contact wire across RRA clamp with 02 PG clamps on either side is shown in figure-1.

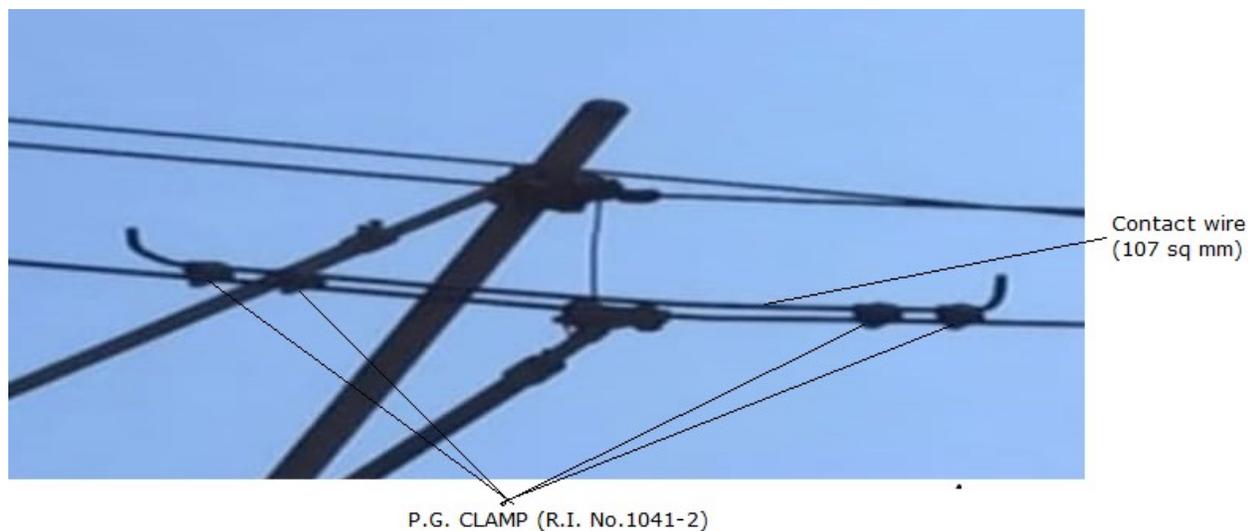


FIGURE-1

6. Note:

- a) RRA clamp should be flexible (free) at RRA adjuster.
- b) Raised register arm tube (25mm)(RI No. 2431) lengths are 0.3m,0.6m,0.8m,1.0m,1.2m,1.5m & 1.7m.
- c) Raised Register Arm Dropper Assembly should as per drawing No. ETI/OHE/P/2470 Rev.-E.

7. REFERENCES:

- a) ETI/OHE/P/1370-1 Rev. H(Raised Register Arm Clamp) , ETI/OHE/P/1370-1 Mod-E, (Raised Register Arm Clamp , MCI), ETI/OHE/P/2470 (Raised Register Arm Dropper Assembly), ETI/OHE/P/2471-1 Rev.-E (Dropper Clip (25) for Raised Register Arm), ETI/OHE/P/2472-1 Rev-B (Raised Register Arm Dropper), ETI/OHE/P/2480 (Raised Register Arm Dropper Assembly). (ETI/OHE/P/1041-2, Rev.-C contact wire parallel clamp).
- b) RE/33/P/2431,Rev.-D (Raised Register Arm Tube 25), RE/33/P/2432 Rev.-E(Raised Register Arm Adjuster 25mm).

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