



No. EL/3.2.119

Dated: As signed

Principal Chief Electrical Engineer,

1. Central Railway, Mumbai, CST-400 001.
2. East Central Railway, Hazipur-844101.
3. East Coast Railway, Chandrashekharapur, Bhubaneswar-751016.
4. Eastern Railway, Fairlie Place, Calcutta-700001.
5. North Central Railway, Block-A, Subedarganj, Allahabad- 211033.
6. Northern Railway, Baroda House, New Delhi-110001.
7. North Eastern Railway, Gorakhpur-273001.
8. South Central Railway, Secunderabad-500 071.
9. South East Central Railway, Bilaspur-495004.
10. South Eastern Railway, Garden Reach, Calcutta-700 043.
11. Southern Railway, Park Town, Chennai-600 003.
12. South Western Railway, Hubli-580020.
13. West Central Railway, Jabalpur-482001.
14. Western Railway, Churchgate, Mumbai-400 020
15. North East Frontier Railway, Maligaon, Guwahati-781011
16. North Western Railway, Jaipur- 302 006

Special maintenance instruction No. RDSO/2024/EL/SMI/0334, Rev. '0' Dec' 2024

1. TITLE:

Special maintenance instruction for Sander used in Electric locomotives.

2. Brief history:

Sanding equipment is installed to provide additional traction between the wheels and rail when required. Sand is released from pneumatically controlled valves at the sand boxes and is exhausted through nozzles just ahead of wheels. There have been various cases of damages/dysfunctioning of sanders due to cattle run over or external hitting or cake formation of sand etc. To dealt with such issues no instructions available.

3. Object:

To avoid stalling of locomotives specially in wet rail condition resulting in loss of adhesion, consequently wheel slip. It may cause loss of punctuality as well as railway resources.

4. Instruction:

In Trip sheds/Pooling points, Loco Sheds and Workshops user railways has to ensure the functioning of sanding system as per following:

i. Minor schedule (TI, IA, IB, IC):

S.No.	DESCRIPTION	TI	IA	IB	IC
i.	Inspect the sand boxes for damage, cracks or tears. Repair if any damages found.	✓	✓	✓	✓
ii.	Check the bracket for damage. Rectify if any damages found.	✓	✓	✓	✓
iii.	Check sand box for cake formation of sand. If any, empty the sand box and clean thoroughly.	✓	✓	✓	✓

iv.	Refill sand as per specification no. AAR M-916-51 in all sand boxes.	✓	✓	✓	✓
v.	Overhaul the sand trap & injector valves and clean sander nozzle.	✗	✓	✓	✓
vi.	Visually check the condition and alignment of sanding pipes.	✓	✓	✓	✓
vii.	Check sanding gear for correct operation for both direction of travel.	✓	✓	✓	✓
viii.	Check exhaust nozzle for wears or damage. Replace if necessary.	✓	✓	✓	✓
ix.	Check hosepipe for wears or damage. Replace if necessary.	✓	✓	✓	✓
x.	Check all the fasteners, tighten/replace if required.	✓	✓	✓	✓
xi.	Inspect the sand box lid seals for wear or damage. Replace if required.	✓	✓	✓	✓
xii.	Adjust the sander nozzle such that it is exhausted through nozzles just ahead of wheels.	✓	✓	✓	✓

ii. Major Schedule (TOH, IOH, POH):

S.No.	DESCRIPTION	TOH	IOH	POH
i.	Inspect the sand boxes for damage, cracks or tears. Repair/replace if any damages found.	✓	✓	✓
ii.	Check the bracket for damage. Rectify if any damages found.	✓	✓	✓
iii.	Empty the sandbox, steam clean and inspect for any corrosion. Repair any corrosion found and then repaint.	✓	✓	✓
iv.	Fill up sand* as per specification no. AAR M-916-51 in all sand boxes.	✓	✓	✓
v.	Overhaul the sand trap & injector valves and clean sander nozzle.	✓	✓	✓
vi.	Replace sander hosepipe.	✓	✓	✓
vii.	Replace sander nozzles.	✓	✓	✓
viii.	Replace seal in the sand box lids.	✓	✓	✓
ix.	Replace sanding equipment fasteners.	✓	✓	✓
x.	Check sanding gear for correct operation for both direction of travel.	✓	✓	✓
xi.	Visually check the condition and alignment of sanding pipes.	✓	✓	✓
xii.	Adjust the sander nozzle such that it is exhausted through nozzles just ahead of wheels.	✓	✓	✓

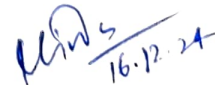
* The procurement of sand for Electric locomotives in Trip sheds/Pooling points, Loco Sheds, Workshops shall be ensured as per specification no. AAR M-916-51 advised vide RDSO letter no. SD.DFM.A.8 dated 28/29.12.2011.

5. Applicable to class of Locomotives:

Electric locomotives

6. Agency of Implementation:

Trip sheds/Pooling points, Loco Sheds, Workshops


 (Nirdosh Kumar Gupta)
 for Director General/Electrical

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