

SOUTH CENTRAL RAILWAY

Headquarter's Office,
Works Branch,
Secunderabad
Date: 26-05-2020

No.W.506/Genl./Track-TM/Vol.XVII

CAO/C/SC

DRM/SC, BZA, GTL, GNT, HYB & NED.

Sr.DEN/Co.ord/ SC, BZA, GTL, GNT, HYB & NED.

Sub: Guidelines for Track Maintenance.

Ref: ENGINEERING STANDING ORDER No.86 issued vide letter no.
W.506/ESOs Dt: 21.05.2020

ENGINEERING STANDING ORDER No.86 dated 21.05.2020 regarding guidelines for track maintenance is forwarded herewith for information and necessary action please.

These instruction should be conveyed to all the concerned in the divisions for strict adherence.

This issues with the approval of Principal Chief Engineer.

Encl: As above


(A. Balaji Rao)
Dy.CE/Track-I/HQ
for Chief Track Engineer

Forwarded to: C/- Secy to PCE for kind information of PCE
C/-CPD/BW & CPD/SD
C/-CBE, CGE, CE/P&D, CE/Wks, CE/TM, CE/TP, CE/RSW, CE/BRH & CE/SD

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SOUTH CENTRAL RAILWAY

Headquarter's Office,
Works Branch,
Secunderabad

No. W.506/ESOs

Date: 21-05-2020

ENGINEERING STANDING ORDER No: 86

Sub: Guidelines for Track maintenance.

Due to increase in speed, traffic and axle load, the pressure on track is increasing day by day and therefore track maintenance is becoming more and more challenging. There is a need to specify some guidelines to be adopted for good maintenance practices to meet the current day challenges. The following desirable maintenance practices are required in addition to the existing instructions/guidelines for safe and efficient maintenance of track.

1. **Greasing of track:** The frequency of greasing should be increased in case of corrosion prone areas, platform lines etc. The following greasing frequency should be adopted.

S. No	Description of work	Existing frequency	Revised greasing/lubrication frequency
1	ERC greasing (i) In corrosion prone areas & platform lines	As per ESO 59 para 2.1(A) ERC greasing (all 4 ERCs) and sealing of liner contact area (only inside) – Once in a year	On Inside and Outside - ERCs, Inserts (eye) & sealing of contact area of liners – Once in a year
	(ii) In other areas	ERC greasing (all 4 ERCs) – Once in 2 years	On Inside and Outside - ERCs, Inserts (eye) & sealing of contact area of liners – Once in Two years
2	Lubrication of Plate screws in Points & Crossings (i) In corrosion prone areas (ii) In other areas	As per ESO 59 para 2.1(E) Once in a year. Once in two years.	 Once in six months Once in a year
3	SEJ lubrication	As per ESO 12A para 4 Once in a month	Once in 15 days
4	Greasing of Points & Crossings (Gauge face)	As per ESO 12A para 3 Once in 15 Days	Once in 15 Days
5	Lubrication of gauge face of rails On Curves : (a) On Curves flatter than 3° (i) BOXN routes (ii) Other than BOXN routes (b) On Curves sharper than 3° (i) BOXN routes (ii) Other than BOXN routes	As per ESO 12A para 2 Once in 3 weeks Once in 3 weeks Once in 15 days Once in 15 days	Irrespective of the routes, for curves of (i) 2° & above upto 3° – Once in 15 days (ii) Less than 2° – Once in a month Greasing by gauge face lubricators to be done for curves of (i) 3° and above

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S. No	Description of work	Existing frequency	Revised greasing/lubrication frequency
			(ii) 1.25° and above on routes where rail grinding is being done.
6	Recently commissioned RUB (till its stabilization)	-	Once in a month
7	On steel girder bridges and its approach upto 100m on either side	-	Once in a month

Above instructions supersedes the instructions given vide ESO No 59 para 2.1(A) & 2.1(E) and ESO No 12A para 1,2,3&4 regarding frequency of lubrication of ERCs, Plate screws of Points & Crossings, Lubrication of gauge face of rails on straight and on curves, Greasing of Points & Crossings and SEJ lubrication.

Each division should workout the Annual consumption of grease for the above and accordingly annual indent of grease should be processed for procurement excluding the curves where greasing is done by Gauge face Lubricators.

Grease supplied to the field unit should be tested in NTH/ Govt. Laboratory by the consignee to verify/affirm the quality of grease supplied by the firm.

2. Turnouts: All joints of points and crossings should be welded except foreleg & backleg of Xing. Gapless joint to be provided with new rails while changing the crossings with CMS. Division should procure 26.5 mm drill bit and it should be under custody of PWI Incharge and this drill bit should be given to Blacksmith on the day of working. Hole to be made in new rail at 166 mm from 1st hole of crossing to ensure gapless joint (sketch enclosed) All fittings, Check rails should also be changed while changing Crossing. Whenever CMS crossing is renewed approach landing rails also to be replaced.

3. Use of small track machine: All division should focus on increased use of small track machines in maintenance activities. Division to follow comprehensive instructions for repair and maintenance of small track machines and to procure small track machines as per Scale check circulated vide this office letter no. B/W/147/STMs/ESTMD dated 26/03/20 (Revised Policy).

4. Toe load measurement: P. way official to measure Toe load during push trolley inspections /foot inspection. Each SSE/P.Way in charge should have at least two nos. of toe load instrument. At least one should be mechanical type.

Toe load should not be less than 800kg at the following locations:

- (i) Breathing length of LWR
- (ii) Steel girder Bridge approach (100 m approach)
- (iii) LC gate approach (3 rail length approach)

Damaged sleeper, out of square, worn-out fittings of PSC sleeper should be replaced/rectified in the above locations.

5. Service life of P.Way materials: Codal life of different assets of P.Way is available in IRPWM but for some of the P.Way material's service life is not mentioned. Division should plan the replacement of the below P.Way materials particularly on run through main lines.

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- (i) GFN Liners/GRSP: 200 GMT or 04 years whichever is earlier or on condition basis.
- (ii) Metal liner/ERC: 300 GMT or 08 years whichever is earlier or on condition basis.
- (iii) CGRSP: 300 GMT or 8 years whichever is earlier or on condition basis.
- (iv) CMS Crossing: 300GMT for 52/60 kg or on condition basis.
- (v) F/S Switch sleepers – normally 500 GMT or on condition basis.
- (vi) F/S Xing sleepers – normally 500 GMT or on condition basis.
- (vii) Fan shaped layout PSC sleepers (complete set) - 1000 GMT or condition basis
- (viii) 10 mm thick rubber pad below CMS crossing portion – 200 GMT or on condition basis.
- (ix) LC gate sleeper – 1000 GMT or on condition basis.
- (x) SEJ sleeper- 400 GMT or on condition basis.
- (xi) Rubber pad for T/Out (other than Xing portion), SEJ, Girder bridges – 100 GMT.
- (xii) Thick web switches – 500 GMT or on condition basis.

Service life of items (i), (ii) & (iii) above are vide Rly Bd's Lr.No 2016/CE-II/TSC/1/Pt.1 dated 04.07.2019 & item (iv) is vide Rly Bd's Lr No. Track/21/2006/01 13/7/Misc/TSC dated 18.08.2017, item (vii) based on Railway Board Letter No 2016/CE-II/TSC/1/Pt.1 dated 04.07.2019 and for Item (xii) based on TSC item 1336/87/GT/PTX recommendations of 88th TSC January 2020.

6. Replacement of Unserviceable Sleepers on crossings and switches on points and crossings.

Due to heavy axle loads of increased traffic and speed crossing portion and switch portion of points and crossings are more prone for distortion and maintainability will be difficult due to grooving of sleepers necessitating frequent renewal fittings and sleepers. Whenever casual renewal of sleepers of crossing and switch portion are planned, all the sleepers under crossing and switch portion renewal to be done at a time as detailed under.

Location	1 in 8.5	1 in 12	1 in 16
Switch portion	Sleeper no 1 to 13	Sleeper no 1 to 20	Sleeper no 1 to 20
Crossing portion	Sleeper no 42 to 49	Sleeper no 65 to 74	Sleeper no 77 to 87

7. TRR(P) to be carried out with 26.00 m long rails on steel Girder bridges where SWP is laid (restricted locations for LWR) and for spans 12.20 m and 18.30 mts. Drilling of holes on track sleepers for fixing guard rails on approaches of bridge is prohibited. Bridge approach sleeper to be provided where it is not available. Tie angle to be provided on channel of girder bridges. For ballasted deck bridges, bridge PSC sleepers to be used to fix guard rail and no hole to be drilled in ordinary PSC sleeper for fixing guard rail.
8. Switch stop released from Switch changing work can be used in check rail of LC gate to maintain the horizontal clearance of check rail.

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9. Attention to turnouts, SEJ, Glued Joints, Girder Bridges:

The following attention frequency for turn outs, SEJ, Glued Joints, Girder Bridges etc. should be adopted for run through main lines-

S.No	Description	Frequency
1	Diamonds and its approach	Once in a fortnight
2	Glued joints	Once in a fortnight
3	Girder Bridges and its approach	Once in a week
4	Turnouts(switches and crossings) & its approach	Once in a month
5	SEJ and its approach	Once in 15 days
6	LC Gate approaches	Once in a month

The pre and post measurement should be taken and recorded. The inspecting officials should check these aspects while doing push/motor trolley and inspection of gang/worksites. One or two dedicated teams of blacksmith & trackmen to be made under the supervision of JE/PWay for attending to the above special fixtures and division to put in place, a mechanism for effective monitoring of work executed on daily basis through Engineering Control.

10. Eutectic welding to be done to repair cupped welds and minor scabbed locations.

All the above instructions are to be followed as minimum requirements. However, attention can be given earlier too, if required on condition basis.

This issues with approval of Principal Chief Engineer.

Encl: As above.


(AKSHAY KUMAR JHA)
Chief Track Engineer

DRAWING OF GAPLESS JOINT

