

East Coast Railway Engineering Department

CE Circular No. 36

Sub: Greasing of track components.

Greasing of track components not only prolongs the life of P.Way fittings and rails but also enhances safety to some extent by reducing frictional resistance between moving parts, lateral thrust and mounting tendency of wheel etc. The following instructions are issued for greasing of different track components.

A. Greasing of curves:

Greasing on sharp curves (more than 3 degrees) is required for better maintenance practice and to prolong life of rail by reducing lateral wear. Outer rails on curve shall be lubricated periodically to minimize wear and tear. Greasing of curves 5° & sharper is to be done on daily basis and lesser than 5° and upto 3° will be done once in a week. While greasing, care should be taken that no grease comes to the top of rail head.

B. Greasing of ERCs:

ERCs on sleeper track shall be greased once a year in corrosion prone area and in other areas once in 2 years. Sealing of liner space by grease shall also be done to arrest corrosion at rail seats/liner bites.

At a time ERCs should not be removed for more than one sleeper. If for any reason more sleeper lubrication of ERC is taken up at least 15 sleepers shall be kept intact between any two sleepers taken up for lubrication of ERC at the same time.

C. Greasing and sealing of liner contact area:

In identified corrosion prone area rail liner seat should be greased using graphite grease to the RDSO specification after proper cleaning. The grease is also applied all around the liner on the rail foot on gauge face side to prevent the ingress of toilet droppings in the gap between the liner and rail foot. Greasing and sealing of liner contact area shall be done once in a year for gauge face side and once in 2 years on non gauge face side of rail.

D. Greasing of point and crossings:

1. The greasing of ERC should be done once in a year.
2. Greasing of plate screw: Due to corrosion the plate screws get seized in the dowel hole of sleeper which leads to breakage of head at the time of opening. This makes sleepers unusable, therefore, plates screws in switch portion must be greased once in a year.

Process:

- (i) At one time only one plate screw should be removed with the help of spanner. The screw should be cleaned with the help of wire brush and all the corroded material should be removed.
- (ii) The dowel hole in the sleeper should be cleaned with the help of wire brush/vacuum cleaner. The dowel hole should be filled up by 'O' grade graphite grease.
- (iii) The screw along with the plain portion should be greased.
- (iv) The screw should be refixed and the grease oozing out the dowel hole will fill the gap between screw cap and dowel tap.
- (v) In some cases where all the screw are corroded, broken or seized all four screws may have to be removed at a time. S&T staff should be required in such cases.

3. The fish plates in the turn out should be greased once in a year to ensure free-expansion/contraction of the rail.
4. The gauge face of tongue rail, nose of crossings and outer rail of lead portion should be lubricated once in fortnight at the location where excessive wear is observed, otherwise it should be greased once in a month.
5. Oiling and greasing of HSD: Proper cleaning and greasing of various pins in SSD should be done once in a year.

E. Greasing of SEJs:

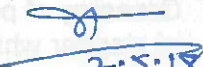
Once in a fortnight, SEJ shall be checked and oiling and greasing of tongue and stock rail including tightening of fastenings shall be done simultaneously.

F. Miscellaneous:

1. Greasing shall not be done in rainy condition and hot weather condition.
2. Insulated fish plates should not be greased.
3. Fishing surface of rail and fish plates should be greased before putting the fish plates in position.
4. Greasing of ERCs should be done in direction opposite to that of approaching train.
5. Grease to IS: 408-1981 (Grade 'O') should be used.

G. Consumption of grease: Approximate quantity required for greasing may be considered as under:

Sl. No.	Maintenance operation	Requirement of grease graphite
1	Gauge face lubrication of outer rail of curves.	10kg per KM
2	Lubrication of joints	0.1 kg per joint
3	Lubrication of ERCs only	60 kg per TKM
4	Sealing of ERCs and sealing of liner contact area for inside liners only	110 kg per TKM
5	Lubrication of ERCs and sealing of liner contract area for all liners	160 kg per TKM
6	Lubrication of SEJ	0.3 kg per SEJ.
7	Lubrication of plate screws of Points and crossings	2kg per joint
8	Lubrication of Points and crossings including turn in curve	1kg per unit.


 2.5.18
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Chief Track Engineer

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