LUBRICATION OF RAIL JOINTS

Purpose :

The lubrication of rail joints retards the wear on the fishing planes of the rails and the fishplates. It also facilitates expansion of rails.

Material used as lubricant :

A stiff paste of plumbago and Kerosine oil made in the proportion of 3 kgs. of plumbago and 2 kgs. of Kerosine oil. Black oil or reclaimed oil is used for fishplates and nuts.

Alternative to the above material may be used, with the specific approval of Chief Engineer.

Schedule :

Once a year after monsoon from October to February. Lubrication should not be carried out in extremes of weather both hot and cold. In yard, this period may be extended to two years with the approval of the Chief Engineer.

Prequisites :

- **Creep in excess of 150 mm should be adjusted before the work of lubrication of rail joints is undertaken.**
- **The work should be carried out under caution order for 'works of short duration' to be issued daily by the permanent way inspector.**
- **The work should be carried out by gangs working under the direct supervision of at-least a qualified permanent way supervisor.**
- **Spare fish-plates and bolts should be available for replacement of cracked ones.**

Procedure :

- **The nuts are unscrewed and the fish bolts and fish-plates are removed.**



Procedure :

- The fishing surfaces of the fish-plates and rail are then cleaned with a wire brush.
- The rails ends are inspected for cracks with the help of magnifying glass and a mirror. The fishing surfaces of rails and fish-plates are checked for wear.
- The fishing surfaces of the rails and fish-plates are then lubricated.







- The fish-bolts are then put back in reverse direction, the inner two bolts being tightened first, then other two bolts tightened with standard fish-bolt spanner.



If the traffic condition so warrants, an alternate procedure of lubrication is adopted. In this, the work of lubrication may be carried out by the keyman of the gang, assisted by one or more men on such sections as may be specified by the DEN.

In such cases the keymen shall exhibit a red signal flag at the site of work and act as lookout man also.

In this procedure only one joint should be opened at a time.

- The nuts are unscrewed and the fish-plates on the nut side is then removed leaving the other fish-plate and bolts in position.
- The fishing surface of the fish-plate and the rails are cleaned with a wire brush. The rails are examined for cracks with a mirror and a magnifying glass, and fishing planes of rails and fish-plates for wear. The fish-plates are lubricated and put back in position.
- The fish bolts are taken out one at a time, and put back in reverse position, after oiling.







- The other fish-plate and fishing surface of the rail is treated similarly.
- The nuts are replaced and tightened to the extent possible with the standard fish bolt spanner.



- The lengths over which the rail joints are lubricated along with dates shall be recorded in the gang chart of the section and the SSE/P.Way's section register.

In the month of April, SSE/P.Way should submit the certificate of lubrication of rail joint to the ADEN giving reason for any exception. Copies of these certificates should be forwarded to the DEN with ADEN’s comments for scrutiny and record.

During all works such as relaying, rails and turnouts renewals etc. rail joints should be lubricated.

Precautions :

- The joints opposite to each other or consecutive joints shall not be opened out at the same time. It should be noted that at no time during the operation there is less than one fish-plate and three fish bolts without nuts connecting the two rails.
- The men should sit facing the direction of train while doing the work.
- While tightening the fish-bolts overstraining of bolt shall be avoided.
- Spare fish-plates and bolts should be carried for renewal of cracks ones.
- Insulated fish-plates should not be opened.

Disclaimer

The information contained in this pamphlet does not supercede any existing provisions laid down in RDSO & Rly. Board instructions. This document is not statutory & instructions given in it are for the purpose of guidance only.

GOVERNMENT OF INDIA - MINISTRY OF RAILWAYS

(For Office use only)

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CAMTECH/C/2010-11/LRJ/1.0
September - 2010

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