

भारत सरकार (GOVERNMENT OF INDIA)
रेल मंत्रालय (MINISTRY OF RAILWAYS)
रेलवे बोर्ड (RAILWAY BOARD)

No. 2023/CE-II/Safety/Instruction

New Delhi, dated 10.02.2025

**Principal Chief Engineer,
All Zonal Railways.**

Sub: Toe Load measurement

1. For proper functioning of LWR/CWR, sufficient toe load is one of the key requirements. As with passage of traffic and time, toe load of ERC decreases, its regular measurement is essential. IRPWM stipulates its frequency & method of measurement and action to be taken if found below prescribed level.
2. Para 628(1) stipulates the sample size, testing frequency and action to be taken regarding toe load measurement which is reproduced below:

Periodicity of measurement of performance of Elastic Fastening Components –

Sample, Size and Testing frequency –

*(a) **Sample size** – Toe load of elastic rail clip should be measured on **1% of ERCs** randomly on **every 100 sleepers** (all 4 ERCs to be measured on one sleeper).*

*(b) **Testing frequency** – The testing of ERCs is to be done after **four years** or passage of **200 GMT** of traffic, whichever is earlier. In **corrosion prone area**, the **initial testing** of ERC is to be done after **two years** or passage of **100 GMT**, whichever is earlier.*

However, if 20% or more of sample size records toe load below 600 kg, both frequency of inspection and sample size are to be doubled.

Replacement of ERC –

*(i) If **20% or more** of sample size records toe load **below 400 kg**, which is to be **confirmed by 5% sample size**, proposal of through fastening renewal should be initiated.*

(ii) The provisions given above are only for guidance of Railways. The Railways on the basis of the overall condition of track, pattern of traffic and the required level of maintenance should undertake the large scale replacement of the fastening.

(iii) Further, as the loss of toe load is reflective of conditions of other elastic fastening components like groove rubber sole plate, GFN/metal liners etc. as well, the railways may also record condition of these components along with measuring toe loads for elastic rail clips.

3. Railways are therefore requested to ensure compliance to above provisions of IRPWM in letter and spirit.

**Director, Civil Engg. (Plg.)
Railway Board**