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9/2/15

S. J. Jadhav
9.2.2015

D. J. Jadhav



Ministry of Railways
New Delhi

Chief Mechanical Engineer
New Delhi



No. SV.FLAT Spring

Dated: 05.02.2015

Chief Mechanical Engineer,

1. Central Railway, Chhatrapati Shivaji Terminus, Mumbai - 400 001
2. Eastern Railway, Fairlie Place, Kolkata - 700 001
3. Northern Railway, Baroda House, New Delhi - 110 001
4. North Eastern Railway, Gorakhpur - 273 012
5. Northeast Frontier Railway, Maligaon, Guwahati - 781 011
6. Southern Railway, Park Town, Chennai - 600 003
7. South Eastern Railway, Garden Reach, Kolkata - 700 043
8. South Central Railway, Secunderabad - 500 071
9. Western Railway, Churchgate, Mumbai - 400 020
10. East Central Railway, Hajipur - 844 101
11. East Coast Railway, Chandrasekharapur, Bhubaneswar - 751 016
12. North Central Railway, Allahabad - 211 001
13. North Western Railway, Jaipur - 302 006
14. South East Central Railway, Bilaspur - 495 004
15. South Western Railway, Gadag Road, Hubli - 580 020
16. West Central Railway, Jabalpur - 482 008
17. Konkan Rly. Corporation Ltd., Corporate Office, Belapur Bhawan, Navi Mumbai - 400 614
18. ICF, Chennai - 600 038
19. RCF, Kapurthala - 144 602

Sub: Speed restriction due to secondary outer flexi-coil spring breakage en-route.

Sh. Kamlik

The issue of stability with broken outer flexi-coil spring of LHB coaches has been examined. Based on simulation results given by RCF, inputs from OEM, a design study including simulation conducted by RDSO and experience of field, it is found that the behaviour of LHB coaches upto a speed of 100 kmph is stable.

From the simulation results, it is concluded that the coach can be permitted safely upto 90 kmph. For further study the effect of broken spring and permitting the

coach at higher speed than 90 kmph, an oscillation trial of coach fitted with broken spring is being planned.

In view of the above, in case of en-route breakage of outer flexi-coil spring of secondary stage suspension the LHB coach can be permitted to run up to the destination with TXR staff to escort the train and critically monitor the broken spring. The following should be ensured while permitting such movement:

- (i) Only one spring is in broken condition.
- (ii) The spring is broken at one location which falls within top or bottom two coils.
- (iii) The spring is not displaced from its position.
- (iv) Bump stop gap should not be zero.

At the destination the broken spring should necessarily be replaced and proper records maintained.


05.02.15
(Indrajit Singh)

Executive Director (Stds.)/Carriage

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EDME/Coaching/Railway Board, New Delhi