

No.TFC/374/Specs.

Date: 24.09.2012

Advisor/Safety,
Railway Board,
Rail Bhawan,
New Delhi.

TFC - 89

Sub: Specification and drawing of Wedges

Ref: Railway Board letter No. 2012/Safety (DM)/Misc dated 13.01.2012

Railway Board had directed RDSO to standardize the specification and drawing of certain safety items including Wedges. Accordingly a committee of Executive Directors of RDSO deliberated on issues concerning these items. The present day norms of local procurement and use of wedges and its adequacy amongst several other related issues including use of alternative non wood material for wedges were considered by the committee.

The overall view of the committee after thorough consideration of all these related issues of wedge is to adopt drawing No. SKDL 4575 dated 11/5/2004 as an interim measure till a non wood substitute is developed by RDSO. An instruction bulletin for the purpose is enclosed along with the drawing.

Encl: Instruction Bulletin
Drawing of Wedge

(Dr. R. Bharadwaj)
Executive Director/Traffic
for Director General

(original letter in main file)

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(Spa) 24. No. 644

**RESEARCH DESIGNS & STANDARDS ORGANISATION
MANAK NAGAR, LUCKNOW-226011**

No.SD.WA.1

INSTRUCTION BULLETIN

Dated 23.05.2012

Instruction Bulletin No. MP.IB.BD.01.03.04

Subject: Provision of Standard Wooden Wedge for use under Locomotives wheels to prevent rolling back on gradient

- Ref:- i) Railway Board letter no. 99/M(Safety)/7/2/SC/1 (Pt.) dated 16.06.2004.
ii) Even letter no. of this office of dated 02.07.2004.

1. Background:

1.1 Instances of disabled locomotives / trains rolling down on graded sections, continue to come to notice. Investigations have brought out that prescribed safety precautions including application of wooden wedges have not been followed. It was also seen that no uniform practice for use of wooden wedges on the locomotives and the brake vans is being followed. In addition the dimensions of the wooden wedges vary on different zonal railways. In case of rolling down of a goods train and its subsequent rear collision with another goods train of S.C.Railway on 03.04.1999, CRS/S.C.Circle, Secunderabad had made following recommendations for Mechanical department:

"9.6 Sufficient number of wooden wedges should be provided in all Diesel and Electrical locomotives. Wooden wedges should also be provided in the brake vans of all goods trains running on the section having ruling gradient of 1 in 150 or steeper gradient. Proper system should be evolved for handing over and taking over of these wedges by the Driving Crew as well as the Guards on change of their duties."

In order to standardise the practice of use of wooden wedge in locomotives & brake van, shape & size, material class etc, Motive power Directorate of RDSO has prepared a drawing for standards wooden wedge applicable for all locomotives as well drawing no. SKDL- 4575. Comprehensive instructions about its use for locomotives are detailed below:

2. Technical Instruction:

- 2.1 The wooden wedge should conform to RDSO Drg. no. SKDL-4575. The drawing has incorporated the following details:
- Dimensions and material specification of the wedge.
 - Instructions for use.

- 2.2 A minimum of four numbers wooden wedges, in good condition, to above RDSO drawing should be provided on each locomotive. These wedges should be in the personal custody of driver and shall be handed over/taken over from one driver to another. The wedge shall form part of the tool box of the locomotive.

3. **Instruction for use:**

- a. The wooden wedge should be used in such a way that the wheel flange does not touch it i.e. at least 2 mm clearance between root of the flange and inner face of the wooden wedge should be maintained to absolutely avoid the riding of wheel flange on the wooden wedge.
- b. The wedges shall be used on the foremost and the rearmost wheel sets of the locomotive.
- c. In case needs is felt, wedges may be used on the intermediate wheel sets also.
- d. The wedge should be discarded in case of any damage whatsoever.
- e. Special care should be taken to avoid any damage to the front edge of the wedge.

4. Use of wooden is advocated under the following conditions:-

- a. After the following precautions have been taken:-
 - i. Application of train brakes from A-9/DVB.
 - ii. Application of loco brake through SA-9.
 - iii. Application of loco hand brakes.
 - iv. Application of hand brakes on wagons.
 - v. Application of Guard's hand brakes.
 - vi. Application of the locomotive independent brakes on the banking locomotive if the train is banked
- b. 1 in 150 or steeper gradient.
- c. Likely detention of the rolling stock to be 30 minutes or more.
- d. Dead locomotive.
- e. Vacuum braked stock.
- f. During re-railment of locomotive on steep gradients.

5. The use of the wooden wedges as enumerated in the above instruction bulletin shall supplement the stipulations already provided in the GR/SR to prevent the rolling down of stock on gradients.
6. In initial and refresher courses, all assistant drivers and drivers should be trained to wedge loco wheels in emergencies to prevent the vehicle from rolling down on gradients.

Enclosures: RDSO Drg. no. SKDL-4575

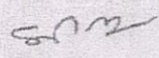
Agencies for implementation:

1. DLW/ Varanasi
2. CLW/Chittaranjan
3. DMW/Patiala

4. All maintenance sheds
5. All workshops undertaking POH of the diesel and electric locomotives
6. All chief safety officers of zonal railways
7. All divisional safety officers
8. All Sr. DME/DME (Power) and all Sr. DEE/DEE (TRS)

Distribution:

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(S. Panwar)

Director Motive Power
For Director General (MT)

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