

NEW ZEALAND GOVERNMENT RAILWAYS MECHANICAL BRANCH	“FLOAT” ON BOGIE ROLLING STOCK	CODE No. 82	
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(1) Definition

“Float” is the clearance allowed between the bogie float-blocks and the corresponding blocks or sections of the underframe immediately above.

The float dimensions specified for the various types of vehicles shall be the clearance provided on *each side of each bogie* when the vehicle is in normal running condition and standing truly vertical on a stretch of level track.

For example, a vehicle that should have $\frac{1}{8}$ " float must have $\frac{1}{8}$ " clearance between the bogie and underframe float-blocks *on each side of each bogie*.

If the float on one side of one bogie of a vehicle or locomotive tender is in excess of that stipulated when standing on level track due to the tilting of the body and underframe on the bogie centres, the float on the *same* side of the other bogie must be checked to use that it is greater by a similar amount than that authorised for this bogie. No bogie vehicle or locomotive tender may be in a cross-cornered condition as regards “float”.

(2) Authorised Float on Bogie Stock

Class	Minimum Float Allowed in Service [And After Specific Repair]		Float When Passed Out From Workshops or Depots	
	Hand Brake Bogie	Opposite Bogie	Hand Brake Bogie	Opposite Bogie
(a) Cars (except AA. 1622), vans and electric multiple units	$\frac{1}{8}$ "	$\frac{1}{8}$ "	$\frac{3}{16}$ "	$\frac{3}{16}$ "
(b) Wagons (except 40 ton well wagon)	$\frac{1}{8}$ "	$\frac{1}{4}$ "	$\frac{3}{16}$ "	$\frac{5}{16}$ "
(c) 40 ton well wagon	$\frac{1}{16}$ "	$\frac{1}{4}$ "	$\frac{1}{8}$ "	$\frac{5}{16}$ "
(i.e., in accordance with notice affixed above each bogie)				
d) 66ft. standard railcars	$\frac{1}{32}$ "	$\frac{1}{32}$ "	$\frac{3}{32}$ "	$\frac{3}{32}$ "
e) EC and EO locomotives	$\frac{3}{16}$ "	$\frac{3}{16}$ "	$\frac{1}{4}$ "	$\frac{1}{4}$ "
f) Breakdown and travelling cranes	$\frac{1}{4}$ "	$\frac{1}{4}$ "	$\frac{5}{16}$ "	$\frac{5}{16}$ "
g) “E” class service vehicles	Float to be provided as specified in subclauses “A” or “B” according to type of vehicle			
	Leading Bogie	Trailing Bogie	Leading Bogie	Trailing Bogie
(h) Locomotive tenders A, AB, B, BA, BB, C, U, and UC	$\frac{1}{2}$ "	$\frac{1}{8}$ "	$\frac{9}{16}$ "	$\frac{3}{16}$ "
K, KA, KB, UB	$\frac{11}{16}$ "	$\frac{3}{16}$ "	$\frac{3}{4}$ "	$\frac{1}{4}$ "
J, JA, JB	$\frac{5}{16}$ "	$\frac{1}{8}$ "	$\frac{3}{8}$ "	$\frac{3}{16}$ "

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Class	Minimum Float Allowed in Service [And After Specific Repair]		Float When Passed Out From Workshops or Depots	
	Radiator End	Cab End	Radiator End	Cab End
(k) DE locomotives DA locomotives DG, DH locomotives.	$\frac{3}{8}$ " $\frac{1}{8}$ " $\frac{3}{16}$ "	$\frac{3}{16}$ " $\frac{1}{8}$ " $\frac{3}{8}$ "	(Tolerance + $\frac{1}{16}$ ") $\frac{7}{16}$ " $\frac{3}{16}$ " $\frac{1}{4}$ "	$\frac{1}{4}$ " $\frac{3}{16}$ " $\frac{7}{16}$ "
(l) Twin Car Sets Ew locomotives	Outer Bogies	Inner Bogies	Outer Bogies	Inner Bogies
	$\frac{11}{16}$ " $\frac{1}{4}$ "	$\frac{1}{8}$ " $\frac{1}{16}$ "	(Tolerance + $\frac{1}{32}$ ") $\frac{3}{4}$ " $\frac{5}{16}$ "	$\frac{3}{16}$ " $\frac{1}{8}$ "
(m) DF locomotives main truck	Truck Pivot Float Blocks	Side Bearer Plungers	Truck Pivot Float Blocks	Side Bearer Plungers
	$\frac{1}{4}$ "	$1\frac{1}{16}$ "	(Tolerance + $\frac{1}{32}$ ") $\frac{5}{16}$ "	1"
(n) DSC locomotives	No. 1 Bogie	No. 2 Bogie	No. 1 Bogie	No. 2 Bogie
	$\frac{3}{16}$ "	$\frac{5}{16}$ "	(Tolerance + $\frac{1}{16}$ ") $\frac{1}{4}$ "	$\frac{3}{8}$ "

(3) Checking of Float

Pass-out Officers or their deputies must check the “float” on all bogie roiling-stock passed out from Workshops and Depots to ensure that such “float” is in accordance with clause (2).

Locomotive Inspectors (Mechanical) or their deputies will act similarly in respect of locomotive tenders.

Train Examiners must check the “float” of bogie vehicles in service when brakes are being adjusted or brake-blocks renewed.

Locomotive Supervisors must ensure that the “float” on locomotive tenders, multiple-unit stock and railcars allocated to their district is checked by the repair staff at regular intervals.

(4) Condition of Float-blocks

Care must be exercised during lifting to see that all float-blocks on each vehicle are in the same plane and that worn blocks are replaced. Electric welding to build up the edges of worn float-blocks or to reduce the float to the prescribed limits is prohibited.

(5) Packing of Float-blocks

~~The use of wood packing in correcting float adjustment is not permitted, and any packing or liners used for this purpose must be perfectly flat, even thicknessed, mild steel~~

~~The use of slotted packing plates which permit their being slipped under float blocks is prohibited.~~

[The use of wood packing in correcting float adjustment is not permitted and any packing or liners used for this purpose must be perfectly flat even thicknessed mild steel of not less than $\frac{1}{32}$ " thickness.

No more than four packing plates are to be used under each float-block and their total height must not raise the float-block; by more than 1".

The use of slotted packing plates which permit their being slipped under float-blocks is prohibited.

See Code 45 Clause 10 for the packing of bogie centres.]

[C.M.E.’s of 27 October 1966]

(6) Clearance on Vehicles with Car Bogies

The clearance between the bogie frames and the underframe of vehicles fitted with car-type bogies when passed out from Workshops must not be less than $2\frac{1}{2}$ ".

The clearance between the bogie frames and underframe of such vehicles when loaded in service must not be less than $1\frac{3}{4}$ ".

[Vs wagons are to be withdrawn from service if clearance between the bogie frame and underframe is less than $1\frac{1}{2}$ " (at tare) or $\frac{1}{2}$ " (fully laded).]

[CME 55/482 of 29.5.59]
[CME 04/563 of 12.2.60]