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# **RAIL**INFRASTRUCTURE CORPORATION

Discipline  
**Rolling Stock Engineering Standard**

Category  
**Maintenance**

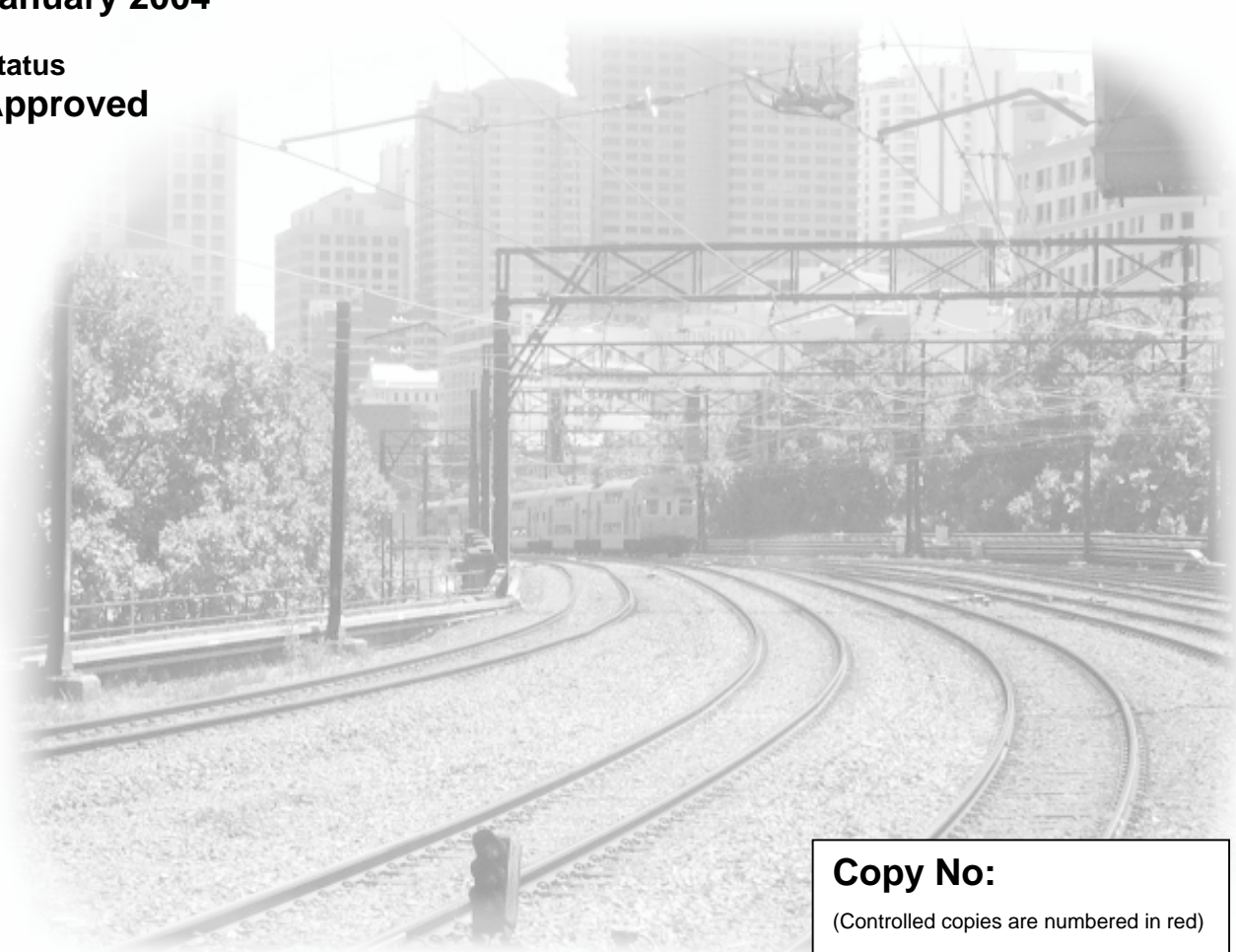
Title  
**ABRASIVE BRAKE BLOCKS**

Reference Number  
**RSS 0067**

Version  
**1.0**

Date of Issue  
**January 2004**

Status  
**Approved**



**Copy No:**

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## About This Standard

This standard is based on TRS Standard 1108 Brake Instruction 88/92 Use of Abrasive Brake Blocks and Cast Iron Brake Blocks to Remove Minor Wheel Tread and Profile Defects.

## Version History

**Version 1.0**

**January 2004**

Draft 1 November 2003

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# 1 Scope

Abrasive brake blocks or cast iron brake blocks can be used to remove minor wheel tread and profile defects on rail wheels.

## 2 Abrasive Brake Blocks

### 2.1 Use of abrasive brake blocks

Abrasive brake blocks can be used on locomotives and locomotive hauled vehicles only. They are not to be used on electric or diesel multiple unit trains.

Abrasive brake blocks are not meant to be used as an alternative to turning a wheel on a wheel lathe.

An abrasive brake block is not to be used on a vehicle in service.

### 2.2 Removal of wheel and tread irregularities

- a) The use of abrasive brake blocks is restricted to yards and depot lines, and are **not** to be used on main, suburban or branch line running.
- b) Ensure that the abrasive block is compatible with the brake head.
- c) Select the appropriate brake block form number for the work to be done, whether it is on tread (Cut No. 3 for wheel flats, scale and spalling), or the flange (Cut No. 4 for arrisses), as illustrated in Figure 1.

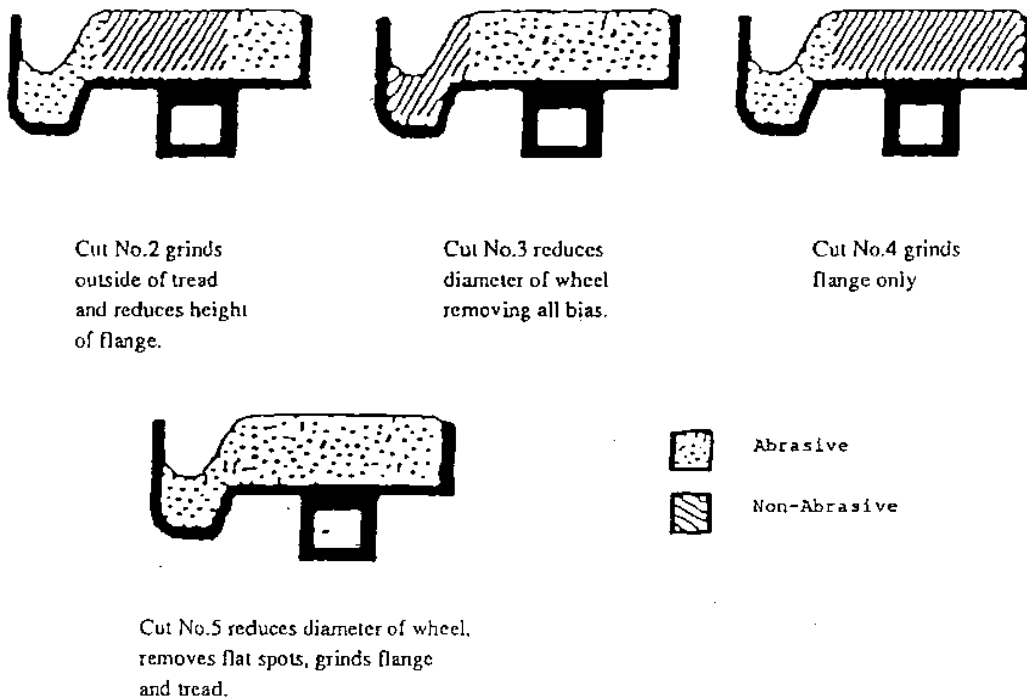


Figure 1 – Cut information

- d) Replace the brake block on both ends of the affected wheelset with the appropriate abrasive brake blocks.
- e) When the abrasive brake blocks are first applied, apply brake pressure gradually until the blocks are properly seated.
- f) If wheel turning is required on a wagon, apply a minimum automatic brake application on the hauling locomotive, release the locomotive brakes and run the wagon back and forth as required.
- g) If wheel turning is required on a locomotive, apply an independent brake application of not more than 75 kPa brake cylinder pressure and operate the locomotive back and forth as required.
- h) The action of the abrasive brake block **must** be checked periodically while the work is in progress.
- i) Accumulated sludge on the abrasive brake block must be removed by a wire brush to enable reuse of the abrasive brake block.
- j) After the wheel is properly trued and the wheel tread and flange have been restored to within specification, replace the abrasive brake blocks with the original friction brake blocks.
- k) Abrasive brake blocks **must** not be fitted to more than one axle on any vehicle to ensure adequate braking on the vehicle.
- l) Pattern #191 abrasive brake blocks have been modified for SRA/RIC use. The lug on the back of the block has been relocated, see Figure 2.
- m) Passenger vehicles and locomotives require a brake block with a 1 in 20 tread taper.

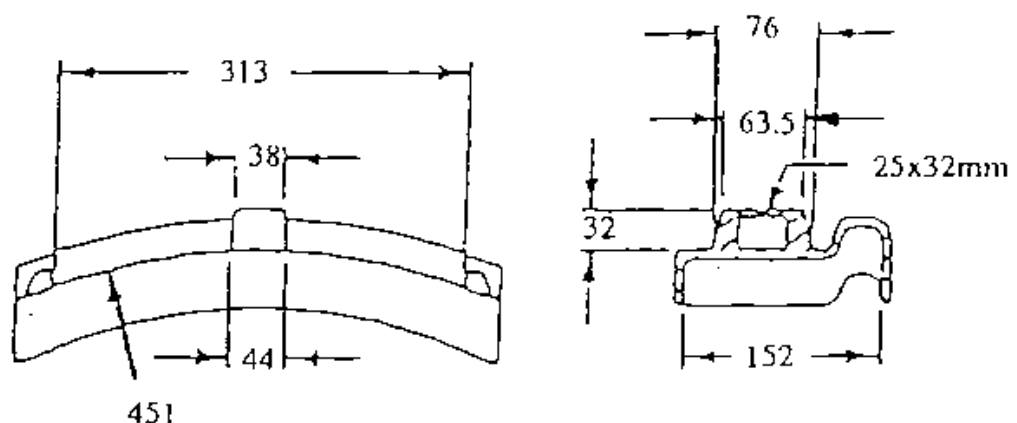


Figure 2 – Abrasive brake block pattern #191



### 3 Cast Iron Brake Blocks

Where minor faults occur, cast iron brake blocks can, in some cases, remove those defects.

In contrast with abrasive brake blocks, cast iron brake blocks can be used on a vehicle in service.

#### 3.1 Types of Tread Defects

Cast iron brake blocks may be used to remove:

- Class 1 wheel skids
- Class 1 wheel scale.

Cast iron brake blocks **must never** be used in an attempt to remove thermal cracks (they cannot remove thermal cracks and only disguise the thermal cracks in existence).

Refer to RSS 0030 for wheel defects

**Note:** Cast iron brake blocks must be used sparingly. Their use will not solve all problems. In some cases where all wheels on a vehicle are found to have tread defects, it is likely that there is an underlying cause such as a faulty triple valve, etc. A single car air test to RSS 0061 must be carried out in these cases.

#### 3.2 Maximum Number of Cast iron Brake Blocks

No more than 25% of brake blocks on any train (locomotives not included) may be cast iron.

### 4 Referenced Documents

#### 4.1 RIC Standards

RSS 0030	Wheel Defect Manual
RSS 0061	Single Car Air Test