

Justification:
Instruction
(Design & Maintenance)

**Private Owner
Circular Letter
559 Issue 2**

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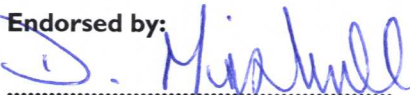
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Title

**Flanging Brake
Blocks**

ENDORSEMENT & AUTHORISATION

Endorsed by:



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Authorised by:



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1. INTRODUCTION

POCL 559, Issue 2 explains the safety implications of flanging (tread) brake blocks, gives guidance on prevention and details the acceptable limits of 'flanging'.

2. BACKGROUND

The flanging of brake blocks is defined as the situation that occurs when a brake block overhangs the wheel tread corner. With a brake block in this position safety is impaired in two possible ways:

- 1). With less than the total friction face of the brake block acting on the wheel tread the braking effort is reduced. In at least one instance this has reduced the braking rate to the point where a train became involved in a 'signal passed at danger' incident (SPAD).
- 2). A flanging brake block also generates considerable heat into the wheel tread corner. This can, over time, generate thermal cracking (one of the purposes of the tread corner chamfer is to reduce this effect). In this area of a wheel tread (outside of the normal wheel/rail running contact area) cracks are not subject to the rolling compressive forces of running contact and once formed may propagate and eventually cause the wheel to fracture.

3. INSTRUCTION

Brake block flanging shall not exceed 5mm measured from the overhanging face of the block to the outer face of the wheel (on any part of a brake block).

Note: Flanging can only be adequately assessed with the blocks applied and by taking the average measurement side to side across a particular wheelset.

Brake blocks 'flange' because of excessive freedom in the linkages of the brake hangers and supports. Therefore it is essential that all limits of wear in the brake rigging, (in particular that of pins and bushes) is maintained in accordance with the limits prescribed in the certificated Maintenance Plan for the vehicle concerned.

In the event that maintenance limits do not prevent brake block flanging, the Owner shall investigate further and propose modifications (if required) to rectify the problem. Any modifications shall require VAB approval.

4. SCOPE

This instruction applies to all PWRA vehicles that operate on Network Rail Controlled Infrastructure.

5. IMPLEMENTATION

This document shall be implemented immediately.

In the event of any query arising, or clarification required, please contact:

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