

Justification:  
Instruction  
**(Maintenance)**

**Private Owner  
Circular Letter  
457 Issue 2**

Title

**Reclamation of  
Scored Axles**

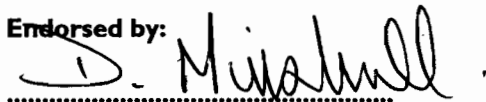
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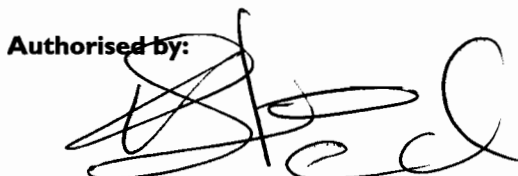
**ENDORSEMENT & AUTHORISATION**

Endorsed by:



D. Minshull, Senior Standards Engineer

Authorised by:



K. Stannard, International Vehicle Engineer

## **1. INTRODUCTION**

POCL 457 Issue 2 details the procedure for examining and reclaiming scored axles. It has been updated to reflect current practice, reporting lines and in particular exclude axles that have been identified as 'high risk'.

## **2. INSTRUCTION**

### **2.1 Inspection**

At every maintenance event axles shall be examined to establish if any scoring is evident. Any scoring found shall be further investigated whilst the wheelset is still fitted to the vehicle to establish what caused the damage.

Whatever caused the scoring shall be rectified before the vehicle is returned to service. All components adjacent to an axle shall be assembled such that in the worst case (i.e. at the maximum wear of components, suspension displacement, movement of brake linkages, etc) a minimum clearance of 6mm is maintained all around the axle in the worst case scenerio.

**Note:** It is recommended that at the design stage the static clearance between any component and an axle takes due account of all tolerances, wear limits, load conditions and dynamic movement.

### **2.2 Reclaiming of scored axles**

Scored axles shall only be reclaimed if all the following conditions are met and agreement has been obtained from the Senior Standards Engineer, PWRA Management Group:

- a). The damage is confined to a 300mm wide band 150mm either side of the axle centre.
- b). NDT confirms that there are no cracks in the damaged area.
- c). The axle is not classified as 'high risk'.
- d). The finished machined dimensions upon complete removal of all visible scoring damage/corrosion plus 0.25mm (0.5mm on diameter) to remove any worked material are not less than the minimum values quoted on the design drawing.
- e). The area of machining is blended smoothly into the existing axle body over an equidistant area either side of the axle centre line, the original geometry of the axle is maintained and the surface finish is no coarser that roughness grade N8 (125 CLA).

If any of the above conditions cannot be met the axle shall be scrapped.

Axles that have been reclaimed shall be identified by a code letter 'R' appended to the axle branding.

### 3. **DEFINITIONS**

#### **High Risk Axle**

A 'high risk' axle is any that:

- a). Is fitted (or has previously been fitted) to a wagon subject to a corrosive/reactive environment.
- b). For which a reduced periodicity of MPI is specified in POCL 506 'Non-Destructive Testing (NDT) of Axles'.
- c). That does not conform to the latest design standards, including stress levels.

### 4. **SCOPE**

This POCL is applicable to all axles supplied for use on 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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DE24 8UP