



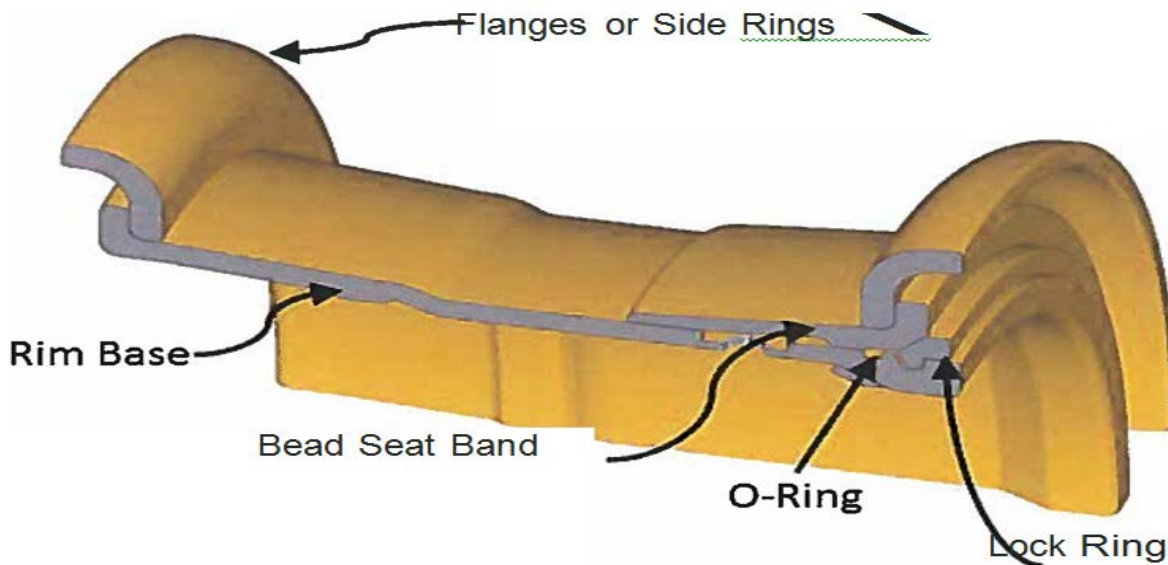
Manitoba Operations



## STANDARD PROCEDURE INSTRUCTION

Title		SPI
Mobile Equipment Multi Piece Rim Inspection		32-6
Department	Supersedes SPI Dated	Effective Date
Manitoba Operations	New	Oct 25, 2016

### Mobile Equipment Multi Piece Rim Inspection



# STANDARD PROCEDURE INSTRUCTION

## 1. PURPOSE

- To establish a standard practice and procedure for the mandatory inspection of Mobile Equipment Multi piece Rims running on pneumatic tires, within the Manitoba Division plants and mines.
- Failures of Multi-piece Rims with pneumatic tires have identified the need to manage the condition of these rims through a specified inspection period and process. Factors affecting the condition of these rims include rim age, vehicle application, and area of use.

## 2. Scope

- 2.1 Equipment and workplaces included
- This policy applies to all mobile equipment operating with multi piece rims on Vale's Manitoba Operations properties, on surface and underground, including all mobile equipment owned and operated by contractors.
- 2.2 Equipment and Workplaces excluded
- None where multi piece Rims Riding on pneumatic Tires are being used.

## 3. Definitions

1. Major Inspection: This inspection will include removal of the tire, a complete disassemble of the rim assembly, sand blasting, and a visual inspection done as per Vale (NDE) practices.(See CSA W47.1 and CSA W59 SPEC-83044 Inspection criteria of rim assemblies.
2. In service inspections: This inspection will be a visual inspection of the tire and rim assembly performed by a Vale maintenance Technician, following the instructions laid out on the 250 hour MST.

## 4. Administration

- Revisions to this SPI shall be reviewed by the Vale Manitoba Maintenance Manager, and approved by Manitoba Operations General Manager prior to implementation.

## 5. Reference Documentation

- **Specifications** – Wheels Program-Manual Specification-83044, Inspection criteria of Rim Assemblies
- **Procedure** – AM 13.7 Removal Installation of Wheel Assemblies on Mobile Equipment.
- **Procedure** –AM 13.14 Tire Deflation-Procedure for all Wheels.

## 6. History and Background Information

- **What the program does**-This program will ensure all Vale Mobile Equipment using Multi piece Rims and Riding on pneumatic tires, will received a quality inspection at specified intervals, these inspections will determine **Rim** life and reduce the hazards associated with Rim and Tire assemblies on Mobile Equipment riding on Pneumatic tires.
- **Why the program was developed**-This program was developed as a result of Rim failures in the Vale Thompson Division; the following 079 report from Thompson Shops area demonstrates the need for a mandatory rim inspection program.

**Divisional Shops 079**-On June 22, 2011 while an employee was operating the carry lift crane at Divisional Shops 079 # 57677 the left front tire blew and the split ring partially dislodged from the rim. An investigation revealed that the rim seat band had corroded. When the load was lifted a fracture initiated causing the rim to fail.

### Program details

#### 6.1 Tracking of Rim

- Rims will be tracked in the North Shore Industrial Wheels data base, using the wheel manufacture serial number, and also by the in service #, stamped onto the **rim** center mounting plate by North Shore Industrial Wheels contractor.
- The Data base must also track the following information.
  - Plant Number.
  - Rim Manufacture Serial Number.
  - Manufactured Date of the Rim.
  - Last major inspection date.
  - Removed from service date (when rim is scrapped).

#### 6.2 Inspection Intervals

- Major Inspections : New rims will be inspected three years after being placed in service as indicated by the stamped, in service date on the rim by North Shore Industrial Wheels, and at two year intervals after the new rim status has lapsed.
- In service Inspections: will be performed every 250 hours by Heavy Duty Technicians following the guidelines set out in the 250 hour MST.

#### 7.0 Internal Scrap Process

- North Shore Industrial Wheels will identify rims no longer fit for service and will then contact Vale's NDE department who will inspect the rim and sign a repair or replace form.
- North Shore Industrial Wheels will then order new rim if needed or have repairs to the rim completed, they will then deliver rim to Northland tire to have tire installed.
- North Shore industrial Wheels will then update data base with all new numbers and information.
- Accepted Scrap Failure Modes will Include- Damage, Corrosion, Cracks, Wear.

**8.0 Appendix A North Shore Industrial Wheels Rim Identification Method.**



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**Date**