



VUL-SWP-072a-003-Tyre Bay Requirements

STANDARD WORK PROCEDURE (SWP)	
Description	<i>Tyre Bay Requirements</i>
Site	Vulcan Mine
Department	<i>Maintenance – Tyres</i>
Purpose	<i>The purpose of this SWP is to provide a documented way of working to achieve an acceptable level of risk. The steps outlined pertain to the titled task only. All other SHMS requirements such as SOPs must be followed e.g., VUL-SOP-065-PPE, VUL-SOP-089-Dust etc.</i>
PPE Required	Job Step Analysis Reference
    	CTMS-ST-001 - Tyre, Wheel, and Rim Management Standard & CTMS-ST-002 - Tyre Bay Minimum Requirements and Inspection. This integrated SWP forms part of VUL-SOP-072a-Tyres, Wheels & Rims Mgmt.
	Other Relevant Information
	☐ Relevant OEM instructions & specification available
Task Specific PPE	
  	<i>ERT resources available on-site during operations.</i> <i>Personnel performing tyre fitting and maintenance tasks shall be assessed as competent in the specific units of competency according to the state OR national regulations</i> • AURKTJ011 Remove, inspect, and fit earthmoving and off-the-road tyres. • AURKTJ012 Remove, inspect, and fit earthmoving and off-the-road wheel / rim assemblies. • RIIVEH307D Operate heavy rigid vehicle. • RIIHAN307D Operate a vehicle loading crane.
The purpose of this SWP is to provide a documented way of working to achieve an acceptable level of risk. The steps outlined pertain to the titled task only. All other SHMS requirements such as SOPs must be followed e.g., VUL-SOP-065-PPE, VUL-SOP-089-Dust etc.	<i>Work Instruction is based on working in a controlled environment (Tyre Bay) on OEM standard Machine. If the environment, tools, equipment changes and or a deviation from this Work Instruction, a new JHA must be created and approved by all workers conducting the task.</i>
Critical (Hazard) Risks	
Ensure controls are in place for critical risks associated with this task. These include:	    



STANDARD WORK PROCEDURE (SWP)

1. Storage of Tyres

The designated area should have the following minimum requirements. Refer to *Recognised Standard 13 – Tyre, Wheel, and Rim Management*.

The storage areas shall be clear, level, well drained, adequately lit, free of flammable materials, petrochemicals, or corrosive compounds. The storage areas are NOT to be positioned in close proximity to electrical equipment that produces ozone. Grass/vegetation shall be kept clear of tyre storage area and hydrocarbons must not be stored in Tyres, Rims, and Wheels storage areas.

Allowance for handling must be made for the type of tyre handling equipment maneuverability around and about the storage area. Any environmental and safety requirements should be taken into consideration as determined via a risk assessment if necessary.

To reduce multiple rehandling operations, the stock of tyres should be stored close to the tyre workshop segregated as far as reasonably practical from other maintenance and operation activities.

This must include provision for physical barriers and communication entering the tyre work area as part of the traffic management system in place.

Tyres should be stored in a safe and clean environment to protect the OTR tyres and prevent them from getting damaged; clean the storage space before placing the tyres if necessary.

- a) The designated storage space should be located away from traffic to prevent interaction or damage.
- b) Ensure that there is firefighting equipment near the designated spot to react to fire hazards at a quicker rate.
- c) Alternatively, refer to the client's fire response procedure.
- d) Ensure that the sidewalls are chalked or painted for tyre specifications.
- e) Tyres should be placed in a segregated manner to lower the risk of fire hazards.
- f) The storage area must be free of petroleum products, electrical equipment that produces ozone and other heat sources to prevent unwanted events.
- g) The storage area should be located closer to the work area to encourage the selection of a replacement for high frequency items.
- h) Tyres should be categorized and segregated into separate stockpiles. Some of the categories include new tyres, run-out tyres, tyres that require inspection etc.
- i) Check that the requirements above have been satisfied and aligned with site requirements; if not, consult the supervisor and devise a plan to resolve the issues.

Traffic areas of the tyre storage area will require a site maintenance plan.



2. Storage & Stacking Method

The designated storage area shall be of an appropriate size to enable a tyre handler to operate safely and efficiently, away from traffic to prevent interaction or damage.

Upon delivering the OTR tyres to the workshop, tyres will be transported to the designated storage area and stored in accordance with the Original Equipment Manufacturer (OEM) recommendations.

The considerations when storing tyres, wheels, and rims are as such:

- Tyres should be stacked horizontally; however, no more than three tyre high or no higher than forklift mast in its retracted height.
- If the tyres are stored indoors, ensure that the storage environment is clean and dry, be free of petroleum products, electrical equipment that produces ozone and other heat sources to prevent unwanted events from occurring.
- Ensure that tyres are within a 12-month period to prevent them from turning hard.
- Ensure that the tyres will not topple, roll away or be dislodged.
- Pre-fitted tyres and wheel assemblies should be stored at 30 psi.
- Ensure that the valve caps are fitted to all valve stems to prevent any air leakage.

NOTE: If the tyres have been fitted with BSB and flanges, they should be stored at an angle.

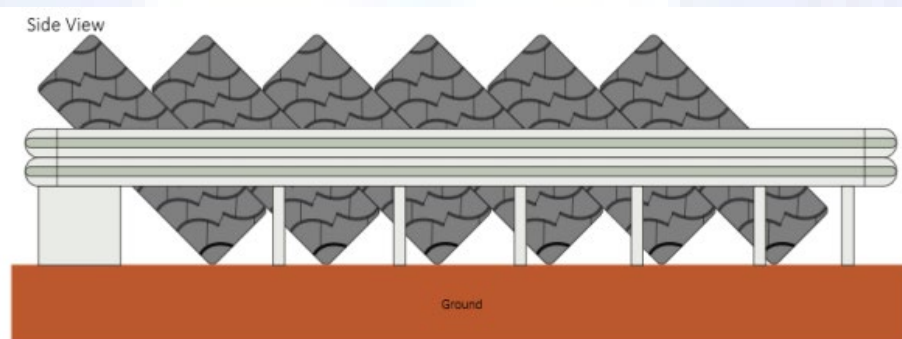


Figure 1 Method 1 - Stacking at an angle

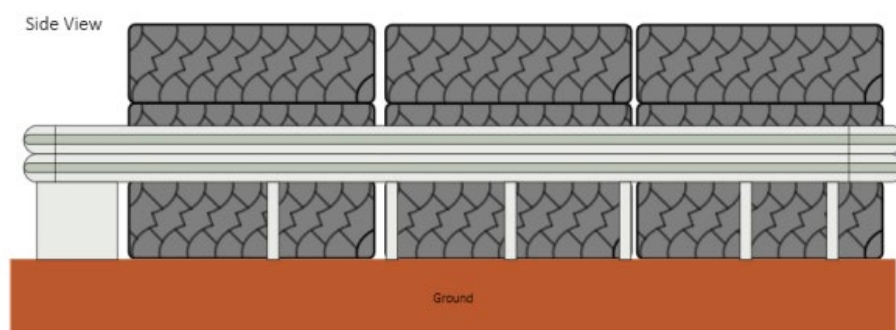


Figure 2 Method 2 - Stacking Horizontally

NOTE: With or without rim, it is recommended to stack them at 45 degrees. Otherwise, if the tyres are stacked horizontally, it should not be higher than the tyre handler's reach (no higher than 3 tyres).

If the tyres are damaged or require testing, they should not be returned for service and should be placed in the "inspection area." Tyres must be marked clearly with their problems.

The preferred tyre stacking method for both OTR & Non-OTR Tyres, Wheel and Rim assemblies is vertically.



Non-OTR preferred storage method

Racking / vertically / no more than two row in height

OTR Preferred storage method

If Tyres, Wheel and Rim assemblies are required to be stacked horizontally then the following stack heights will apply

Tyre, Wheel, or Rim Assembly	Stack Height
OTR	Three (3) Assemblies or 3m
Non-OTR	Three (3) Assemblies or 1.5m

NOTE: OTR Loader tyres greater than 45" (1150mm) must only be stacked of a MAXIMUM of two tyres high.

Tyre stacking Inflated tyres preferred storage method

Wheel or Rim Assembly Inflation (Psi) OTR 30 Psi ± 5 Psi	Wheel or Rim Assembly Inflation (Psi) OTR 30 Psi ± 5 Psi
Non-OTR	Non-OTR
30 Psi ± 5 Psi	30 Psi ± 5 Psi

3. Tools and Equipment

The tools and equipment brought to the site or already on-site should be certified and fit-for-purpose.

The tyre bay should undergo a full inspection on each day shift to ensure that all items have been checked by crew members.

The minimum requirements in the following are but not limited to;

- Check that the jacking pads suitably rated.
- Check that the jacks and equipment stand are certified and fit-for-purpose.
- Workbenches are appropriate and filled with enough power and air outlets.
- Check that there is a designated area for the storage of consumables (nuts, bolts, and washers etc.) and tools.
- A display and noticeboard should be put in place to take notes or show relevant information.
- Check that there are tools to measure tolerances and dimensions of the wheel.
- Check that the jacking plates are present and fit-for-purpose.
- Check that there is a certified tyre inspection stand & it is secured.
- Check that the wheel or rim fitment stand are certified and fit-for-purpose.
- Ensure that the safety cage is certified and is able to suit assembly size & is secured correctly.
- There are sufficient tyre additives within the expiry date.
- Stands and dollies are certified and are in good working order.

4. Firefighting Equipment & First-Aid Kit

Fire-fighting equipment must be made available on-site in accordance with **VUL-SOP-037-Action to be taken on discovery of Fire.**

Fire extinguishers must be placed near the work area and storage area. In the case of tyre fire or other fire hazards, personnel can react quicker to the situation.

Similarly, a portable first-aid kit must be made available on-site, in accordance with

VUL-SOP-038-First Aid and in the tyre handler's cab to allow quicker response if personnel are injured and require immediate medical attention.



5. Lighting

Whilst conducting work, it is vital to have good visibility of the tyres, wheels, and rim components. Without the provision of good lighting, the likeliness of making a mistake is much higher. If there is insufficient lighting, inform the supervisor and request a light tower to illuminate the surroundings without causing glares.

Lighting shall be in accordance with **VUL-MOP-144-Lighting**.

6. Tyre Pad

The Tyre Pad should be a thick layer of levelled concrete ground, allowing it to support the machine's weight when it is being jacked. The Tyre Pad should have the following sets of requirements:

- a) Depending on the equipment model, select an appropriate tyre pad to accommodate the machine's size and weight. Ensure that the tyre pad is suitable for jacking the equipment.
- b) Check that the Tyre Pad is equipped with drainage and make sure that it is not clogged to prevent water accumulation (Slip Hazard).
- c) Demarcation – The Tyre Pad should be demarcated with lines to separate different work zones.

The tyre pad's surroundings should be regularly maintained to ensure no undulations/soft spots and maintain a flat surface to conduct tyre bay activities.

7. Theft

Precautions should be in place to prevent theft.

8. Designated Storage Areas Inspections

Periodic inspections shall be conducted every 3 months using Vitrinite's compliance audit tool and record keeping system on Site, using **VUL-SOP-072a-F1-Tyre and Rim Storage Audit**, on the designated storage areas to ensure the tyres are stored correctly and in a safe and compliant manner.

The periodic inspections will also ensure all tyres, rims and other components must be inspected for corrosion, contamination or other damage are marked/tagged for further inspection and or scrapping.