



On-Site findings from visit to Xstrata  
Date: 2014/10/01  
Machine Type: JCB B24293  
Tyres Supplied: Skid Steer Dirt Terrain



## Executive Summary

Client	Xstrata-Rustenburg		
Client Manager + Position	Coenie /Plant Manager		
Workshop on site	Coenie		
MMTWS Technical Support	<a href="#">Shawn Hockley</a>		
Date of Visit	2014/10/01		
Machine Type	JCB		
Fleet Number of Machine	B24293		
Description of Tyres Fitted:	Skid steer Dirt Terrain (14")		
Application (Mining / Construction / Agriculture)	Metal smelters /Hot Slag		
Site Conditions	Extremely High Temperatures <87 Degrees Celsius		
Date Tyres fitted	28 May 2014		
Cost of Tyres	R15350.00		
No of hours worked	Machine hours at date fitted:	1613.6	Hours to date 929.0
	Machine hours at site visit:	2542.6	
Tyre wear to date from 74mm original tread	Front – right	36.66mm	
	Rear – right	34.95mm	
	Front – left	41.76mm	
	Rear – left	41.71mm	
	Average	38.77mm	
Projected hours to 74mm Tread line based on usage to date	1374 hrs		
<b>Note: Initially wear will be faster as the tread width is broader as the tyre becomes older</b>			
Projected hours below Tread line Note this is Bonus hours which we expect and have not been included in the Projected Hours calc above	50 hrs		
Manufacturers Projection under similar conditions to Xstrata	800hrs		

## Cost per hour

	<b>MMTWS</b>	<b>Pneumatics</b>
<b>Cost</b>	<b>R15350</b>	<b>R3800 (12 ply)</b>
<b>Estimated Hours</b>	<b>1374</b>	<b>100</b>
<b>R/hour</b>	<b>R 11.17 p/h</b>	<b>R 38.00 p/h</b>

## REPORT

### 1. Background

The machine works in charge cart application on Xstrata smelter. In deciding which tyres should be used for this clients requirements, the following was taken into consideration –

- Cushion effect to ensure that the machine was not negatively affected;
- The MMTWS was estimating a three times durability in comparison to a pneumatic tyre; and
- The proposition would be the most cost effective solution for the customer.

The Solid cushion tyres were recommended for this application.

The machine was fitted with 14inch Solid cushion tyres. The wheels had an overall diameter of 920mm. Rim size 20"x11". The serial numbers of the tyres are as follows –

- 50x414x12 - 0500050329 and 0500050327 for the left hand side front and rear tyres; and
- 50x415x12 - 0500050343 and 0500050345 for the right hand side front and rear tyres.



The Solid cushion Skid Steer tyres were recommended for this application.



Cushion effect to ensure machine is not negative affected.



Second phase in the life of the tyre provides an extra 60% longer life.

## 2. Details of the site visit

The visit was conducted by MMTWS Sales Support on 2014/10/01 the Plant Manager on site (Coenie). The machine was called into the workshop and measurements were taken.

## 3. Fitment

The fitment of the tyres was done on site at Xstrata on instruction from Mr Coenie. The fitment was done by the tyre fitment team with Jonathan and Morne in attendance.

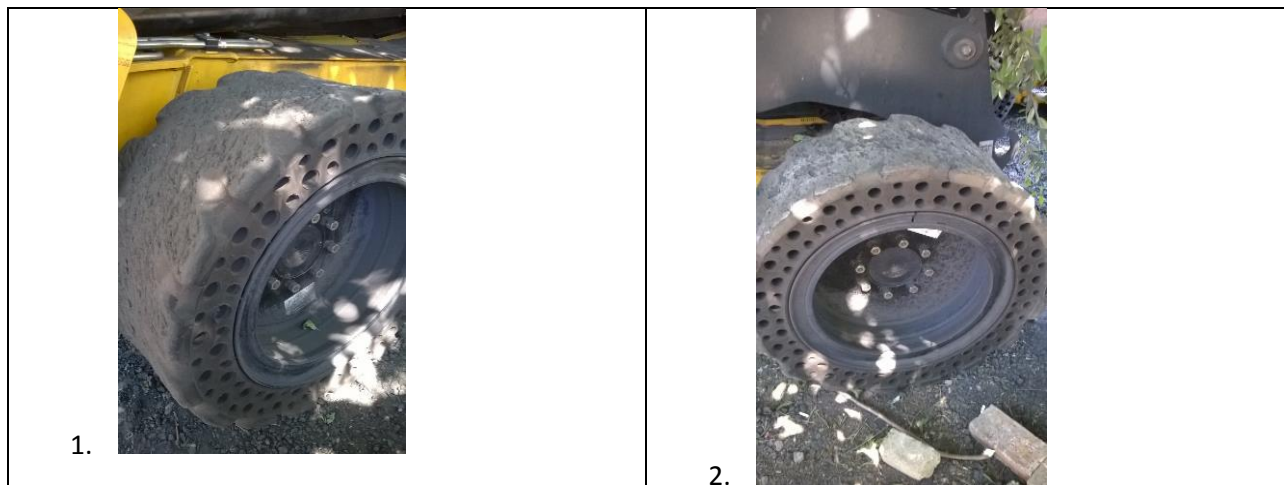
## 4. Measurements




The following measurements were established –

- Rear right tyre 39.05mm tread left
- Front right tyre 37.34mm tread left
- Front left tyre 32.24mm tread left
- Rear left tyre 32.29mm tread left

The average tread left on the tyres on 2014/10/01 was 35.23mm.

## 5. Photo Gallery



<p>3.</p> 	<p>4.</p> 
<p>5.</p> 	
<p>Pic 1: Showing rear right tyre 39.05mm tread left          Pic 2: Showing front right tyre 37.34mm tread left          Pic 3: Showing front left tyre 32.24mm tread left          Pic 4: Showing rear left tyre 32.29mm tread left          Pic 5: Hour meter on machine – 2014/10/01 – 929 hrs</p>	

**6. Conclusion**

The 14” Solid cushion tyre had a tread depth of 74mm when new. There was an average of 38.77mm wear on the tyres over a 929 hour period. Therefore, according to the wear patterns being demonstrated, a total 1374 hours are projected on this set of tyres.

There are two phases in the life of the tyre. The first phase wears only on the lugs and the second phase wears on the remaining lugs and centre cushion built into the tyre. The second phase provides a 60% longer life because there is an increase in the contact area is increased.

**7. MMTWS contact person(s)**

**Shawn Hockley Sales and technical 011 894 4471/ Cell: 082 554 4004**