M&M Tyre and Wheel Solutions (Pty) Ltd

Tyre Report

Customer : Fraser Alexander

Site : Rustenburg / Extrata

Report Compiled by : Morne Muller

Background

The wheels have been fitted to skid steer machines working in the smelters at Extrata in Rustenburg. McLaren Flexi Solid NU AIR Tyres (AT – All Terrain)

The given working method where the machines (skid steers) pushes the raw materials into the ovens. All the machines have been fitted with a extended “boom” on the attachment to give the necessary safety to the operator.

In this case the reasoning to fit our tyres have been that a normal pneumatic tyre would give **200 hrs maximum in these SEVERE conditions**. Our prediction on the NU Air in the same conditions 800 to 1000 hrs Flat free with No risk to sidewall cuts.

M&M TWS also promised that the customer would get the MAXIMUM life from the rubber provided. (Guaranteed)

Six of these machines have been fitted and commissioned on site.

Site visit

On 2014/01/17 we (M&M TWS) visited the site and found machine with ref number B24292

A JCB skid steer fitted with our NU Air All terrain Tyres (12”)

The representative of Fraser Alexander (Bulk Mech) Vicus Coetzer, informed us that the front and the rear tyres have been swopped prior to our visit after the machine came from the plant.

An immediate observation has been where the rear tyre had much less tread left than the front. Keeping in mind that they have been swopped, Vicus confirmed that the “pivot” action on the machine from the “boom” weight as well as an incident where the front wheels came in contact with HOT slag, caused this wear.

For this reason the tyres have been swopped to get the maximum life from the rubber.

<u>Measurements.</u>

On the Hour reading on the machine we have 226 hrs



Left front (rear) 48.13mm



Right front (rear) 49.82mm

Starting off at 55mm (6mm) tread have been used.

Facts from the tyre is that a) this is in the first phase of wear and b) the rubber can be used past the tread line to at least the first row of apertures.

The prediction on these is 6mm = 266 hrs therefore on 55mm you should get 2438.15 hrs on the formal tread.

A note also that the second phase of wear gives more hours. (the increase in hours is factual but the actual hours must be measured on site)



Left rear (fronts) 36.64mm



Right rear (front) 33.81mm

Starting off on 55mm , we can say that a average of 20mm have worn down on these tyres.

Should they have remained on the front end the prediction on the formal tread is at 621.5 hrs in total.

<u>Conclusion</u>

From previous experience it have been seen that our tyres can be used past the safety line.


(Picture taken at a Chrome handling site in SA)

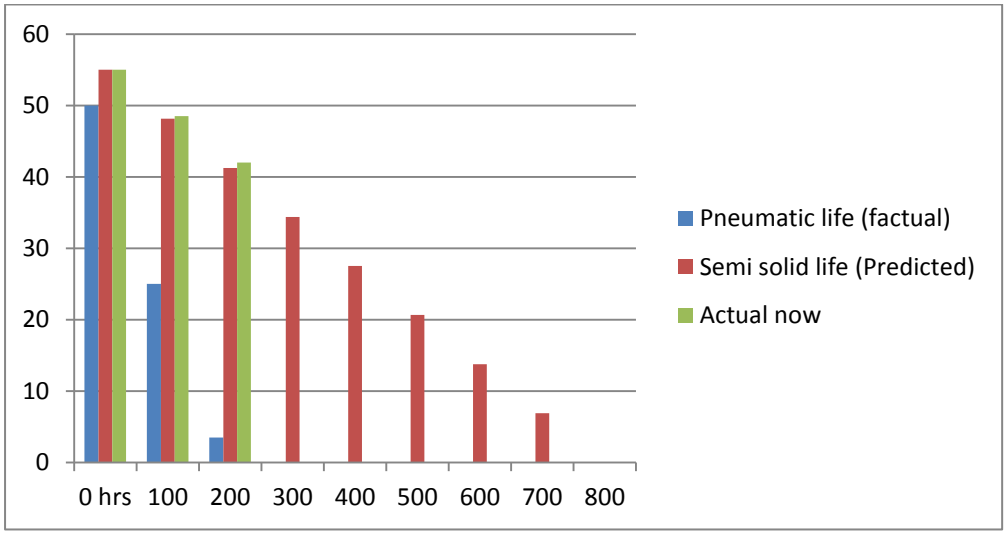
Even if the tyres have not been changed the prediction at this stage can be made that the tyres in front will get to the aimed 800 hrs. The rear tyres in the same conditions will get to at least 2800 hrs should they remain in the same position.

By rotating them around the wear ratio should be applied that have been noted till now.

The front a 36.36% wear rate on the 226 hrs and the rear 10.90% on the 226hrs.

The tyres will be rotated every 230 / 250 hours on its service intervals and would therefore give 920 to 1000 hrs with the noted wear.

By fitting McLaren who have ensured that their tyres have 30% more usable rubber and the best cushioning above the competition, you will ensure that these machines are optimised on the most cost effective way when it comes to your rubber usage.



Graph starts with New Tread depth (50-55mm) on Zero hrs

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