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***DUNLOP***

*Driven by Precision*

**Test Report- Survival SP6000 Tyre  
Sealant**



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Apollo Tyres- South Africa**

# Background

- On the 24<sup>th</sup> of August 2011 we attended a testing session with Mark Bentley from Survival South Africa on the farm Klipkop just outside of Pretoria. The invitees included various people with some type of involvement in the tyre industry and also Truvelo –a well known gun manufacturer. The objective was to shoot a tyre fitted to a Personnel carrier with a very large caliber rifle. The carrier should then still be able to drive away without losing too much air pressure in the tyre which could immobilize the vehicle completely.



# Specifications

- Vehicle Specifications:

**Reva 4X4  
Armored  
Personnel  
Carrier**



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# Specifications

- *Tyre Size and description*

**12.5R20 General**

**Type “M”**

**Multi Purpose**

**Serial number-**

**18100101B**

**Inflated to**

**550KPA**



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# Specifications

- *Caliber of gun used*

Truvelo 12.7 X 99 (BMG 50) Sniper Rifle





13.8 CM

10.8CM



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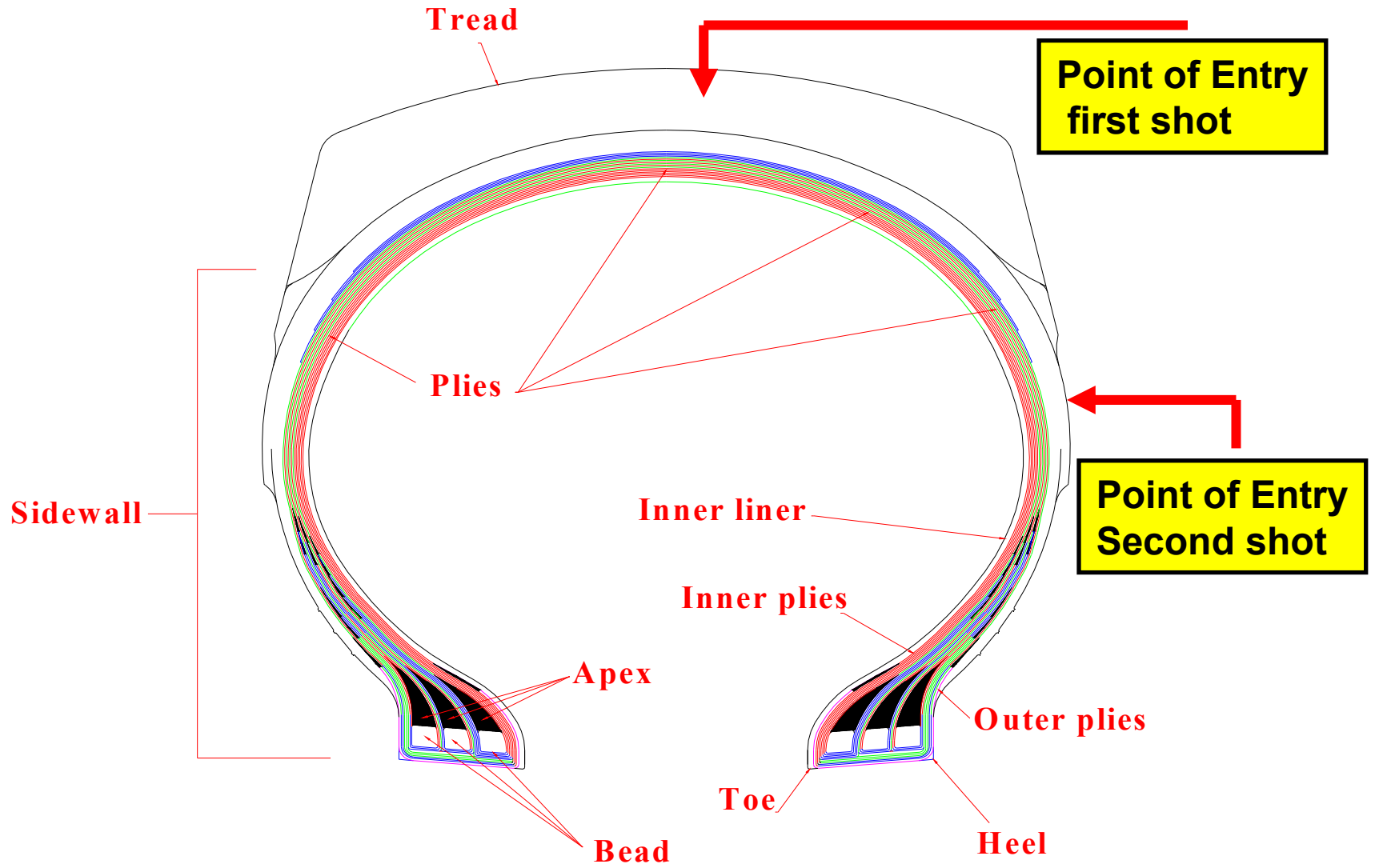
A promotional banner for Apollo and Dunlop. On the left, there is a stylized flag with green, yellow, and red colors. In the center, the word 'apollo' is written in a white, lowercase, sans-serif font on a purple background. To the right, a Dunlop tire is shown in a perspective view, with the 'DUNLOP' logo embossed on the sidewall. On the far right, the text 'Manufacturers of' is above the 'DUNLOP' logo, which is a red and white stylized 'D' inside a circle. Below the logo, the tagline 'Driven by Precision' is written in a smaller font. The background of the banner transitions from purple to yellow.

# Objective

- Two rounds was fired at a distance of approximately 70 Meters. One shot to the crown of the tyre and the other shot to the side wall. The vehicle will drive off directly after each shot. The driver would complete a distance of approximately 300Meters. Both shots to be fired through the tyre only. The Survival sealant will then seal the tyre as soon as the vehicle drives off and a couple of tyre rotations were completed.



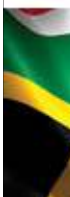




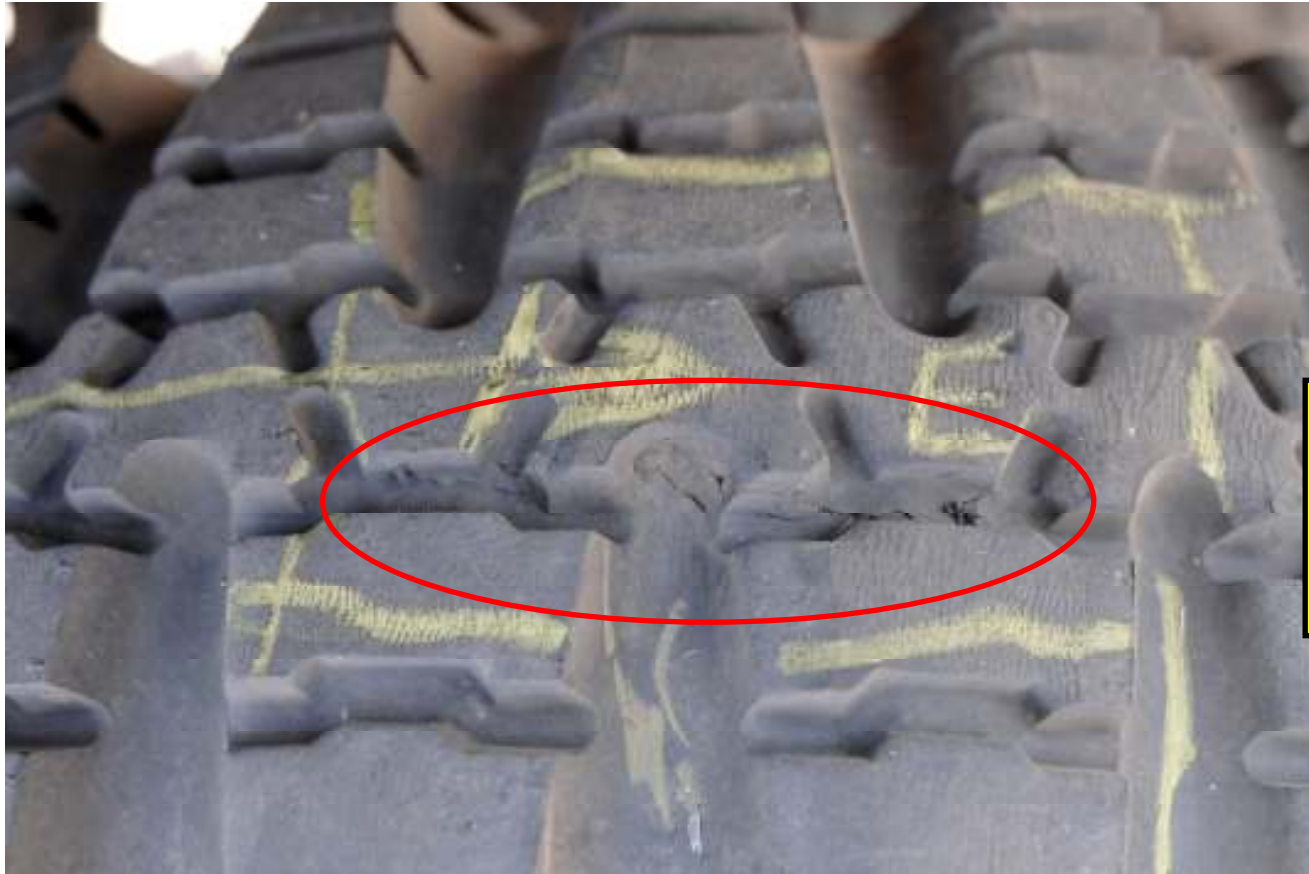
# Tyre Tread after first shot



Entry wound in between tread lugs. The white substance visible is the Survival seal which formed after the shot and a round trip of +/- 300meters. The pressure loss from this shot was only 0.6 KPA. Pressure dropped to 490KPA



# Tyre tread after first shot



Exit wound from first shot. Small tears visible on the tread area.



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# Sidewall after second shot



Exit wound second shot. White seal from Survival sealant visible. We could not locate the actual entry wound. Pressure loss from this shot was only 0.8KPA. Pressure reading 410KPA



# Tyre inspection after demount

## Visible penetration marks



# Tyre inspection after demount

Considerable damage to liner and casing



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# Findings

- Both the tread and sidewall penetration holes sealed after the vehicle drove for the short distance and where the tyres rotated. This happened soon after the fourth or fifth rotation. The exit wounds showed a white seal formed by the Survivor sealant after been penetrated by a projectile with a diameter of half an inch.
- It was noted that the tyre inspected also had 13 other penetrations. This was confirmed and we were informed that this tyre was shot at with a .556 automatic rifle. The tyre was never refilled with the sealant after the test on the 7<sup>th</sup> of July 2011.
- The next slide clearly indicates the scuff marks from the previous test.





Extra penetration and scuff marks from the automatic weapon





# Conclusion

- The Survivor SP6000 sealant proved to be one of the best products in its class. The penetrations sealed even after the casing integrity was compromised by such a massive projectile. I would like to recommend this product to anyone with the need to eliminate or reduce penetrations on their vehicles. In the tested vehicle this product would have saved lives.
- I would like to thank Mark and his team for the invitation to witness such a remarkable product and wish team Survivor all the best.

Please contact the writer for any questions on my findings

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# QUALITY STANDARDS



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# INTERNATIONAL ACCREDITATION

*Europe*



E MARK CERTIFICATION

*China*



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**DOT**

DEPARTMENT OF TRANSPORT  
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