



DESERT LION CONSERVATION

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1 March 2010

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Report on BFG Mud-terrain tire donation

In March 2009 Michelin agreed to sponsor 8 BFG Mud-terrain tires to the Desert Lion Conservation project in Namibia. The tires arrived and were fitted in Swakopmund on 14 September 2009.

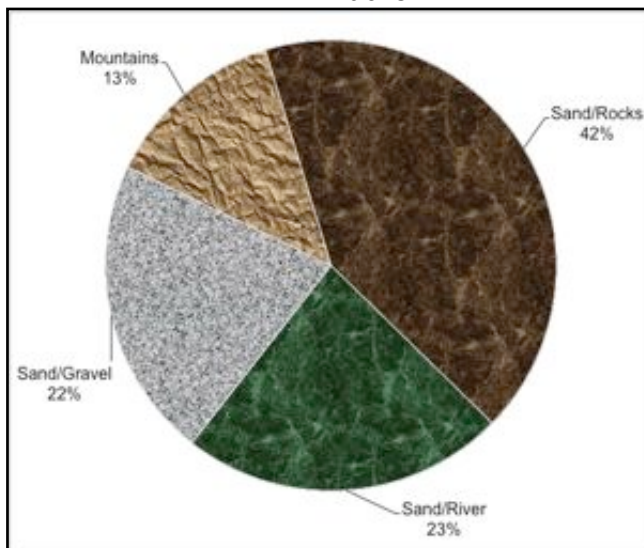
During the following five months, up until 1 February 2010, detailed records were kept on the use and performance of the tires. This report presents an analysis and summary of those records.

Between 14 September 2009 and 1 February 2010 a total distance of 10,455 km was driven in three main substrates.

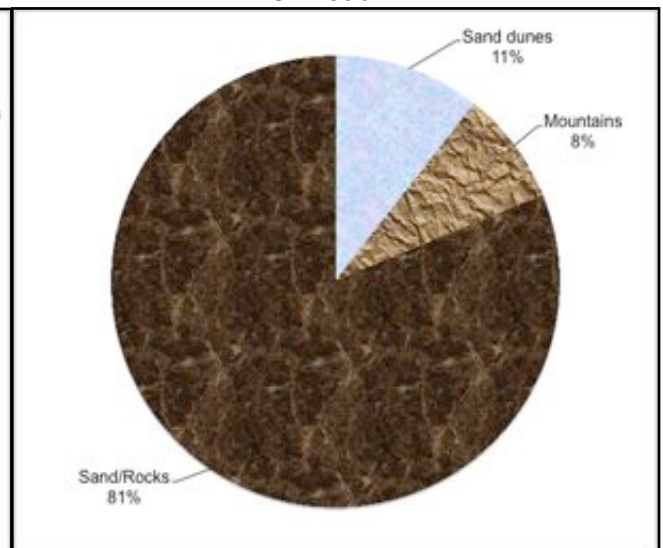
Substrate	Kilometers
Roads: gravel & salt	3,639
4 x 4 Tracks	3,781
Off-road	3,035
Total	10,455

Within the 4 x 4 Tracks and Off-road substrates, the following sub-divisions were recorded, with "Sand/Rocks" (4,055 km) contributing 40% of the overall distance.

4 x 4 Tracks

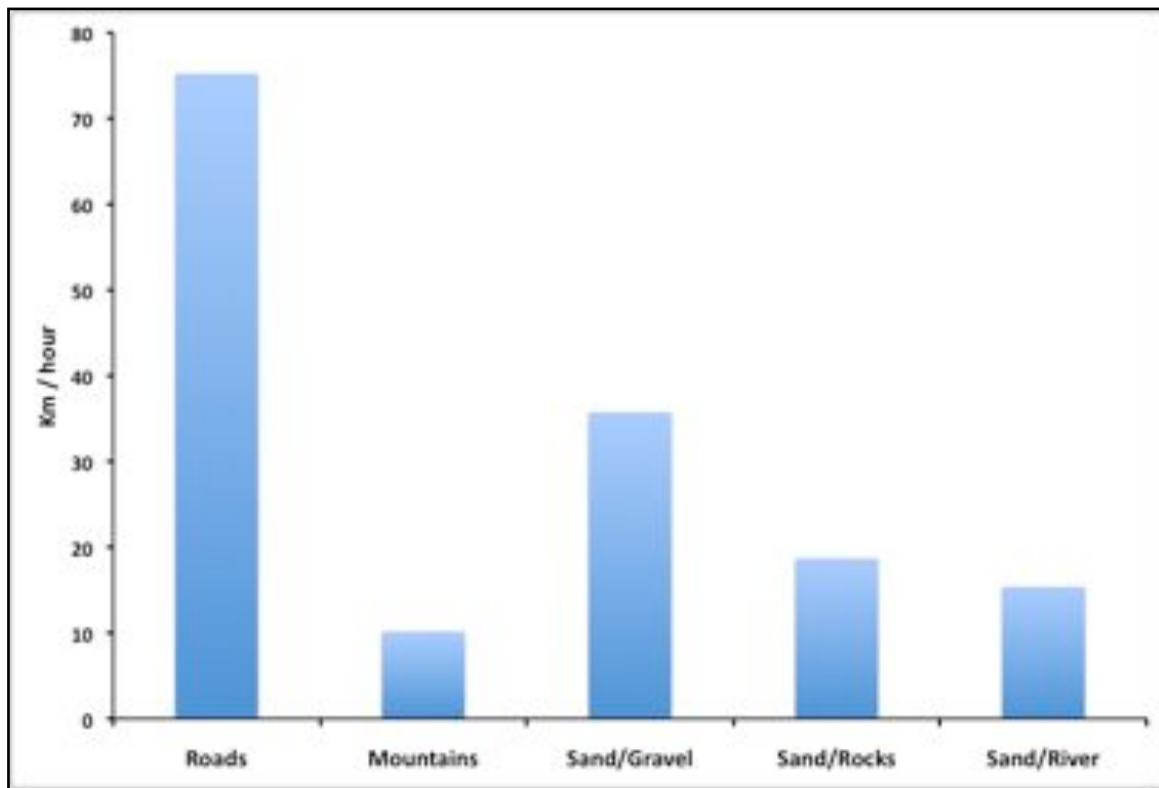


Off-road



For further analyses the data for 4 x 4 Tracks and Off-road substrates were combined within the sub-division substrate categories (above).

The average speed (km/hr) recorded for each substrate is presented below.



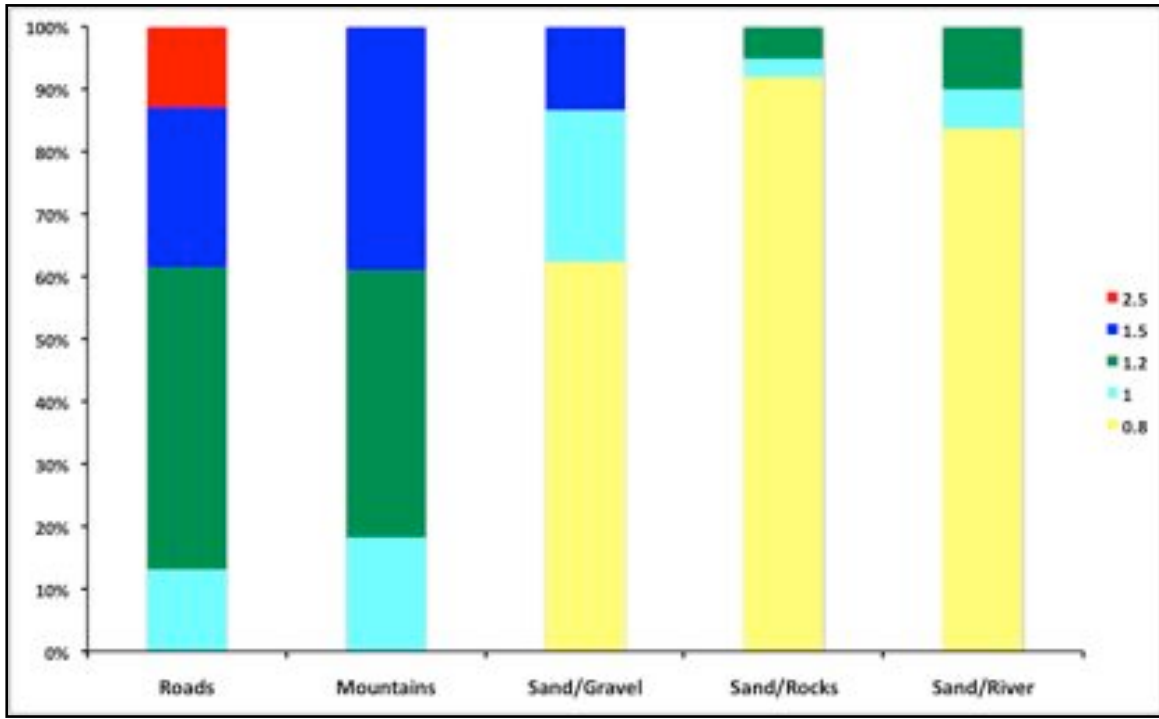
	Roads	Mountains	Sand/Gravel	Sand/Rocks	Sand/River
Mean	75.3	10.2	35.8	18.7	15.4
Std Dev	26.6	4.2	19.7	17.0	9.2
Min	12	6	22	8	6
Max	95	18	65	52	28
<i>N</i> (km)	3,639	714	865	4,055	1,182

The load carried by the Land Cruiser was recorded in three categories and a summary of the proportion (percentage of the total distance) driven in each substrate category is presented below.

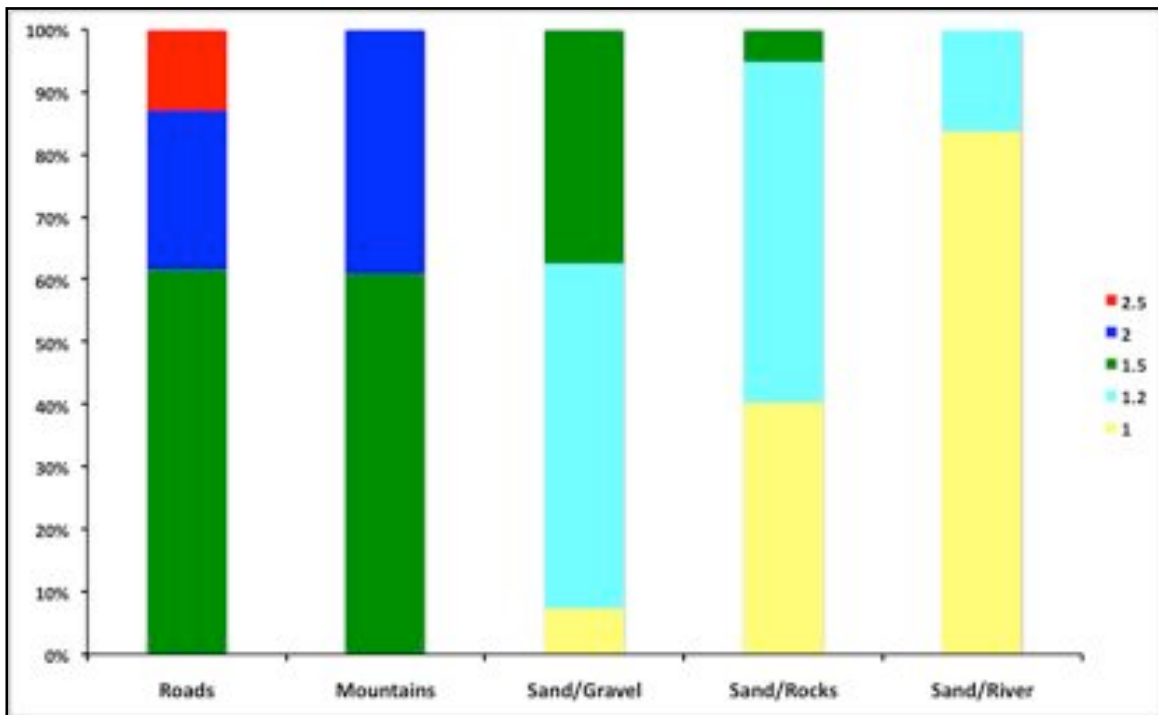
	Roads	Mountains	Sand/Gravel	Sand/Rocks	Sand/River
1000 kg	53%	57%	13%	3%	0%
750 kg	0%	43%	76%	23%	6%
500 kg	47%	0%	11%	74%	94%
<i>N</i> (km)	3,639	714	865	4,055	1,182

Tire pressures (kPa x 100) were monitored and recorded regularly for each wheel. A summary of the tire pressures recorded in each of the substrate categories are presented separately for the front and rear wheels.

Front wheels

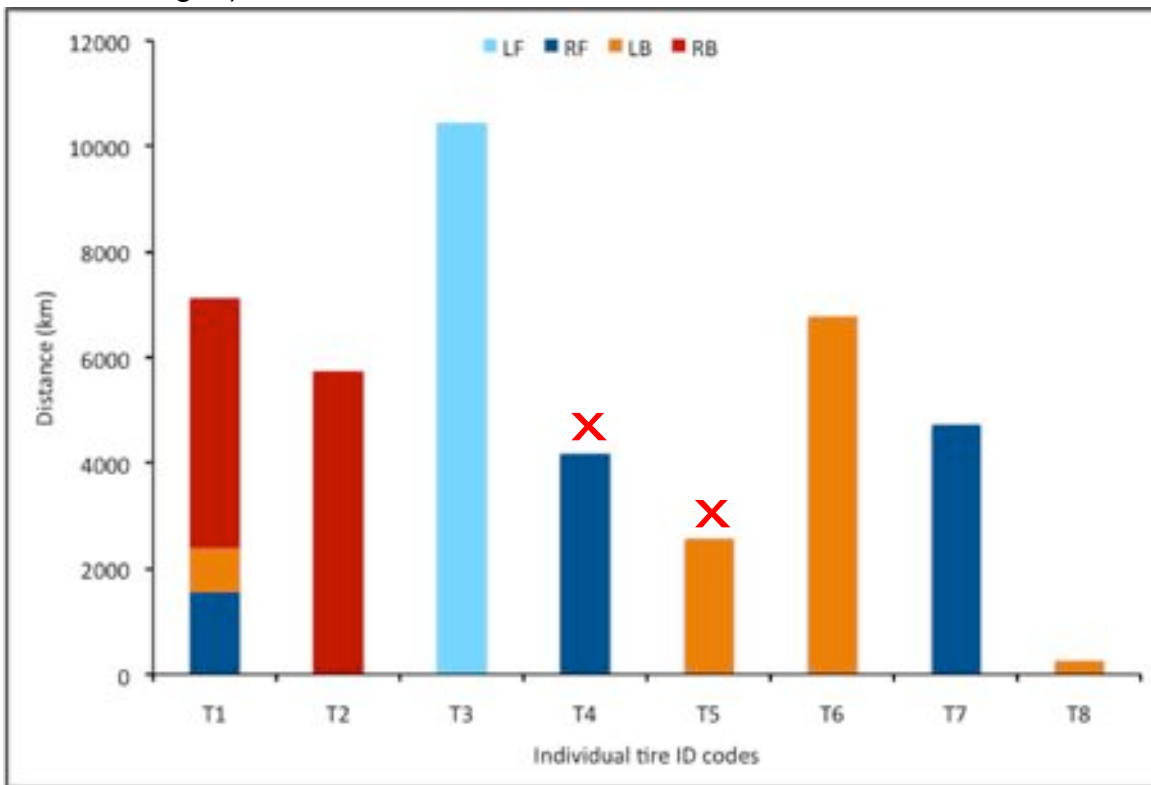


Rear wheels



The eight tires were individually marked and accurate records were kept on the performance of each tire. During the 10,455 km there were five flats. On two occasions the tires were badly damaged by sharp rocks that penetrated the side-wall and the tires could not be repaired. The other three tires were also punctured by sharp rocks (1 x side-wall & 2 x main tread), but could be repaired.

The schematic layout (below) show the distances and wheel-position of the eight individual tires during the recorded 10,455 km (red crosses indicate when the tires were damaged).



Examples of the “Sand/Rock” substrate.



The following photographs are included as examples of the terrain and working conditions that the BFG tires are exposed to on a daily bases.



Conclusion

The BFG Mud-terrain tires have performed extremely well under the demanding conditions. The traction, versatility and durability of the tires have been outstanding, and thus made a significant contribution to the conservation of desert-adapted lions in Namibia.