

“And the best all-terrain tyre is...”

In 2014 we did South Africa's most comprehensive all-terrain tyre test yet. We just repeated that test – with an interesting new test to distinguish the best from the rest. **JACO KIRSTEN** got behind the wheel of the test vehicles.



PHOTOS: CHARLES THOMPSON

BACKGROUND

Most bakkies and 4x4s are not equipped with tyres that are aimed at off-road driving. If you had a look at the tyres’ sidewalls you’d see they are equipped mostly with “HT”, or highway terrain, tyres. There are numerous reasons for this. The first one is that HT tyres are aimed at tar road driving – there where more than 99% of vehicles spend most of their life. These types of tyres are, therefore, aimed at good roadholding, little road noise, and low rolling resistance for better fuel consumption. The big disadvantage of these tyres is that they are very prone to damage, especially if you start driving on dirt roads. For this reason the replacement of your vehicle’s HT tyres with AT, or all-terrain tyres, is probably the first modification you should make to your vehicle if you plan to drive on more than just tar roads.



WHAT IS AN ALL-TERRAIN TYRE?

These tyres are designed to travel better over a variety of terrains. Where HT tyres are designed exclusively for tar road handling, your average AT tyre must be good enough on wet and dry tar, dirt, sand, rocks, mud and the occasional snow (you’ll see that a lot of ATs have the letters “M+S” for mud and snow on their sidewalls). It’s also not a surprise to realise that not all manufacturers have the same targets for their AT tyres. Where some tyres are designed for a 50:50 ratio for tar road and off-road, others are 30:70 or 60:40. In other words, although some tyres are described as AT, they’re not necessarily the type of tyre you want on your vehicle if you’re driving around in, for example, the Kaokoland.

THE TYRES

This time we decided to test fewer tyres. One of the reasons for this – besides the fact that it requires a lot of money and effort – is that we already know that the cheaper tyres in general can’t compete with the tyres of the bigger manufacturers. The tyres that always perform well are therefore one of a few possible manufacturers and so it doesn’t make sense to spend days testing tyres that people buy based on price. We finally decided on the following list:

- 1. General Grabber AT3:** The AT3 is the replacement for the AT2, the tyre that won our first all-terrain test. It was therefore logical to see if it would keep its crown.
- 2. Goodyear Adventure All Terrain:** The Adventure is Goodyear’s new replacement for its well-known AT/SA tyre. The AT/SA came in fourth in our previous test. How good would the replacement be?
- 3. BF Goodrich All-Terrain T/A KO2:** The BFG is a legendary tyre and very popular with off-roaders. The KO2 was introduced two years ago and we wanted to know how much of an improvement on its predecessor it is.
- 4. Continental CrossContact AT:** This is a good tyre that is known for its good and predictable on-road handling characteristics.
- 5. Hankook Dynapro ATM RF10:** The Hankook was a top-three tyre during our first test and we wanted to know how it would fare against the new tyres.

- 6. Yokohama Geolandar A/T-S:** This is a big seller in SA and is well priced.
- 7. Adventuro GT Radial AT:** TI Auto Brands, the importers and distributors of Hankook and Yokohama in South Africa, asked us if we didn’t want to also test this one to see how it would fare against the more established brands.

Note: We contacted Cooper Tyres to include the Discoverer ST Max in the test but they didn’t want to participate. The same with Mickey Thompson. Bridgestone, whose Deuler performed well in our previous test, initially agreed to be part of the test, but then withdrew because of “logistical reasons”. As per usual, BF Goodrich, which is owned by Michelin, didn’t want to be part of the test, so we obtained a set via a dealer because this tyre is too important not to be part of a test like this. For practical reasons we used the tyres in 265/65 17-inch.



UNDER PRESSURE (top). Tyre pressures are critical for performance, as well as to make sure all the tyres competed on a level playing field. All distances were also meticulously measured after each run (below).



THE TESTS

Tar road braking: A tyre’s braking ability is directly related to its physical grip. In other words, if a tyre has high grip levels it will achieve good braking distances. Although all-terrain tyres are used for dirt roads and off-road, most people still drive on tar more than 50% of the time. Three emergency stops were made at a speed of 100km/h and the average of the three distances was calculated. **Dirt road braking:** With this we could determine how much grip a tyre has on a dirt road. We did three emergency stops at 70km/h and an average was calculated. **Climb test:** Here we crawled a slope of between 30 and 40 degrees in first gear, low range. We started with all tyres on 1.5 bar and gradually increased to 2.2 bar. If a 2.2-bar tyre could climb without losing traction it would get full marks. **Sidewall penetration test:** With this we looked at how much resistance a tyre provides against a sharp object jabbed into the shoulder part of the sidewall. We punctured each tyre three times while it was pumped up at a pressure of 2.0 bars.

THE VEHICLES

To save time we used two identical Toyota Hilux 2.4 GD-6 SRX 4x4 bakkies. While we tested one set of tyres on one vehicle, the next set of tyres were already fitted onto the other bakkie. We couldn’t detect any

difference in braking distances between the two bakkies with a set of control tyres, so we were satisfied that their braking ability was also identical.

THE TERRAIN

Just like with the first all-terrain shootout in 2014, we used Klipbokkop’s facilities. They are equipped for these sort of tests and there is access to tar road (in this case a concrete road with similar grip levels as tar), dirt road, sand, rocks, and constant slopes where repeatable tests can be done.

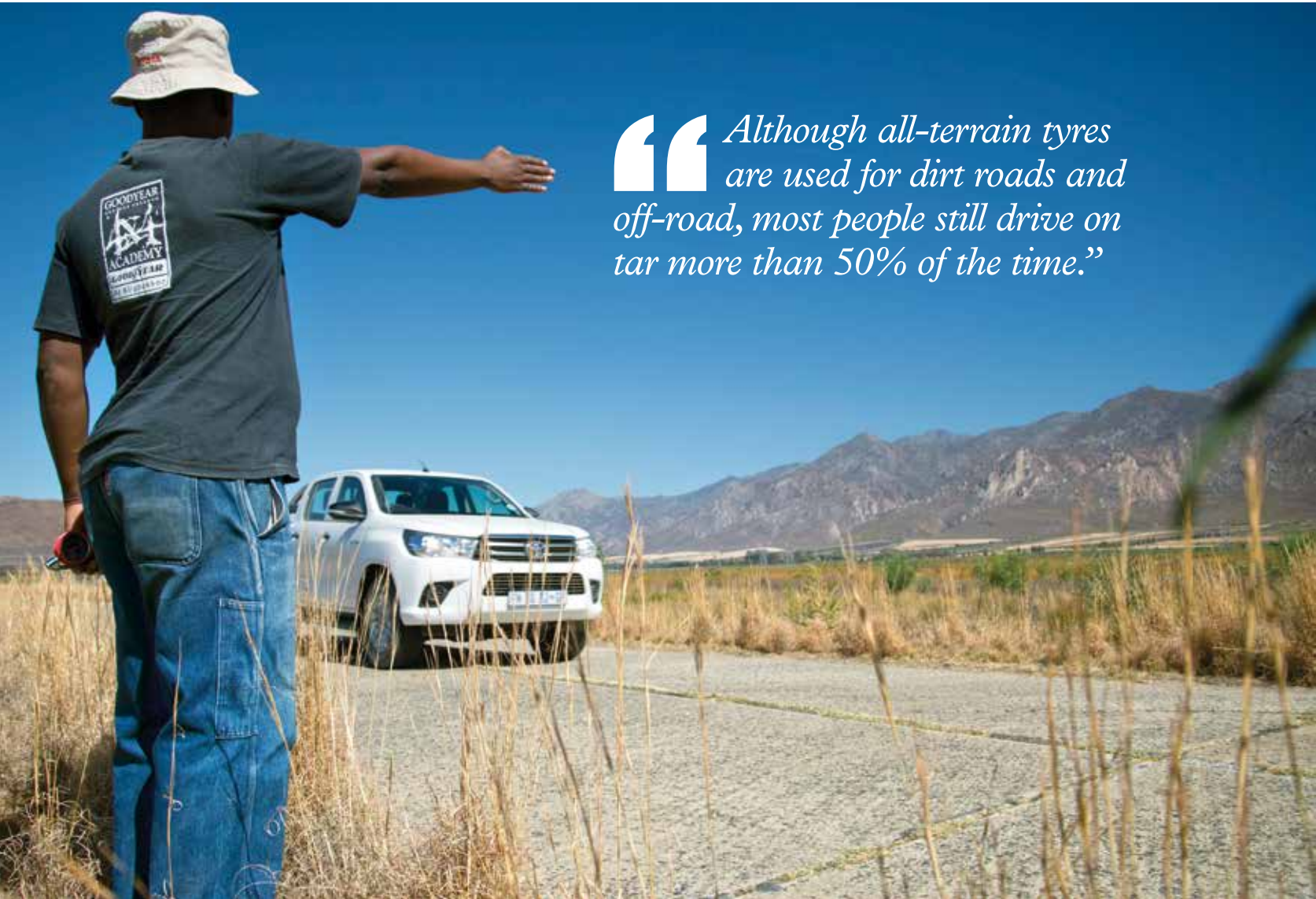
THE TEST DRIVER

Jaco Kirsten, *Drive Out’s* editor. Apart from advanced 4x4 training, he’s also done various high-speed and advanced courses, including those of Porsche, Mercedes-Benz AMG, Audi, and the South African Guild of Motoring Journalists. He also underwent specialist ice-driving training in Sweden.



“ We used two identical Toyota Hilux 2.4 GD-6 SRX 4x4 bakkies and were satisfied that their braking ability was equal.”





“Although all-terrain tyres are used for dirt roads and off-road, most people still drive on tar more than 50% of the time.”

1 TAR ROAD BRAKING

Here the Goodyear Adventure was the undisputed champion, with an average of 35.8 m braking distance. The tyres were, however, quite close to each other, with the second tyre, the Hankook Dynapro ATM, which took only 30 cm longer to come to a standstill. As expected the BFG A/T, with 39.6 m, had the longest braking distance. It not only had the most road noise, it also felt the loosest on tar.

RESULT:

	Distance (m)	Mark out of 25
Goodyear Adventure All Terrain	35.8	25
Hankook Dynapro ATM RF10	36.1	24.47
Continental CrossContact AT	36.5	23.77
GT Radial Adventuro AT	36.6	23.59
General Grabber AT3	36.8	23.24
Yokohama Geolandar A/T-S	37.4	22.18
BF Goodrich T/A K02	39.6	18.30



GRIPPING STUFF. The testing facility gave us the opportunity to safely do repeated brake testing at a speed of 100 km/h. Careful records were kept of distances, with the average of three used to determine the final score.



2 DIRT ROAD BRAKING

Here the Goodyear Adventure and the Yokohama Geolandar were the combined winners, with the BF Goodrich and Hankook Dynapros not far behind. The GT Radial Adventuro AT was last, with a braking distance of more than 3 m longer than the winners’.

RESULT:

	Distance (m)	Mark out of 25
Goodyear Adventure All Terrain	28	25
Yokohama Geolandar A/T-S	28	25
BF Goodrich T/A K02	28.2	24.77
Hankook Dynapro ATM RF10	28.5	24.43
General Grabber AT3	29.5	23.30
Continental CrossContact AT	30.4	22.27
GT Radial Adventuro AT	31.2	21.36



DUST BUSTERS. We did dirt road braking tests at a speed of 70 km/h and a 2.0 bar tyre pressure for all the competitor tyres. Once again, the average of three stops was used to arrive at a score.

3 CLIMB TEST

We decided to deflate the tyres to 1.5 bar and to climb the obstacle – a long, steep incline that starts at 30 degrees and ends at about 40 degrees – in first gear, low range. The test started at a pressure of 1.5 bars, after which the tyre pressure was increased incrementally. If a tyre could climb the slope at 2.2 bar without losing traction, it was considered a 100% pass mark. To our surprise, all the tyres got it right. Which only confirms that most tyres have enough grip for most applications.

RESULT:

	Climb at 2.2 bar	Mark out of 25
Goodyear Adventure All Terrain	100%	25
Yokohama Geolandar A/T-S	100%	25
BF Goodrich T/A K02	100%	25
Hankook Dynapro ATM RF10	100%	25
General Grabber AT3	100%	25
Continental CrossContact AT	100%	25
GT Radial Adventuro AT	100%	25



TRACTION. The test was to idle up this steep incline with pressures of up to 2.2 bar. Interestingly enough, all the tyres passed the test, proving that most AT tyres have enough grip and that the differences lie somewhere else.



TAKING A STAB. With a lot of the results being quite similar for a lot of tyres, we knew that the dreaded shoulder-puncture test was going to end up making a huge difference in the final score, which it undoubtedly did.



4 SIDEWALL PENETRATION

This is one of the most important tests in our shootout. We're proud of the fact that no other local publication has ever done a similar test. A few years ago we had a special machine built that could measure the pressure (in kPa) it requires to penetrate something. We believe a tyre's ability to resist sharp objects is one of its most important characteristics – much more important than tar road handling and tyre life span – if you really want to go off-road. As expected the BF Goodrich T/A stood out from the rest. Similarly we also expected that the Continental CrossContact AT wouldn't perform well. From personal experience its grip is good but their sidewalls are vulnerable to sharp objects. It remains a good tyre for tar road but we suspect it was designed as a 90:10 tar and dirt road tyre. The big surprise, however, was just how good the Goodyear Adventure did.

RESULT:

	Pressure required (kPa)	Mark out of 25
BF Goodrich T/A K02	196.6	25
Goodyear Adventure All Terrain	176.6	22.46
Yokohama Geolandar A/T-S	158.3	20.13
Hankook Dynapro ATM RF10	140	17.8
General Grabber AT3	136.6	17.37
GT Radial Adventuro AT	130	16.53
Continental CrossContact AT	110	13.99



“We crawled a slope of between 30 and 40 degrees in first gear low range.”

GOODYEAR ADVENTURE ALL TERRAIN



BF GOODRICH T/A K02



YOKOHAMA GEOLANDAR A/T-S



HANKOOK DYNAPRO ATM RF10



GENERAL GRABBER AT3



GT RADIAL ADVENTURO AT



CONTINENTAL CROSSCONTACT AT



OVERALL RESULT:

Goodyear Adventure All Terrain	97.46 %
BF Goodrich T/A K02	93.07 %
Yokohama Geolandar A/T-S	92.31 %
Hankook Dynapro ATM RF10	91.70 %
General Grabber AT3	88.91 %
GT Radial Adventuro AT	86.48 %
Continental CrossContact AT	85.03 %

SUMMARY

When we did this test four years ago, the General Grabber AT2 was the winner, with the Goodyear AT/SA in fourth place. The BF Goodrich T/A didn't fare well and the Hankook Dynapro was third.

The result is proof that the Goodyear and BF Goodrich tyres are not only considerably better than their predecessors but also that our new test – where we measure how resistant the sidewalls, and specifically the shoulders, are against penetration – paints a different picture than if you, for example put a racing driver in a bakkie and measure lap times around the course or if you drove on sand all day.

We know the BF Goodrich doesn't have high grip levels on tar and that it is quite noisy. So if you're

going to be driving on tar all day it's probably not the best choice. But if you do mostly off-road driving, it's probably the best tyre money can buy.

But this is an all-terrain test and that's why the Goodyear Adventure really impressed us. It not only won the tar road braking test but was also the joint winner for the dirt road braking test, together with the Yokohama Geolander A/T-S. And with the side-wall penetration test it was also not far behind the tough-as-nails BF Goodrich.

In addition, the new Goodyear also has Kevlar, a material used for bulletproof vests, in the tread. That's why we believe this Goodyear is a worthy winner of our all-terrain shootout. 🏆

PRICES

As expected there is a huge difference between the most and least expensive tyres in this test. Taking this alone into account, it's clear that value for money is another reason why the Goodyear Adventure is our winner, being one of the most affordable tyres tested.

	Per tyre	Per set of five
1. Goodyear Adventure All Terrain	R2 395	R11 975
2. BF Goodrich T/A K02	R4 195	R20 975
3. Yokohama Geolandar A/T-S	R2 595	R12 975
4. Hankook Dynapro ATM RF10	R2 495	R12 475
5. General Grabber AT3	R2 600	R13 000
6. GT Radial Adventuro AT	R2 052	R10 260
7. Continental CrossContact AT	R2 295	R11 475

