

Publication: EVO
Date: 01/09/2017
Type: Consumer Magazine Monthly . [UK]
Display Rate (£/cm²): 9.09

Circulation: 43119
Readership: 129357
Size (cm²): 4830
AVE: 43904.70



evo TYRE TEST 2017



*This year we test the most popular
performance tyre size of all, the
225/40 R18. Nine brands go
head-to-head in the toughest
objective and subjective tests*

by JOHN BARKER

PHOTOGRAPHY by ASTON PARROTT

IT'S HARD TO OVERSTATE THE

importance of tyres. The safety of the best-handling car can be compromised simply by fitting a poor set of tyres. The effectiveness of its finely tuned chassis hardware and sophisticated stability control and collision-mitigation software rely totally on the contact between tyres and road. Any car can only work with the grip that it's got. And the same goes for ride and handling. As an enthusiast you have almost certainly paid your money for a car based on how it drives. Why would you then go and compromise how it feels, how it stops, turns and accelerates, by fitting poor tyres?

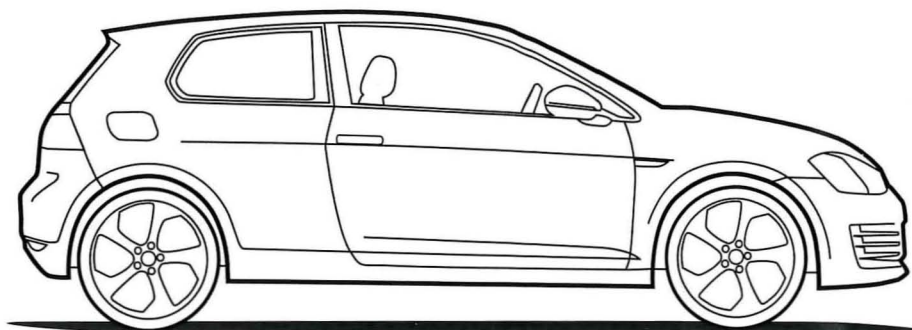
It can be painful, forking out for a complete set of brand new, quality tyres, but if you value how your car performs there is no such thing as a cheap tyre. There are, however, better value tyres, which is why we go to such lengths to produce our independent tyre tests. Yes, all tyres are black and round and keep your alloys off the ground, but all tyres are not created equal. So if you want to know which tyres – here in the most popular 18in fitment of 225/45 – perform best in both objective tests and subjective feel, read on.

THE CAR

With a keen front end offering ample feedback and a rear that will swing to help agility, the Mk7.5 VW Golf GTI is an ideal dynamic platform to hang tyres off. With a turbocharged 227bhp plus 258lb ft from 1500rpm channelled through the front tyres, it will also test straight-line traction and each tyre's ability to take torque when at the limit of cornering grip. The GTI's stability control cannot be turned off completely, only backed off to a 'sport' level, but this is relaxed enough to allow both ends some slip, so the ability and character of each tyre will be revealed.

THE TRACK

We've visited Continental's test track, the Conridrom, near Hannover, Germany, on a number of occasions. It has pretty much every facility you need to fully assess a tyre objectively, including a tricky wet circuit and a sinuous dry layout. It also has a vertiginous banked track and an array of special surfaces with features such as transverse ridges, coarse textures and raised and sunken manhole covers to help with the subjective assessment of ride quality and road noise.



THE TYRES

This year our chosen tyre is the 225/40 R18, the most popular 'UHP' – Ultra High Performance – size on the market. Nine well-known brands compete, including all the usual 'premium' suspects plus Falken, Hankook and Toyo. All nine have identical load (92) and speed (Y) ratings and range in weight from 8.9kg (Dunlop) to 10.1kg (Falken). Tyres were sourced from the wholesale market; prices are from blackcircles.com where possible.

PRICES

	Tyre	Price (£)	Score
1	Toyo	72.00	100.0
2	Hankook	74.00	97.3
3	Dunlop	76.80	93.8
4	Goodyear	77.40	93.0
5	Falken	79.30	90.8
6	Continental	85.00	84.7
7	Bridgestone	89.50	80.4
8	Michelin	90.40	79.6
9	Pirelli	94.00	76.6



Bridgestone
Turanza T001 Evo
(9.5kg, £89.50)



Continental
PremiumContact 6
(9.3kg, £85.00)



Dunlop
Sport Maxx RT2
(8.9kg, £76.80)



Falken
Azenis FK510
(10.1kg, £79.30)



Goodyear
Eagle F1 Asymmetric 3
(9.3kg, £77.40)



Hankook
Ventus S1 evo2
(9.9kg, £74.00)



Michelin
Pilot Sport 4
(9.7kg, £90.40)



Pirelli
P Zero P24
(9.4kg, £94.00)



Toyo
Proxes Sport
(10.0kg, £72.00)

WET HANDLING

SOAKED ASPHALT CAN OFTEN be the most significant and portentous test of all, and so it proved this year. Unexpectedly, however, the number of tyres that felt as though they really worked on this 1823m track was small. Just two tyres gave the Golf GTI the feeling of control, the sense that you could exploit the handling and pick your own lines. Most just coped, a couple felt treacherous.

Fastest around the lap was the **Pirelli**, in 84.13sec, just over a second faster than the second-placed Michelin (85.27sec). They both felt grippy and exploitable, but subjectively the Michelin was preferred. It offered lots of grip and tactile feedback, letting you know how hard you were pushing. You could be accurate

with it, turn-in was crisp and the rear would swing because the front was so hooked up. The Pirelli gave a less complete performance, feeling distinctly average in a straight line but great when turning. The rear was loose but the front found the mid-corner traction to pull the car out of corners like no other. Uncanny. Not the best feel but undeniably effective.

The Continental was third fastest, but didn't inspire confidence, with no outstanding traits. The Bridgestone wasn't especially quick but at least felt connected and reasonably grippy; it stopped, turned and hooked up but could be easily overloaded, resulting in the front washing wide or the rear swinging too much.

The midfield pack mostly felt like they were just coping with the wet conditions. Fourth and

fifth fastest were the Goodyear and Falken. The Falken was the better of the two in terms of feel, offering a gritty, grippy feel early in the turns, which was a little offset by a tendency to oversteer on a trailing throttle.

Like the Bridgestone, the Hankook lapped at around the 87.5sec mark, but spent more time slithering wide of the apex. This pair and the slowest two, the Dunlop and Toyo, could be easily pushed into side-slip by modest throttle inputs and backing off caused their rears to swing excessively. Dead last was the Toyo, a massive 5.7sec a lap slower than the Pirelli, and it felt like it too, offering little grip to work with; turn-in was weak, and it took a very delicate throttle and cautious lift-off to keep it close to the desired line. Hard work.

WET LAP

Tyre	Time (sec)	Score
1 Pirelli	84.13	100
2 Michelin	85.27	98.7
3 Continental	86.10	97.7
4 Goodyear	86.89	96.8
5 Falken	86.92	96.8
6 Bridgestone	87.50	96.1
7 Hankook	87.64	96.0
8 Dunlop	88.29	95.3
9 Toyo	89.79	93.7

WET HANDLING – SUBJECTIVE

Tyre	Points	Score
1 Michelin	56.0	100
2 Pirelli	54.5	97.3
3 Bridgestone	52.0	92.9
4 Falken	50.0	89.3
5 Continental	49.5	88.4
6 Goodyear	48.0	85.7
7 Hankook	47.5	84.8
8 Dunlop	46.5	83.0
9 Toyo	41.0	73.2

WET STEERING PAD

Tyre	Time (sec)	Score
1 Pirelli	11.17	100
2 Michelin	11.31	98.8
3 Continental	11.51	97.0
4 Goodyear	11.61	96.2
5 Falken	11.68	95.6
6 Hankook	11.80	94.7
7 Bridgestone	11.85	94.3
8 Dunlop	11.90	93.9
8 Toyo	11.90	93.9



WET STEERING PAD

A AS YOU WOULD EXPECT, there is a strong correlation between the lap times of the tyres on the wet handling circuit and their performance in the simpler task of circulating an evenly wetted, 57.5m circle. The Pirelli was happiest on the wet circuit when it was turning and that shows here; at 11.17sec it is the quickest by a small but significant margin from the other strong track performer, the Michelin, on 11.31sec. There's a bit of a gap then to the third quickest, the Continental, which was third on track too, followed by the Goodyear and Falken. Bringing up the rear on identical times of 11.90sec are the Dunlop and Toyo, a sizeable 0.73sec behind the best.



WET TOTAL

	Tyre	Score
1	Michelin	297.5
2	Pirelli	297.3
3	Bridgestone	283.3
4	Continental	283.1
5	Falken	281.7
6	Goodyear	278.7
7	Hankook	275.5
8	Dunlop	272.2
9	Toyo	260.8

BRAKING AND ROLLING RESISTANCE

I F YOU'RE LOOKING FOR strong, consistent braking performance in the wet and the dry, Michelin and Continental deliver. The Michelin was the best slowing from 80kph (50mph) on sodden asphalt and second best from 100kph (62mph) in the dry, while the Continental was second in the wet and third in the dry. Best in the dry – just – was the Pirelli, but in the wet it was fourth, taking 1.3m further to stop than the lead tyre.

The Falken was third best in the wet and in the dry was part of a close midfield pack on 36.5m. Easily the weakest tyre in both braking

tests was the Toyo, its performance in the dry being well off the pace and meaning that when the best tyre had stopped, the Toyo would still be travelling at 30kph (19mph).

Rolling resistance is a measure of the energy required to roll a tyre on a given surface and therefore its impact on fuel economy. The lowest friction score of 0.783 is generated by the Dunlop, and it's a chunk better than the second-placed tyre, the Bridgestone. The highest recorded friction of 0.915 goes to the Falken and this would, roughly, make its economy 0.5mpg worse than the Dunlop's on a car that returned 30mpg.

DRY BRAKING

	Tyre	Distance (metres)	Score
1	Pirelli	35.3	100
2	Michelin	35.4	99.7
3=	Continental	36.1	97.8
3=	Goodyear	36.1	97.8
5	Hankook	36.3	97.2
6	Dunlop	36.4	97.0
7	Falken	36.5	96.7
8	Bridgestone	36.7	96.2
9	Toyo	38.8	91.0

WET BRAKING

	Tyre	Distance (metres)	Score
1	Michelin	29.8	100
2	Continental	30.7	97.1
3	Falken	30.9	96.4
4	Pirelli	31.1	95.8
5	Bridgestone	31.7	94.0
6	Hankook	32.2	92.5
7	Goodyear	32.3	92.3
8	Dunlop	32.7	91.1
9	Toyo	33.2	89.8

ROLLING RESISTANCE

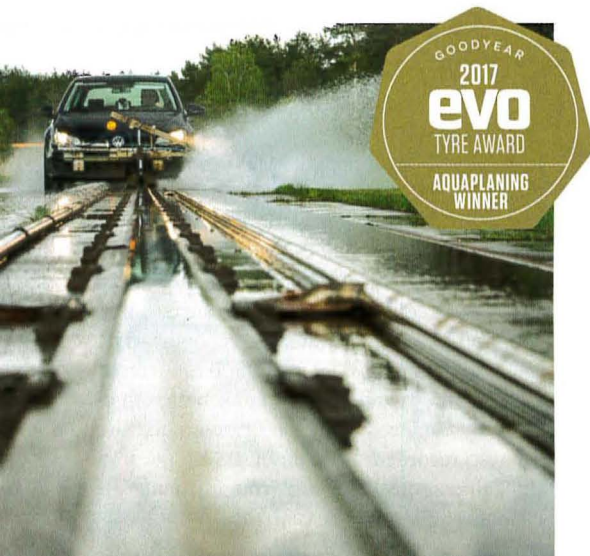
	Tyre	Coefficient	Score
1	Dunlop	0.783	100
2	Bridgestone	0.825	94.9
3	Continental	0.829	94.5
4	Toyo	0.842	93.0
5	Hankook	0.849	92.2
6	Goodyear	0.855	91.6
7	Michelin	0.861	90.9
8	Pirelli	0.898	87.2
9	Falken	0.915	85.6



AQUAPLANING

WHEN A TYRE CAN NO LONGER clear the water passing beneath it, it lifts, losing contact with the asphalt and meaning you are no longer in control. We measured the road speed at which each tyre would overspeed by more than 15 per cent in a straight line in controlled standing water, and then the maximum lateral acceleration when cornering in standing water.

Topping the straight-line test is the Michelin at 72.3kph (50mph), with the Goodyear and Pirelli just behind. Least good is the Toyo, though the margin is modest. In the curved test, the Dunlop is the top tyre with the Goodyear a close second, and considerably off their performance are the Pirelli and Bridgestone.



STRAIGHT-LINE AQUAPLANING

	Tyre	Max speed (kph)	Score
1	Michelin	72.3	100
2	Goodyear	72.1	99.7
3	Pirelli	71.5	98.9
4	Falken	71.1	98.3
5	Bridgestone	71.0	98.2
6	Dunlop	70.7	97.8
7	Continental	69.8	96.5
8	Hankook	69.2	95.7
9	Toyo	68.9	95.3

CURVED AQUAPLANING

	Tyre	Lateral accel (m/s ²)	Score
1	Dunlop	3.01	100.0
2	Goodyear	2.99	99.3
3	Falken	2.77	92.0
4	Toyo	2.72	90.4
5	Michelin	2.68	89.0
6	Continental	2.61	86.7
7	Hankook	2.52	83.7
8	Pirelli	2.42	80.4
9	Bridgestone	2.40	79.7



DRY HANDLING

IT STARTS WITH A SHALLOW left-hander entered under power at 145kph (90mph) before diving into a string of ever-tighter curves. You know where you stand with a tyre by the time you've made that first apex – or not. The spread of times is not nearly as large as it is on the wet handling circuit but subjectively the difference between the fastest and slowest is huge.

Unusually, the same tyre sets the pace in the dry as it did in the wet – the Pirelli. And, as in the wet, the second-placed tyre, the Michelin, felt better to drive. It gave the best steering feel – sharp, connected, direct – and although there was some adjustability it wasn't needed because it turned in so well, held the line and took power early. It gets the best out of the Golf and is quiet, too. The Pirelli does everything the Michelin does – finds every apex, hugs the line, drives out of turns well and isn't noisy – but is let down by dulling the steering and being less engaging.

Third fastest is the Dunlop. It's effective

but not a particularly enjoyable experience – ignore the howls of protest and the soft steering and simply muscle the car to the clipping points.

The remaining six are as close on lap times as makes no difference, so we'll rank them subjectively. A whisker behind the Pirelli is the Falken, which has the same crisp steering as the Michelin and is also willing and accurate. Next up is the Continental, which feels biddable and shows good traction but needs to be lightly handled to not wash wide. The Bridgestone feels willing and has good steering feel but simply lacks the sense of grip of the best. The Hankook is similar to the Dunlop in character, being noisy but effective, with good exit traction, while the Toyo has fair grip and traction but feels woolly, squidgy and vague in comparison with the best. Bottom of the table is the Goodyear, thanks to steering response that is slow and rubbery, and grip that is fair but which needs to be teased out of the tyre – try too hard and it'll wash you wide of the apex.



ROAD ROUTE

T HIS IS ALL ABOUT EVERYDAY performance; steering feel in normal driving, and ride comfort and refinement over a variety of common and more testing surfaces. The Michelin tops the table, essentially because it gives steering character that's appealing and which suits the car, the Golf feeling connected and keen to turn, effortlessly agile. This is backed up with quietness and rounded comfort, especially at slower, town speeds.

The Continental was a good performer and not far behind, offering good ride refinement and having clean, direct steering – characteristics shared with the Hankook. The **Pirelli** was good too, with slightly better noise suppression than the Michelin and similarly impressive comfort, but it was marked down for steering, the Golf feeling decidedly less keen and non-linear.

The Dunlop and Goodyear were equally good at isolating road imperfections but both were let down by steering that felt dull and lacking in immediate response. Although it had better steering feel, the Bridgestone's brightness was also apparent in its surface sensitivity, with a hollow, ringing sound over sharp impacts. The Falken and Toyo, meanwhile, were the least refined and comfortable of all, being generally the noisiest and reacting sharply to ridges and both raised and sunken manhole covers.



DRY HANDLING – SUBJECTIVE

	Tyre	Points	Score
1	Michelin	41.0	100
2	Pirelli	39.0	95.1
3	Falken	38.5	93.9
4	Continental	36.5	89.0
5	Bridgestone	34.0	82.9
6	Dunlop	33.5	81.7
7	Hankook	32.0	78.0
8	Toyo	31.5	76.8
9	Goodyear	29.5	72.0



DRY LAP

	Tyre	Time (sec)	Score
1	Pirelli	52.26	100
2	Michelin	52.40	99.7
3	Dunlop	52.65	99.3
4	Hankook	52.85	98.9
5	Falken	52.93	98.7
6	Bridgestone	52.98	98.6
7	Goodyear	53.04	98.5
8	Toyo	53.04	98.5
9	Continental	53.11	98.4



ROAD ROUTE

	Tyre	Points	Score
1	Michelin	22.5	100
2	Continental	22.0	97.8
3=	Dunlop	21.0	93.3
3=	Hankook	21.0	93.3
3=	Pirelli	21.0	93.3
6	Goodyear	20.5	91.1
7	Bridgestone	19.5	86.7
8	Falken	18.0	80.0
9	Toyo	17.0	75.6

RESULTS

9 TOYO
PROXES SPORT 86.9

Finishing behind most of the pack in all the objective tests bar curved aquaplaning and rolling resistance would have placed it near last, but what made this a certainty was its woeful subjective performance. It felt awful on the wet handling circuit, slithering everywhere, was woolly on the dry handling, and on the road it was noisy, harsh and felt disconnected. A tyre with few redeeming qualities.

8 GOODYEAR
EAGLE F1 ASYMMETRIC 3 90.7

It's a surprise to find such a big brand and previous strong performer at this end of the final order. The Goodyear was good in the wet handling, best overall in the aquaplaning tests, and did well in dry braking too. However, it was slow on the dry circuit and was easily overloaded and lacked steering sharpness – subjectively it was the lowest scoring tyre. Scored well for refinement, though.

7 HANKOOK
VENTUS S1 EVO2 91.6

Not outstanding in any one area in the measured tests but, at the same time, not poor either. Midfield in the objective dry tests but a little off the pace in the wet tests, particularly curved aquaplaning. Subjectively, the Hankook didn't shine on either the wet or dry handling circuit but was appealing on the road, combining keen steering response with a comfortable, quiet ride.

6 BRIDGESTONE
TURANZA T001 EVO 91.8

The highlight of the Bridgestone's performance was its subjective feel in the wet handling test, where it ranked third thanks to good steering feel and a fragile but exploitable grip. It had low rolling resistance – claiming second place here – and scored decently in most of the measured tests, and although it was quite surface sensitive the payoff was crisp, tactile steering.

5 DUNLOP
SPORT MAXX RT2 92.1

A tyre of contrasts, being one of the quickest in the dry handling test but faring poorly in the wet, coming second to last and producing the joint lowest wet lateral G. Yet it scored best in the curved aquaplane test. On the road it was good in parts, too, with decent ride comfort and impact noise suppression but dull steering. It was also the lightest tyre and delivered the lowest rolling resistance.

4 FALKEN
AZENIS FK510 92.8

The Falken was the heaviest tyre, one of the least refined on road and it recorded the highest rolling resistance. That said, it performed well in both wet and dry measured tests and was particularly strong in curved and straight-line aquaplaning. It was fast around the dry handling track and backed this up with good feel too, being praised for precise, accurate steering.

3 CONTINENTAL
PREMIUMCONTACT 6 94.3

Started well, with a solid third fastest in the wet, but didn't back that up with feel, being a little skittish and disconnected. Was slowest of all in dry handling but felt better than that, being biddable and responsive, if easily overloaded. Best of all, it was second only to the Michelin in terms of on-road feel, being quiet and comfortable and having clean, connected steering.

2 PIRELLI
P ZERO PZ4 95.7

Fastest of all around both the dry and wet handling circuits, where it showed strong turn-in and mid-corner grip and great exit traction that kept the swinging rear in check. Had a poor result in the curved aquaplaning but it was an impressive performance overall, and all that kept it off the top step was steering that lacked tactility and brightness compared with the best tyre here.

**1 MICHELIN**
PILOT SPORT 4 98.1

A clean sweep of subjective ratings helped secure victory for the Michelin. Its feel was peerless in the wet, where it was among the few to feel connected and exploitable, and that description applied to its dry track performance too. It scored consistently well in all the measured tests and on the road it was effortlessly agile and refined too. Simply a great tyre.