

Tuning Test:

Toyota GR Supra and BMW Z4 M40i by AC Schnitzer

## **RED ALERT**

Two brothers, one shaped into a coupé, the other a cabrio, are dedicated to sporting performance. And with AC Schnitzer, you get a bit more. The Aachen-based tuner gives the Supra and Z4 more power and makes them into real hard guys.

*Fresh breeze for the Z4:*

*The Roadster now benefits from 400 hp and 600 Nm. The AC Schnitzer engine trim puts the spotlight even more on the R6-T. The driver controls the eight-speed automatic with shift paddles the size of a fingertip.*

Small doubts nuzzle at the very back of your mind. Not about being too slow on corners or straights. The Schnitzer machines slurp and swallow these like the Brits do tea and snacks at tea-time. Again and again - and always gleefully.

But Germany's roads - in towns, across country or on the motorway - aren't as flat as a pancake. Cracked surfaces, bumpy tarmac, potholes as oceans for insects, undulations like the sea - they're all here. And the Toyota Supra and BMW Z4 by AC Schnitzer fly over them all, so if you're sitting in the driver's seat, sometimes your teeth rattle.

Take the A8 motorway from Ulm to Stuttgart. The tuned Supra was covering the fast lane at over 200 km/h, but now it's restricted to 120 down the Aichelberg hill. On these few kilometres down to Kirchheim unter Teck, there are a few nasty tarmac bumps which were partly sprung through the driver's body in this sports car - like an extended arm of the short springs. You can't really call this good driving comfort for everyday use, as AC Schnitzer say. If anything, the Supra is just a bit worse than the Z4, which seems to trip at least slightly more gently over the ground bumps, drain covers, potholes and level crossings. While in its brother, which is slightly harder in setup, you try - not always successfully - to find ways round them. The road surface isn't four metres wide. As well as the definition for "rock hard", the dictionary should include a picture of these two.

**BUT:** At Sport Auto, we're not looking for everyday comfort, but rather sporting performance. It's about acceleration, transverse dynamics and the question of whether in this case the effort is worthwhile - whether the tuning bears fruit. Both the ACS4 M40i and the Supra are crouching, powerful and energetic. And both get a touch of wickedness from the conversions. Other customers at the filling station look on admiringly.

## **Low, lower, AC Schnitzer**

AC Schnitzer has enjoyed a reputation as the BMW tuning experts since 1987. In this case, the Aachen-based company is making some exceptions to the rule, because it's there to be done. The Supra is fitted with the six-cylinder turbo engine from Munich - this gem. The two sports cars were developed hand in hand - with the difference that BMW has built a Roadster and Toyota a coupé. There are some who say that the Toyota has become the better BMW. A verdict which this

comparison supports just slightly. Because in both cases, the same means were used: extra ECU, suspension, exhaust, body accessories, wheels, interior trim.

Downforce is improved by the front splitter, side skirts and the two-piece rear spoiler for the Z4. In the Supra, the experts have fitted a second lip below the nose, and added a wing at the rear which is supported on two split feet. AC Schnitzer has punched two bonnet vents of carbon fibre into the bonnet, i.e. ventilation ducts to conduct the hot air from the engine out of the body. At the rear, the six-cylinder breathes through an in-house sports exhaust in both cases.

Both cars run on 20-inch wheels; both have lowered coilover suspension. When you set this to its maximum, you lose 30 to 40 mm height. Or in other words: in our test cars - which cost over 90,000 Euro with all the extras - the body and the ground are only around ten centimetres apart. You can just get your thumb between the tyre and paintwork.

### **Z4 better tuned than the Supra**

With the help of an additional control unit, the power of the turbo engine rises from 340 to 400 hp. The maximum torque climbs by 100 to a total of 600 Newton-metres, which is transferred to the rear axle at 3000 rpm. Quite a moderate increase, but one which achieves its aims one hundred percent. Both sports cars benefit in acceleration, and develop the power reliably. Both under full load during measurement and in everyday use, there were no outliers.

Even the standard engine is lightning fast and generous in its power development. But the crankshaft is working a little harder. The twin-scroll turbo avoids the need for more gas, since it gets to work directly and without fuss even at low revs. Above 2000 rpm, it lights up the Roadster and coupé. And this euphoria lasts to over 7000 rpm, as long as the thrust.

So in a comparison of the standard brothers, the rigged Supra is more lively than the soft-top Bavarian. The sports coupé sprints to 100 km/h in 4.2 seconds, and has reached 200 km/h in 15.4 seconds. In comparison with standard (Sport Auto 8/2019), the red-head from AC Schnitzer takes 0.2 and 1.5 seconds respectively off the stop watch.

The Aachen tuners have also raised the Z4 to another level: 4.6 seconds from zero to 100; 16.2 seconds from zero to 200 km/h. For classification, the values for the standard Z4 are 4.9 and 17.6 seconds, as measured in the Supertest 10/2018. To summarise the longitudinal dynamics: the Supra has the more finely-set launch control, so it gets the power down to the ground better and benefits from its over 60 kg lower weight. Only a tuned Z4 is faster than the standard Supra.

On the brakes and in the slalom too, the Japanese car is ahead. The Schnitzer Supra scurries round the bollards with an average speed of 71 km/h - with a more stable rear because of the harder suspension. The Schnitzer Z4 is now as quick as the standard Supra was in the slalom in our test 8/2019: 70.4 km/h (standard BMW 69.5 km/h). It could have gone a bit quicker if the Roadster had been fitted with Michelin Pilot Sport 4S, the slightly grippier successor to the Super Sport which the Z4 was wearing.

### **Less play in the rear**

On country roads, both contribute to the driver's pleasure. In comparison with the respective standard models, it's striking that the body virtually doesn't roll at all. Steer in, minimal side tilt, calm suspension, press the throttle: on long corners especially, the Schnitzer Supra and the Schnitzer Z4 shine with stability.

It's the same for both - because they're closer to the ground, both handle corners with a firmer grip and bite more sharply thanks to the coilovers, without overdoing it. The playfulness you find in the standard Supra above all with its mobile rear gives way to more seriousness. Finally, the optimisations are designed to extract more power from the system. Would you prefer an agile rear or the shorter leash and a rear axle glued to the tarmac? That's what every customer must decide for himself. Different drivers have different preferences.

In any case, the BMW steering feels slightly more planted and slightly more artificial. Gas hiccups on alternating curves create a slight turn-in effect at the rear on both cars. To a certain extent, the rear pushes in so you can deploy the increased thrust earlier on the exit. To get the rear wings to use the air flow, you'd have to steer in more sharply and at the same time get on the gas harder.

So one final thought before the next bump: upgrade successful, but on the race track probably, slightly more extended tendons would be needed in the locomotor system.

*Supra in the limelight:*

*AC Schnitzer has upgraded the BMW engine in the Supra with an additional control unit. As well as aerodynamic extras, there are new wheels. In the interior, a new pedal set and in-house turn-press control are added.*

**Summary**

The Z4 and Supra take life more seriously after tuning by AC Schnitzer. Both develop their increased power reliably. For my taste, the suspension is too hard for everyday use - slightly softer and more play at the rear would be the right middle way.

**Data & Facts**

<b>AC Schnitzer BMW Z4 M40i</b>	<b>AC Schnitzer Toyota GR Supra</b>
<b>Engine:</b> Six-cylinder in-line engine with turbocharger Bore x stroke (mm): 82.0 x 94.6 Capacity: 2998 cm <sup>3</sup> Compression: 11.0 : 1 Power: 400 hp (294 kW) at 6000 rpm Torque: 600 Nm at 3000 rpm	<b>Engine:</b> Six-cylinder in-line engine with turbocharger Bore x stroke (mm): 82.0 x 94.6 Capacity: 2998 cm <sup>3</sup> Compression: 11.0 : 1 Power: 400 hp (294 kW) at 6000 rpm Torque: 600 Nm at 3000 rpm
<b>Power transmission:</b> Rear-wheel drive, eight-speed automatic transmission, limited slip differential, DSC	<b>Power transmission:</b> Rear-wheel drive, eight-speed automatic transmission, limited slip differential, DSC
<b>Brakes:</b> Internally vented discs all round, diameter 348/345 mm, ABS	<b>Brakes:</b> Internally vented discs all round, diameter 348/345 mm, ABS
<b>Tyres:</b> 255/30 R 20 front, 275/30 R 20 rear, on 8.5 and 10.0 inch alloy rims, Michelin Pilot Super Sport	<b>Tyres:</b> 255/30 R 20 front, 275/30 R 20 rear, on 9.0 and 10.0 inch alloy rims, Michelin Pilot Sport 4S

