

Toyota GR Supra Adds Manual Transmission and Enhanced Drive Dynamics for 2023

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PLANO, Texas (April 27, 2022) – From the moment of its launch in 2019 the GR Supra captured the spirit of TOYOTA GAZOO Racing – one that’s all about the joy of driving. For 2023, it adds one more dynamic element: a six-speed intelligent Manual Transmission (iMT). For drivers who love the control and rewards offered by precisely timed manual shifts, it might be the Supra they’ve been waiting for.

True to the GR Supra’s thoroughbred engineering quality, this development wasn’t simply a matter of using an off-the-shelf solution. Engineers developed a manual transmission specifically for GR Supra, with components designed specifically to suit the power and torque characteristics of its 3.0-litre 382 horsepower engine. At the same time, the GR Supra’s braking control systems and suspension have been retuned for even better performance – changes that are being introduced throughout the model range.

The manual transmission will be available as an option on the Supra 3.0 and 3.0 Premium and a limited A91-MT Edition model will also be produced for model year 2023 only. Available colors for the MT 3.0 and 3.0 Premium will include all standard Supra colors plus a new Stratosphere Blue color, which will also be available on Supra 2.0. The A91-MT Edition will be available in Matte White and CU Later Gray. Pricing for 2023 GR Supra MT versions will be announced later this summer and models will be available at Toyota dealerships later this year.

Manual Transmission Designed for Supra Power

Available on the 3.0, 3.0 Premium and a limited A91-MT Edition model. The manual transmission installed in the GR Supra has been engineered and tuned specifically for use with the coupe’s straight-six engine.

The engineering team modified an existing transmission housing, driveshaft and gear set and removed elements that were not required, such as the acoustic package, which reduced weight. At the heart of the transmission is a newly engineered large diameter clutch with a reinforced diaphragm spring. With a larger friction area and a stronger spring, this new component has the high-performance capability appropriate for use with the GR Supra’s high-torque engine.

The newly developed 6-speed manual gearbox also features an intelligent Manual Transmission (iMT) programmed with new software that prioritizes sporty performance. When upshifting, the parameters are tuned to optimize engine torque at the moment of clutch engagement and release; on downshifts, the software has been fine-tuned for consistent performance. The iMT is set as the default but, if the driver prefers, it can be switched off in Sport mode.

To avoid a sluggish take-off and a low in-gear acceleration feel, the final drive ratio has been shortened, from 3.15 (in the GR Supra automatic) to 3.46 (in the GR Supra MT). The result is response and gearing appropriate for sports car performance.

Close attention was also paid to how a manual shifter could be accommodated in the driver’s cockpit. The lever ratio was specifically set to minimize the effort required to make shifts and engage reverse gear. While the weight and shape of the 200g gear knob, along with the quality of shift engagement, have all been precisely defined. Ergonomics were also top-of-mind, as the console unit and position of the drive mode selector were adjusted to provide a 1.7-inch clearance between the shift knob and the control panel.



TOYOTA GAZOO Racing: #savethemanual

The GR Supra was Toyota's first global GAZOO Racing (GR) model and the dream of Toyota President Akio Toyoda to deliver a car that is purely about the joy of driving.

Subsequently, the introduction of global models, like the GR Yaris and last year's arrival of the GR86 coupe, have reinforced the special qualities that define the GR brand – cars that are born out of a passion for driving and draw directly on the world championship-winning expertise and experience of TOYOTA GAZOO Racing.

At launch, the 2020 GR Supra was offered with a straight-six 3.0-litre engine with 335 hp/365 lb.-ft. of torque matched to an eight-speed automatic transmission. In 2021, the GR team increased the 3.0 Supra to 382 hp and 367 lb.-ft. of torque and introduced a turbocharged four-cylinder GR Supra 2.0 with 255 horsepower and a stout 295 lb.-ft. of torque.

While the car and its performance have received high praise worldwide from media and fans alike, perhaps inevitably the question of whether a manual gearbox would be available persisted. Now that it's official, the addition of a manual transmission option to the Supra line-up means Toyota will offer all three of its U.S. GR models with a stick, which is standard on the upcoming GR Corolla and available as an option on GR86.

Tuned for Traction, Stability and Agility

The GR Supra's traction and braking have been optimized for operation with a manual transmission.

With an automatic, it's possible to use second gear when pulling away uphill when opposite wheels are on surfaces with different grip levels – for example, when the car is parked on partly icy road, progress is smooth with no rolling back or wheel slip. With a manual gearbox, first gear must be used and releasing the clutch brings a greater risk of wheel spin. To address the issue, Toyota engineers have tuned the car's TRAction Control (TRAC) system to achieve smooth operation like that experienced with an automatic. The system is also optimized for the GR Supra's characteristic high engine torque, wide tires and rear-wheel drive.

The car's behavior when accelerating out of a corner is a key element in the "Fun to Drive" quality Toyota has developed for the GR Supra. For the new manual version, the traction control has again been the focus to ensure an ideal balance of agility and stability when exiting a corner on the throttle. TRAC intervention has been calibrated to maintain stability – so the car keeps faithfully to the driver's intended line – while allowing the right amount of power for a sporty experience.

The ambition to make the GR Supra fun to drive in the most demanding scenarios has helped inspire the introduction of a new Hairpin+ function. This is designed to allow more freedom and reward when taking tight bends on an uphill gradient (more than 5%) with a high-friction road surface. More "freewheel" spin can make such routes more enjoyable to drive, so Toyota has optimized engine torque control to allow a greater difference in the degree of wheel spin on the left and right-side tires.

To counter the possibility of "snap-off" oversteer – something that may be hard to control with the car's Vehicle Stability Control (VSC) alone – an Anti-Roll Program (ARP) has been adopted for both the manual and automatic versions of the GR Supra. This intervenes at an earlier point with the VSC to cover any sudden loss of grip when the car's high-response suspension setting is used.

In addition, the Track mode has been tuned to allow for easy drifting with freedom of throttle control. The vehicle remains agile, but there is less risk of spinning thanks to specific engine and torque control.



Special Edition and Updates Across the Lineup

The A91-MT special edition will be a 500 unit limited-run model that comes equipped with exclusive Cognac leather-trimmed seats, GR logoed Alcantara shift knob and a 12-speaker acoustically tuned premium JBL sound system. On the outside, a red “Supra” Badge and red GR Supra emblazoned calipers punctuate its extreme, condensed design. It will be offered in two exclusive colors, Matte White and CU Later Gray, and comes equipped with unique forged 19-inch Frozen Gunmetal Gray wheels. Under the hood, red strut tower braces add one more accent to the already bold Supra.

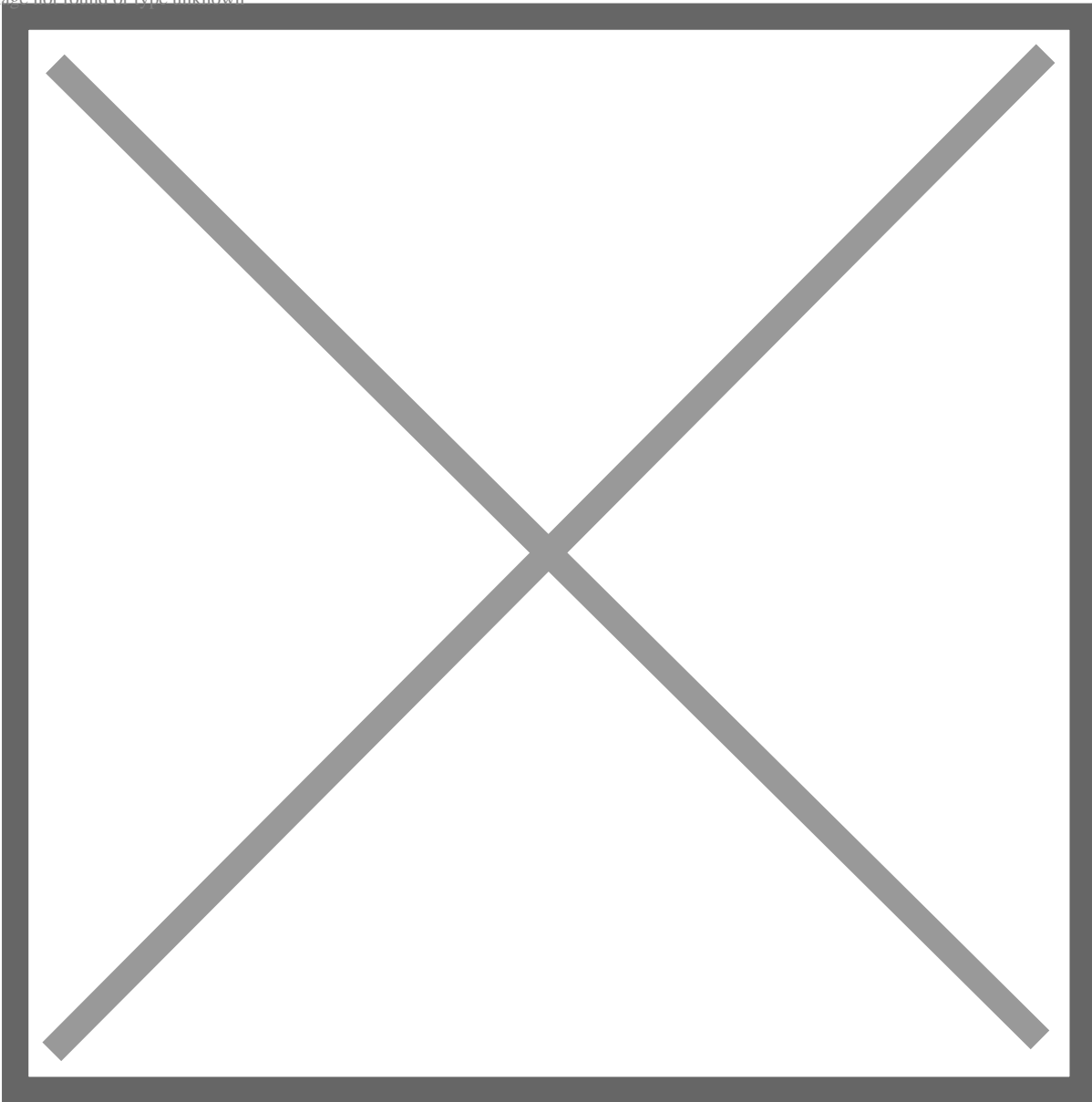
All 2023 GR Supra 3.0 models, both AT and MT versions, will benefit from a retuned suspension with re-tuned shock absorbers for improved roll balance and ride comfort. The mechanical components in the electric power steering and the system's operating parameters have also been re-tuned. All 3.0 models will have an active rear sport differential standard.

The 3.0 MT will come equipped with new 19-inch forged aluminum wheels and be available in previously available standard and premium colors plus the new Stratosphere Blue color. On the inside heated, black leather-trimmed seats are now standard. The 3.0 Premium has everything you'll find on the 3.0, plus a red and black leather-trimmed interior, full color heads up display, acoustically tuned 12-speaker JBL sound system and Qi Wireless charger standard.

Supra Connect1 is also available. This advanced technology suite is designed to help you get more from your GR Supra 2.0 and 3.0 with Safety and Technology Package, 3.0 Premium and A91-MT Edition and includes features like Automatic Emergency Call, Real-Time Traffic Information, Roadside Assistance and the available Supra Connect iPhone® app to lock/unlock the doors and activate Ventilation Now and Ventilation Timer features.

Key Standard Features Include

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Options and Packages Include

