5 June 2019

Gordon Murray Automotive reveals details for its new 'T.50': the purest, lightest, most driver-focused supercar ever

- **Designed to the same exacting engineering standards as the driver-focused McLaren F1; improves upon its iconic predecessor in every way**
- **Mid-engine and rear-wheel-drive layout; famed central driving position and H-pattern gearbox all key to a matchless experience behind the wheel**
- **All-new V12 to be the highest-revving engine ever used in a production car; produces unrivalled power-to-weight**
- **'Fan car' technology delivers the most advanced aerodynamics yet seen on a road car**
- **Unique carbon fibre tub and a focus on minimising the weight of every component underpin 'lightweighting' strategy – overall weight is just 980kg**
- **New model will set new standards for supercar packaging, providing driver and two passengers with exceptional comfort, safety, practicality and luggage space**
- **Only 100 exclusive models to be produced costing in excess of £2m (before taxes); deliveries from early 2022.**

Gordon Murray Automotive, sister-business of visionary vehicle design and engineering company Gordon Murray Design, has announced details of its first vehicle – the T.50 supercar. Conceived as the spiritual successor to the Murray-devised McLaren F1, the T.50 will be the purest, lightest, most driver-focused supercar ever built.

The development of T.50 is at an advanced stage, with full production and customer deliveries set to commence in early 2022. Just 100 owners of the T.50 will experience Murray's vision – a supercar inspired by his 50 years at the pinnacle of Formula One and automotive industry engineering and design.

Professor Gordon Murray CBE, Chairman of Gordon Murray Group, said: "An unflinching dedication to lightweighting, highly-advanced active aerodynamics and world-leading standards of advanced engineering will ensure the T.50 rewrites the supercar rulebook. Our experienced team is applying the same uncompromising approach to design and engineering that shaped every facet of the F1, and they are able to deliver substantial improvements over that car in every meaningful way."

The engineering planning, plus all interior and exterior styling of the new vehicle has been carried out by Gordon Murray Design. It will be manufactured in the UK by Gordon Murray Automotive – a new company first announced in late 2017 at the *One Formula* exhibition. The event celebrated 50 years of Murray's career in motorsport and automotive design and engineering, plus it previewed plans to build a limited-run supercar – the T.50. Every race or road car penned by Murray so far has featured a 'T' designation; and the T.50 will be the 50th in a highly illustrious line.

The T.50 breaks from performance-car convention, just as the F1 did in 1992. It weighs significantly less than any other current supercar. It has the most advanced aerodynamics of any road car, and it relies on design and engineering excellence to deliver the purest, most driver-focused performance and dynamics of any road car since the F1.

It will be powered by a compact and light, naturally-aspirated, all-new V12 engine. The unit will be capable of an extraordinary 12,100rpm – unparalleled in a V12 road car – and 650hp to deliver unmatched power-to-weight. However, Murray says: "I have absolutely no interest in chasing records for top speed or acceleration. Our focus is instead on delivering the purest, most rewarding driving experience of any supercar ever built – but, rest assured, it will be quick."

The T.50 adopts the same, iconic three-seat format that Murray pioneered for the F1, with the driver benefitting from a central 'jet-fighter-style' driving position. The new car builds on the F1's highly-advanced aerodynamics, taking Murray's ground-effect innovations to an all-new level with intelligent management of underbody airflow coupled with a 400mm fan at the rear. The fan actively controls underbody airflow – a feature Murray famously premiered on the Brabham BT46B Formula One 'Fan Car'. This approach allows the upper surfaces of the car to retain purity and beauty, eschewing the exaggerated scoops and spoilers familiar in the segment and equipping the T.50 with the most advanced aerodynamics of any road car

All engineering, design and styling of the T.50 is by Gordon Murray Design and the car will be manufactured by Gordon Murray Automotive at a new, purpose-built facility in Surrey, UK. Furthermore, all major components will be bespoke and UK-sourced, including the powertrain, body and chassis. This will be a true British supercar.

The T.50, by Gordon Murray Automotive will be priced in excess of £2 million before taxes.

T.50 IN DETAIL

Setting new standards in lightweighting, the T.50 supercar weighs significantly less than any existing supercar

“Automotive enthusiasts and road-test editors have discussed the concept of ‘peak supercar’ for some time,” says Murray. “The reality of chasing top speeds only adds weight, notably through ever-more powerful engines, which increase the requirement for larger, heavier ancillaries. We are taking a very different approach.”

Ingrained in the approach of the Gordon Murray Automotive product development strategy is a fastidious commitment to minimise weight – in *every* component. “This is the key to achieving enhanced performance and dynamics, and refocusing the supercar on the driver and the thrill of driving. We’re not interested in simply chasing numbers, and never will be,” asserts Murray.

Gordon Murray Automotive will produce the world’s lightest, most driver-focused supercar through sophisticated use of advanced carbon fibre engineering and this fanatical dedication to purging the vehicle of every unproductive gram.

The T.50 supercar will weigh just 980kg – around a third lighter than the average supercar – making it, by far, the lightest supercar ever.

With a clear driver-focus, the external proportions are highly compact (smaller than the footprint of a Porsche 911 at just 4,380mm long and 1,850mm wide) to optimise handling, while the interior is nonetheless spacious and comfortable for three, with ample dedicated space for luggage.

The most advanced aerodynamics of any road car

In rewriting the supercar rulebook, Gordon Murray Automotive set out to equip the T.50 supercar with the most advanced aerodynamics of any road car. The new model will feature intelligent under-body active aerodynamics, which employs continuous, dynamic and interactive underbody ground-effect systems to optimise the driving experience.

Uniquely, the supercar will feature a 400mm ground-effect fan, similar to that on Murray’s famous Brabham BT46B Formula One ‘Fan Car’. The Gordon Murray Automotive team has

established a new technical partnership with a Formula One team, which will make its rolling-road wind tunnel available to develop the aerodynamics of the T.50.

With all of the car's intelligent aerodynamic sophistication housed beneath the car, the upper surfaces are free from unsightly wings, outlets, vents and bulges, safeguarding the purity and beauty of the exterior design. The sense of drama, even when stationary, is amplified by the striking dihedral doors that hark back to the F1 – where they first appeared on a supercar.

An engineering work of art with bespoke powertrain and running gear

Through exquisite engineering, every part of the T.50 is refined to create the purest, most focused supercar ever made – "We expect this to be the last, and the greatest, 'analogue' supercar ever built," says Murray.

The T.50 features a bespoke, mid-mounted, all-new V12 engine that has been designed, developed and built exclusively for Gordon Murray Automotive by Cosworth Powertrain.

The V12 3.9-litre 'Cosworth Gordon Murray Automotive' engine will rev to an unparalleled 12,100rpm and develops 650hp and 450Nm torque. Paired with the car's extraordinary lightness (980kg), it achieves a power-to-weight of 663hp/ton exceeding that of any other naturally-aspirated sports car designed for the road.

The V12 Cosworth GMA engine delivers more power from four litres than the F1 produced with 6.1 litres in 1992, an achievement aided by the inclusion of roof-fed ram-air induction, which increases horsepower to around 700hp.

Cosworth Managing Director, Powertrain, Bruce Wood, said: "We are tremendously excited to be part of the T.50 supercar project, and to have the opportunity to work alongside Gordon Murray Automotive. It is a real privilege to play such a key role in the T.50 with an all-new V12 3.9-litre engine, designed, developed, manufactured and assembled by Cosworth's industry-leading powertrain division.

"Developing an engine that delivers superlative performance, while meeting stringent emissions targets, is a challenge that demonstrates Cosworth's unique capabilities. To be so intrinsically aligned with a supercar that puts engine performance, response and light weighting at the very heart of the driving experience is the ultimate accolade and underscores Cosworth's reputation and capabilities as a leading OEM tier one powertrain partner."

The Gordon Murray Automotive team was focused on producing the purest driving experience so rejected the use of turbos or electrified powertrain assistance, instead applying attention to engine response.

Murray adds: “By working with the team at Cosworth Powertrain we have created the greatest naturally-aspirated engine ever designed for the road. It is the highest revving, highest power density, lightest and fastest-responding naturally-aspirated V12 ever made for a road car.”

Power is transferred to the rear wheels via a bespoke, lightweight six-speed transmission designed in conjunction with British transmission technology specialists Xtrac. In the furtherance of maximum driver reward and low weight, Murray has specified the T.50 with a newly-designed and developed ‘H-pattern’ six-speed gearbox – deliberately eschewing the twin-clutch solution favoured by many supercar makers. The brakes, also developed specially for the T.50, shed speed through a combination of lightweight monobloc alloy calipers and new technology carbon-ceramic discs.

Applying the same driver-focused engineering principles that shaped the F1

The T.50 supercar is the spiritual successor to the ground-breaking F1, and is being developed with the same unwavering focus on engineering purity and quality.

“Just as with the F1, we have no specific targets for acceleration, top speed or lap times,” explains Murray. “The F1 was fast because it was light and relatively small. The T.50 will deliver performance and dynamic characteristics simply out of reach for other supercars not least because of its low weight. Once again, I have focused on the complete driving experience, not horsepower or top speed.”

The central driving position provides a perfect ‘jet-fighter-style’ visibility, while analogue instruments and driver-centric controls are positioned to provide an even more intuitive and immersive driving experience than the acclaimed F1.

Armed with the same mid-engined, rear-wheel-drive set-up, the new T.50 supercar has perfect weight distribution and will boast incomparable vehicle dynamics and driver feel. Despite the car’s performance capabilities, it is far from a stripped-back racer. The T.50 is an ‘everyday supercar’ capable of GT-style cruising in spacious comfort with room for driver, two passengers and luggage.

“I designed the F1 as a sort of super GT car – absolutely road-focused with no plan to go racing, which is why the car set new standards for packaging and luggage space. The T.50 design has the same focus and betters the F1 in every area – ingress and egress; luggage capacity; serviceability; maintenance and suspension set-up. Also, driver-selectable engine maps ensure a driving mode to suit every situation,” concludes Murray.

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Technical specifications

General	
Body type	Two doors, three seats, Grand Tourer Supercar
Engine	Cosworth-GMA 3.9l 65° V12 N/A twin-cam
Weight	980kg
Length	4,380mm
Width	1,850mm

Motor and transmission	
Type	Naturally aspirated V12
Displacement	3,980cc
Layout	Rear mid-engine
Maximum power	650hp
Maximum torque	450Nm
Valves	Four valves per cylinder
Fuel system	Petrol pfi aluminium fuel tank
Maximum engine revs	12,100rpm
Engine details / overview	Dry sump lubrication
	Variable valve timing
	Highest-revving road car engine (no flywheel / lightweight clutch)
	Structural chassis member
	Ram-air induction system
	Cutting-edge materials and coatings
	All light alloy (including magnesium and titanium)
Transmission	Bespoke lightweight six-speed transmission
	Light alloy casing
	Limited-slip differential
	Lightweight clutch
	Gun-drilled drive shafts

Chassis and body	
Drive type	Rear-wheel drive
Chassis	Primary structure handmade sandwich-panel carbon monocoque, including semi-structural powertrain utilising high-modulus adhesive
Body	Carbon composite panels
Occupant architecture	Central driving position – three seats

Suspension and brakes	
Front suspension	Rod / operated rising rate; double wishbone; anti-roll bar
Rear suspension	Rod / operated rising rate; double wishbone – inclined shear axis; powertrain mass damper
Brakes	Carbon-ceramic discs
	Aluminium floating disc bells
	Monobloc light alloy calipers
	Low boost assist / ABS

Steering	LSPA rack and pinion

Wheels	Forged light alloy

Aerodynamics	Active ground-effect with full-width diffuser and fan-assisted underbody airflow – brake balance foil

Notes to editors

Further information, high-resolution imagery and original video files are available on request from: PFPR Communications: Jon.visscher@pfpr.com / 01622 776680. Assets available:

- T.50 design sketch by Gordon Murray
- T.50 video – introduction to the T.50 by Gordon Murray

Gordon Murray Automotive
Gordon Murray Automotive was launched in November 2017. The T.50 supercar will be the first model manufactured by the new company. Alongside production of its own vehicles, Gordon Murray Automotive will manufacture vehicles on a low-volume basis for external customers.

Gordon Murray Automotive forms part of a new corporate organisation for the engineering group, and is positioned as a sister company to Gordon Murray Design.

Gordon Murray Design
Gordon Murray Design is a visionary design and engineering company with its headquarters in Surrey, UK. It was established in 2007 with a focus on developing an innovative and disruptive manufacturing technology trademarked iStream, and has since built a global reputation as one of the finest automotive design teams in the world.

The company's unique approach and truly creative thinking enables Gordon Murray Design to deliver complete car programmes in a highly efficient and innovative way from concept and design, through to prototype and development for production.

Cosworth Powertrain
Cosworth has used the rigours of motorsport to transform itself into a growing and profitable Tier 1 supplier to automotive manufacturers. The company's unparalleled capabilities in powertrain and performance electronics have been honed from six decades at the very pinnacle of automotive engineering. In response to the significant advances in the automotive and motorsport landscape, Cosworth has always sought to develop technologies to meet ever-evolving demands from its customers. Whether it is through propulsion, hybridisation, connectivity or automation technology, Cosworth is ready to solve the new challenges on the road, racetrack and in the air with the mobility solutions of the future. www.cosworth.com

Xtrac
Xtrac is the world-leader in the design and manufacture of high-performance transmissions and driveline components used by virtually all the world's top-level motorsport teams. High-performance automotive customers rely on Xtrac's specialist expertise, particularly for the development of hypercar transmissions, as well as advanced highly-integrated transmissions, in the next generation of hybrid and electric vehicles.

Xtrac is a major ambassador for the UK's motorsport industry and employs 360 highly qualified staff, including 47 who have been trained through Xtrac's award winning apprentice and undergraduate schemes. They work on global customer programmes, of which 80 per cent are exported to the US, South America, Europe, Asia and many other countries. Further information at www.xtrac.com.

Professor Gordon Murray, CBE – biography
Gordon Murray was born in Durban, South Africa in 1946 and gained a Mechanical Engineering Diploma from Natal Technical College. He designed, built and raced his own sports car (the IGM Ford) in the National Class in South Africa during 1967 and 1968.

In 1969 Gordon moved to the UK and joined the Brabham Formula One Team as Technical Director, winning two world championships (1981 and 1983) during his 17 years with the team. Gordon joined McLaren Racing as Technical Director in 1988 and three consecutive championship wins (1988, 1989 and 1990) followed. In 1990, Gordon moved away from Formula One – after 50 Grand Prix wins – to concentrate on establishing a new company for the group, McLaren Cars Limited.

The company's first project, the F1 road car, is still regarded as one of the world's best-engineered cars. A racing version won two world sports car championships and the Le Mans 24-hour race on its first attempt in 1995. McLaren Cars then completed several other successful projects culminating in the Mercedes-Benz SLR McLaren programme.

Gordon left McLaren in 2005 to set up a new company Gordon Murray Design Ltd (in 2007), of which he is Chairman and Technical Director. The innovative British company operates from Surrey, UK and aims to be the world leader in automotive design. It reverses the current industry trend for sub-contracting by having a complete in-house capability for design, prototyping and development.

In 2017, Gordon Murray Design celebrated the company's 10-year anniversary along with that of the iStream® manufacturing process. At a special event, named 'One Formula' Gordon Murray also celebrated the 25th anniversary of the McLaren F1 road car entering production, and his 50th year of car design and engineering.

In May 2019, Professor Murray was made a Commander of the British Empire (CBE) by the Duke of Cambridge, Prince William. The ceremony, held at Buckingham Palace, recognised the contributions made by Murray to the motorsport and automotive sectors over the past 50 years.

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