

Gordon Murray Automotive – T.50 technical specification

<u>Configuration</u>	
	Rear-mid engined coupé
	Central driving position with two outboard passengers
	Rear-wheel drive
<u>Dimensions</u>	
Length	4,352 mm
Width	1,850 mm
Height	1,164 mm
Wheelbase	2,700 mm
Front track	1,586 mm
Rear track	1,525 mm
Weight	986 kg
Dry weight	957 kg
Ride height	120 mm (front) 140 mm (rear)
Turning circle	10.9 metres
<u>Capacities</u>	
Fuel tank	80 litres
Oil capacity	14 litres
Luggage / stowage	Three occupants – 228 litres
Luggage / stowage	Two occupants – 288 litres
<u>Engine</u>	
Type number	Cosworth GMA
Configuration	V12 semi-structural
V-angle	65°
Capacity	3,994 cc
Bore	81.5 mm
Stroke	63.8 mm
Compression ratio	14:1
Max power	663 PS @ 11,500 rpm
Power to weight ratio	672 PS per tonne
Weight to power ratio	150 kg per 100 PS
Max torque	467 Nm @ 9,000 rpm
Flexibility	71% of max torque @ 2,500 rpm
Maximum rpm	12,100 rpm
Valve train	Gear driven double overhead camshafts
	Inclined axis four valves per cylinder – variable valve timing on inlet / exhaust
Induction system	RAM induction airbox – four throttle bodies – Direct Path Induction Sound (DPIS)
Exhaust system	Inconel and Titanium
Lubrication system	Dry sump
Cooling system	Water-cooled - twin aluminium front radiators
Oil cooling system	Single aluminium rear radiator
Ignition system	12 individual coils 12-volt
Starter / alternator	48-volt gear driven integrated starter / generator
Exhaust emission control	Four catalytic convertors with Lambda sensors and secondary air injection

Engine block	Aluminium alloy
Cylinder heads	Aluminium alloy
Connection rods	Titanium
Valves	Titanium
Total engine weight	178 kg
Engine mounting	Semi-structural-inclined axis shear mounting (IASM)
Power density	166 PS-per-litre
<u>Transmission</u>	
Configuration	Transverse with high-speed bevel gears and spur gear final drive
Speeds	Six forward speeds plus reverse: full synchro mesh
Gear change	Manual H pattern with reverse lock-out
Differential	Limited slip (Salisbury)
Clutch	184 mm diameter – Triple-plate carbon silicone and titanium
Drive line	Tripod joints and gun drilled drive shafts
Casing	Aluminium alloy
Lubrication	Pumped lubrication
Oil cooling	Single aluminium alloy radiator
Ratios	
First	2.833:1
Second	2.095:1
Third	1.577:1
Fourth	1.226:1
Fifth	0.971:1
Sixth	0.744:1
Input bevel	1.688:1
Final drive	3.176:1
Optional overdrive (6 th)	0.595:1
Weight	80.5 kg
<u>Chassis</u>	
Front suspension	Double wishbone (forged aluminium alloy)
	Rising rate pushrod operation – steel coil springs over aluminium dampers. Anti-roll bar. Forged aluminium alloy uprights
Rear suspension	Double wishbone (forged aluminium alloy) toe link
	Rising rate pushrod operation. Steel coil springs over aluminium dampers. Forged aluminium alloy uprights. Inclined axis shear mounting system (IASM)
Steering	Steering rack and pinion (LSPA)
Hubs and Bearing carriers	Formula One-style lightweight hubs. iCentre lock nut wheel attachment
Wheels	Forged aluminium alloy 19-inch x 8.5-inch front; 20-inch x 11-inch rear
Tyres	Michelin Pilot Sport 4 S
	Front – 235 / 35 R 19
	Rear – 295 / 30 R 20
<u>Brakes</u>	Brembo carbon ceramic discs
Front brakes	370 mm x 34 mm CCM-R
	Six-piston air-cooled aluminium alloy Monobloc calliper
Rear brakes	340 mm x 34 mm CCM-R
	Four-piston air-cooled aluminium alloy Monobloc calliper

<u>Handbrake</u>	Manual lever – flyoff mechanism twin cable
	Aluminium alloy calliper
<u>Monocoque</u>	Multi-part bonded carbon fibre sandwich panels with aluminium honeycomb core
	Carbon or metallic inserts
<u>Body</u>	Monolithic and cored carbon fibre panels
<u>Aerodynamics</u>	Ground effect aerodynamics with a fan interactive aero system (FIAS)
	Twin rear spoilers
Fan	Fixed pitch multi-blade
Fan motor	8.5 kw 48 volt
Fan speed	7,000 rpm (max)
Fan thrust	15 kg
Active diffuser	Electric actuation
Spoilers	Electric actuation
Aero modes	Auto (automatic)
	Brake Boost (automatic)
	Streamline (driver selectable)
	V Max Boost (driver selectable)
	High Downforce (driver selectable)
	Test (driver selectable)
<u>Fuel system</u>	Aluminium alloy tank – 80 litre capacity including six-litre reserve. In tank pumps and high-pressure delivery pump
<u>Engine cooling</u>	Water cooling by twin, front aluminium radiators
	Electrical fans
	Oil cooling by single, rear aluminium radiator
<u>Transmission cooling</u>	Single, rear aluminium radiator
<u>ISG cooling</u>	Independent water-cooling system with aluminium radiator and fan
<u>Power module</u>	Direct cooling with refrigerant
<u>Driver aids</u>	Traction control and electronic stability programme (ESP) (switchable)
	Anti-lock braking system (ABS)
	Vacuum assisted brakes
	Low speed power-assisted steering (LSPA)
<u>Primary controls</u>	350 mm diameter carbon fibre steering wheel
	Aluminium alloy brake and clutch pedal – titanium throttle pedal
	Titanium gearchange hand control
<u>Secondary controls</u>	Rotary switches for:
	Engine mode
	Aero mode
	Lights
	Heating and ventilation (HVAC)
	Windscreen wiper/washer
	Infotainment
<u>Information screens</u>	R/H screen – infotainment
	L/H screen – car / engine / aero / information
<u>Sound system</u>	Arcam, 700-watt, 10-speaker audio system
<u>Instruments</u>	120 mm diameter analogue rev counter
<u>Power module</u>	Combined 12 v and 4.8 v unit with integrated inverter and control system
<u>ISG</u>	20 kw 48 volt – gear driven from front of crankshaft