

Gordon Murray Automotive T.50s Niki Lauda

Technical Specification



<u>Configuration</u>	Rear-mid engined coupé Central driving position + 1 passenger Rear wheel drive
<u>Dimensions</u>	
Length	4,416 mm
Width	1,917 mm
Height	1,179 mm
Wheelbase	2,700 mm
Front Track	1,629 mm
Rear Track	1,573 mm
Weight	852 kg
Ride Height	87 mm front, 116 mm rear
Turning Circle	14.67 m
<u>Capacities</u>	
Fuel Tank	50 litres
Oil Capacity	14 litres
<u>Brakes</u>	
Front Brakes	370 mm x 34 mm CCM-R 6 piston air cooled AL caliper
Rear Brakes	340 mm x 34 mm CCM-R 4 piston air cooled AL caliper
<u>Engine</u>	
Type Number	Cosworth GMA-S
Configuration	V12 semi-structural
V-angle	65°
Capacity	3,994 cc
Bore	81.5 mm
Stroke	63.8 mm
Compression Ratio	15:1
Max Power	725 bhp with RAM induction
Torque	485 Nm @ 9,000 RPM
Power to Weight Ratio	835 PS /tonne
Maximum RPM	12,100 RPM
Valve Train	Gear driven double overhead camshafts
Induction System	RAM induction airbox - 12 throttle bodies
Exhaust System	Free-flow - thinwall - Inconel
Lubrication System	Dry sump
Cooling System	Water-cooled - twin aluminium front radiators
Engine Power	711 PS @ 11,500 RPM
Oil Cooling System	Single aluminium side radiator
Ignition System	12 individual coils 12-volt

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Starter / Alternator	48 volt integrated strategy/generator
Engine Block	Aluminium alloy
Cylinder Heads	Aluminium alloy
Connection Rods	Titanium
Valves	Titanium
Engine Weight	162 kg
Engine Mounting	Semi-structural-inclined axis shear mounting (IASM)
Power Density	178 hp/litre
Driver Aids	ABS - ESP (switchable) - vacuum assisted brakes - low speed power assisted steering (LSPA)
Primary Controls	Racing carbon fibre steering wheel Aluminium alloy brake pedal Titanium throttle pedal
Secondary Controls	Carbon fibre R/H switch panel
Steering Wheel Controls	Flash/Horn/Intercom/Launch Control/Traction Control/Screen Scroll/Neutral
Display	Central Screen - Engine Info/Aero Info/Tell Tale/Car Info/Lap Time/G-Metre/Gearchange Indicator/Camera-Video/Telemetry
Transmission	Configuration 0 Transverse with high-speed bevel gears and spur gear final drive Xtrac IGS. 6 speed IGS paddle shift gearbox.
Gearchange	Paddle shift - electronic gear selector
Differential	Limited slip (Salisbury)
Clutch	Electric power clutch
Driveline	Tripod CV joints and gun-drilled drive shafts
Casing	Aluminium alloy
Lubrication	Pumped lubrication
Oil Cooling	Single aluminium radiator - side mounted
Input Bevel	1.69:1
Weight	76 kg



<u>Ratios</u>	
First	2.83:1
Second	2.08:1
Third	1.62:1
Fourth	1.29:1
Fifth	1.06:1
Sixth	0.89:1
<u>Chassis</u>	
<u>Front Suspension</u>	Double wishbones (forged aluminium alloy) Rising rate pushrod operation - Titanium coil springs over-aluminium dampers Anti-roll bar Forged aluminium alloy uprights
<u>Rear Suspension</u>	Double wishbones (forged aluminium alloy) and toe link Rising rate pushrod operation Forged aluminium alloy uprights Inclined axis shear mounting system (IASM)
<u>Steering</u>	Rack and pinion (LSPD)
<u>Hubs, Bearing & Carriers</u>	Formula One style lightweight hubs - Centre lock attachment
<u>Wheels</u>	Forged magnesium - Front 18" Dia x 10" Rear 18" Dia x 12"
<u>Tyres</u>	Michelin slicks with wets option Front - 25/64 18" (250m/m wide) Rear - 30/68 18" (300m/m wide)
<u>Monocoque</u>	Multi-part carbon fibre sandwich panels with aluminium honey-comb core carbon or metallic inserts
<u>Body</u>	Ultralight carbon monolithic and cored panels
<u>Aerodynamics</u>	Ground effect aerodynamics with fan interactive aero systems (FIAS) Pilot tube and downforce readout
Fan	Fixed pitch multi blade - carbon fibre
Fan Motor	8.5Kw 48 Volt
Fan Speed	7000 RPM
Fan Thrust	15 kg
Rear Wing	Twin element delta wing. Fixed main plain and adjustable slotted flap.
Front Aero	Front splitter with central aerofoil section/drive planes/adjustable front diffusers and barge boards.



<u>Fuel System</u>	Aluminium alloy tank, 50 litre capacity with in-tank pumps and high pressure delivery pump.
<u>Radio</u>	Car to pits + driver to passenger - push to talk
<u>Fire Extinguisher System</u>	Cabin & engine - lifeline
<u>Seating</u>	Full carbon race seat with head side protection - HANS - device compatible, fore and aft adjustment - 6 point racing harness, fixed passenger seat - 4 point harness.
<u>Trackspeed Pack</u>	
Pit equipment to run T.50	Fuel filler Fuel churns Fuel cans Front quicklift jack Rear quicklift jack Full garage toolset
<u>Ergonomics</u>	Full ergonomic fitting
	Removable steering wheel
<u>Support</u>	Engineering and driver support for a track day to set up the chassis and the aero: Training for owners, Technician on car operation. Operation manual.
<u>Facts</u>	Specific power exceeds the all-conquering Cosworth DFV Formula One engine