

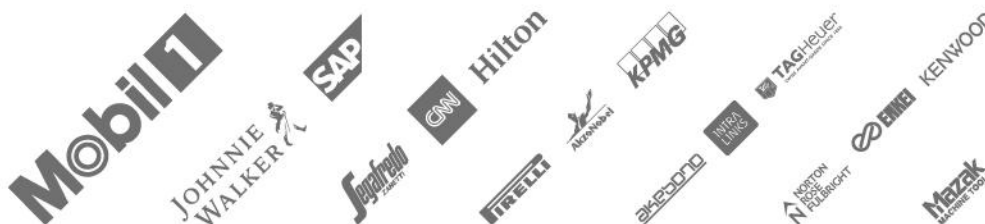
McLAREN HONDA



MP4-30 TECHNICAL SPECIFICATION

Chassis

Monocoque	Carbon-fibre composite, incorporating driver controls and fuel cell
Safety structures	Cockpit survival cell incorporating impact resistant construction and anti-penetration panels, front impact structure, prescribed side impact structures, integrated rear impact structure, front and rear roll structures
Bodywork	Carbon-fibre composite. including engine cover, sidepods, floor, nose, front wing and rear wing with driver-operated drag reduction system
Front suspension	Carbon-fibre wishbone and pushrod suspension elements operating inboard torsion bar and damper system
Rear suspension	Carbon-fibre wishbone and pullrod suspension elements operating inboard torsion bar and damper system
Weight	Overall vehicle weight 702kg (including driver, excluding fuel) Weight distribution between 45.5% and 46.5%
Electronics	McLaren Applied Technologies. Including chassis control, power unit control, data acquisition, alternator, sensors, data analysis and telemetry
Instruments	McLaren Applied Technologies dashboard
Lubricants & Fluids	Mobilith SHC™ 1500 Grease – High temperature drive-shaft tripod lubrication Mobilith SHC™ 220 Grease – Low rolling resistance ceramic wheel bearing lubrication Mobil SHC™ Hydraulic Oil – High pressure, high temperature hydraulic fluid used for chassis, transmission and power unit actuation
Brake system	Akebono brake calipers and master cylinders Akebono 'brake by wire' rear brake control system Carbon discs and pads
Steering	Power-assisted rack and pinion
Tyres	Pirelli P Zero
Race wheels	Enkei
Radio	Kenwood
Paint	AkzoNobel Car Refinishes system using Sikkens products



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>>> Power Unit

Type	Honda RA615H
Minimum weight	145 kg
Primary PU components	Internal Combustion Engine (ICE) Motor Generator Unit – Kinetic (MGU-K) Motor Generator Unit – Heat (MGU-H) Energy Store (ES) Turbocharger Control Electronics

Internal Combustion Engine

Capacity	1.6 litres
Cylinders	Six
Bank angle	90 degree vee angle
No of valves	24
Max speed	15,000 rpm
Max fuel flow rate	100 kg/hour (above 10,500 rpm)
Fuel consumption	100 kg 'lights to flag' regulated fuel capacity limit
Fuel injection	Direct injection, single injector per cylinder, 500 bar max
Pressure charging	Single-stage compressor and exhaust turbine, common shaft

Fuel	ExxonMobil High Performance Unleaded (5.75% bio fuel)
Lubricants	Mobil 1™ Engine Oil – High protection low friction lubricant and coolant, for high durability and improved fuel economy

Energy Recovery System

Architecture	Integrated Hybrid energy recovery via Motor Generator Units Crankshaft coupled electrical MGU-K Turbocharger coupled electrical MGU-H
Energy Store	Lithium-Ion battery, between 20 and 25 kg Maximum energy storage, 4 MJ per lap
MGU-K	Maximum speed, 50,000 rpm Maximum power, 120 kW Maximum energy recovery, 2 MJ per lap
MGU-H	Maximum energy deployment, 4 MJ per lap Maximum speed 125,000 rpm Maximum power, unlimited Maximum energy recovery, unlimited Maximum energy deployment, unlimited



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>>> Transmission

Gearbox	Carbon-fibre composite main case, longitudinally mounted
Gear ratios	Eight forward and one reverse
Gear selection	Electro-hydraulically operated seamless shift
Differential	Epicyclic differential with multi-plate limited slip clutch
Clutch	Electro-hydraulically operated, carbon multi-plate
Lubricants	Mobil 1 SHC™ Gear Oil – Low traction loss, high efficiency gear and bearing lubricant and coolant



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