McLaren Senna Product Guide

Version 2
December 2017

Strictly Private & Confidential

Contents

1. At A Glance

Foreword

The McLaren Senna turns the McLaren road car philosophy on its head; this is a car designed first for the track and then for the road. This no compromise approach means that every component has had to earn it's right to exist on the McLaren Senna and function as part of the whole package.

Whilst the focus has been on track performance, we set out to deliver a car which proudly displays it's beautiful engineering detail and smart thinking.

We challenged ourselves to take the driver and passenger to a new level of engagement. With enhanced performance, sound, vision and feel, we wanted to generate a modern expression of the emotions felt when driving the greatest supercars built to this day.

Mark Gayton, Project Manager, McLaren Senna

Introduction

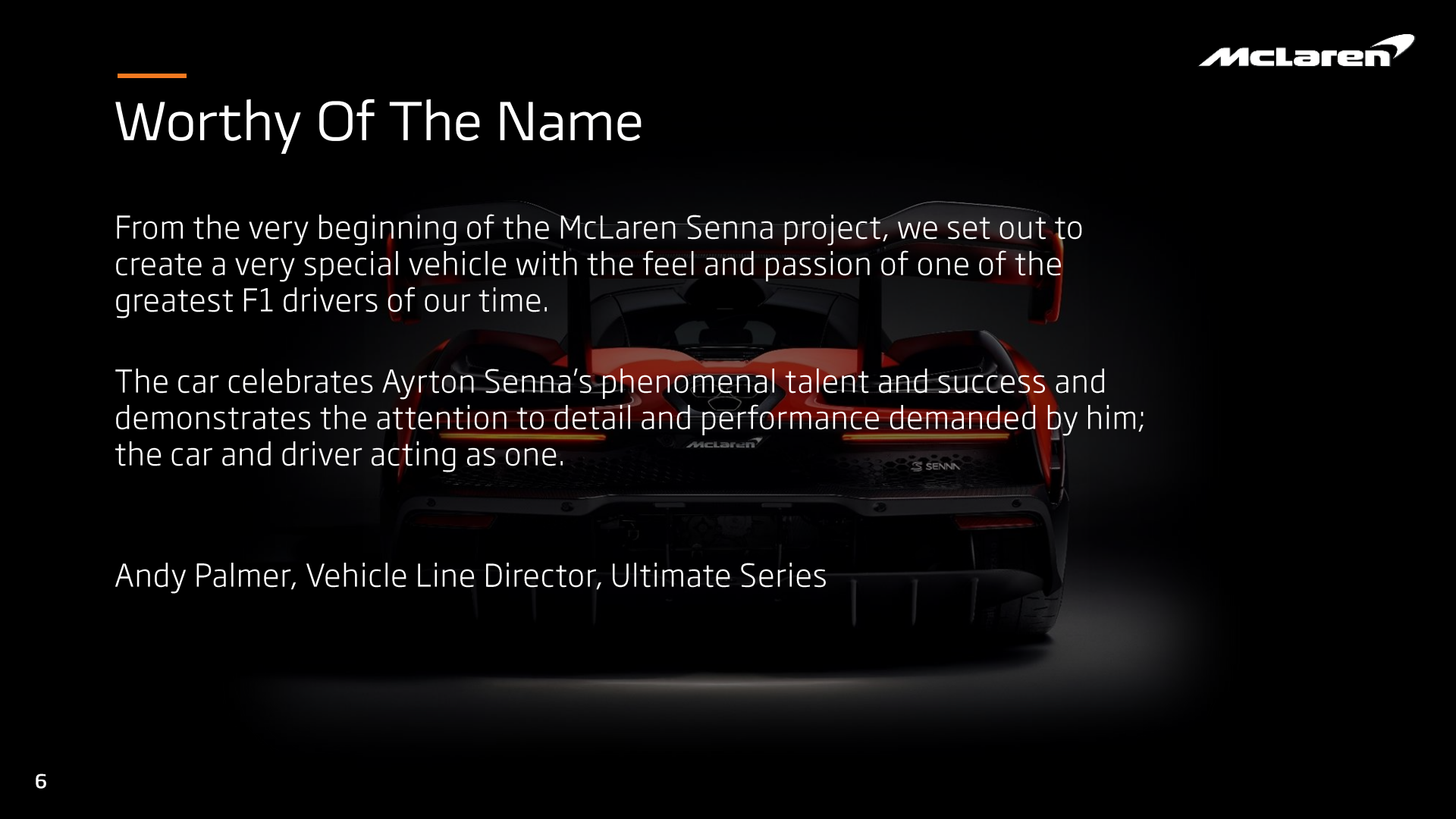
- The Ultimate Series represents the pinnacle of the McLaren range, pushing the limits of what is technically possible.
- The McLaren Senna takes Hypercar performance to new heights.
- The design and engineering teams' key focus was to create the ultimate road legal track car.
- Using knowledge gained from the development of the legendary McLaren P1™ and McLaren P1™ GTR, the McLaren Senna is a car worthy of it's legendary name.

Worthy Of The Name

From the very beginning of the McLaren Senna project, we set out to create a very special vehicle with the feel and passion of one of the greatest F1 drivers of our time.

The car celebrates Ayrton Senna's phenomenal talent and success and demonstrates the attention to detail and performance demanded by him; the car and driver acting as one.

Andy Palmer, Vehicle Line Director, Ultimate Series



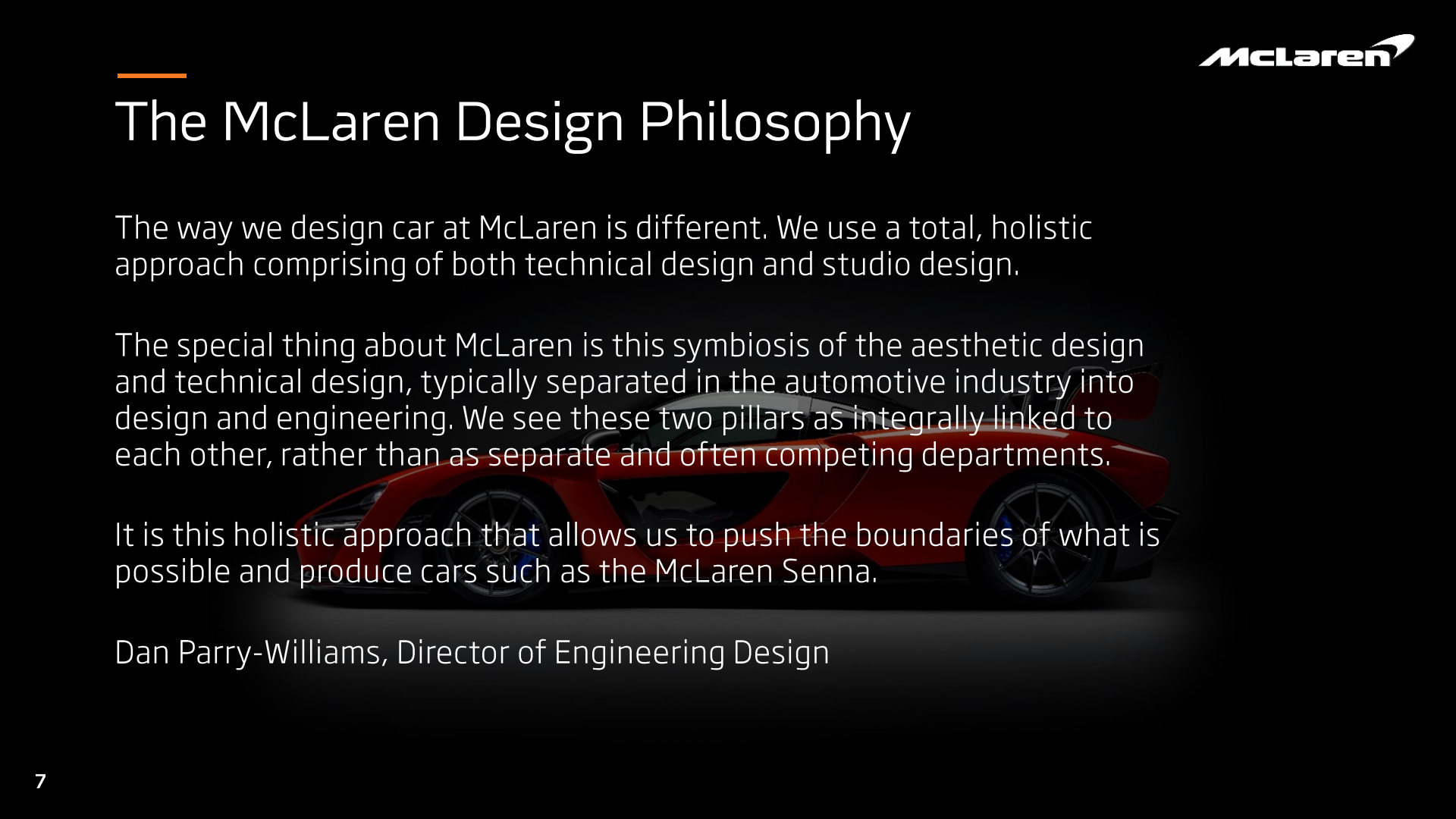
The McLaren Design Philosophy

The way we design car at McLaren is different. We use a total, holistic approach comprising of both technical design and studio design.

The special thing about McLaren is this symbiosis of the aesthetic design and technical design, typically separated in the automotive industry into design and engineering. We see these two pillars as integrally linked to each other, rather than as separate and often competing departments.

It is this holistic approach that allows us to push the boundaries of what is possible and produce cars such as the McLaren Senna.

Dan Parry-Williams, Director of Engineering Design



Key Strategic Goals

- Serious about drivers – a serious driver's car
- Create the ultimate road legal track car
- Continue to pioneer
- Lightest, fastest, most engaging, McLaren yet
- Create a driving experience that is worthy of the McLaren Senna's legendary name

Silver Bullets

The Key Elements of the McLaren Senna

1. Structure

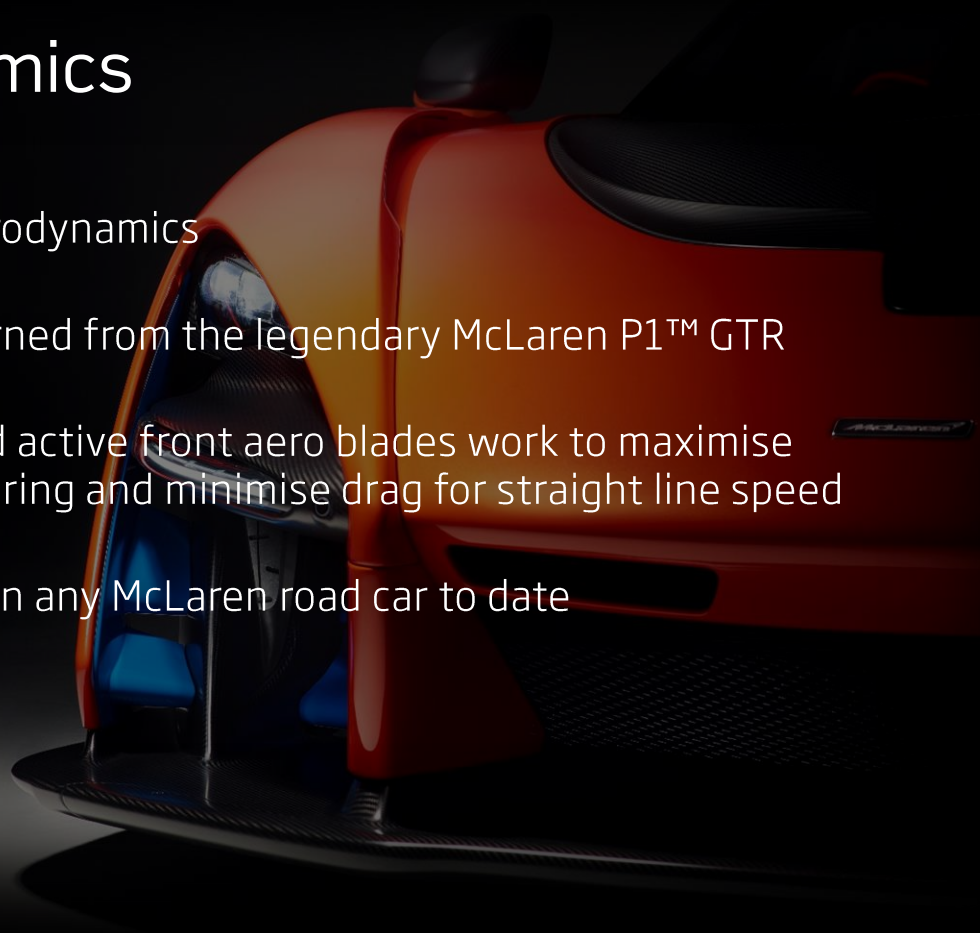
- Lightweight, Hypercar construction
- Carbon fibre Monocage III adds further rigidity and protection
- Similar structure to that found on the legendary McLaren P1™
- Lightest road car in the McLaren range
- Interior storage space to accommodate helmet & race suit

2. Design

- Aggressive, game-changing design
- Honed for the racetrack
- Extensive use of carbon fibre for body panels keeps weight to a minimum
- Form follows function – every surface is designed with performance in mind
- Stunning, super-lightweight glazed dihedral doors offer fantastic visibility and even more drama

3. Aerodynamics

- Advanced active aerodynamics
- Built on lessons learned from the legendary McLaren P1™ GTR
- Active rear wing and active front aero blades work to maximise downforce for cornering and minimise drag for straight line speed
- More downforce than any McLaren road car to date



4. Suspension

- Innovative suspension
- RaceActive Chassis Control II with K damper system gives the McLaren Senna sublime handling on the track and the road
- The suspension combined with the electro-hydraulic steering provide an unparalleled feeling of connection to the road
- Outright performance prioritised over comfort levels
- Race mode drops the ride height of the car to maximize ground effect

5. Interior

- Stripped-back, minimalist interior
- Exposed carbon fibre in cabin and lack of trim materials reinforces the importance of weight saving on the McLaren Senna
- Super-lightweight carbon fibre racing seats provide optimum support for track driving
- The performance focussed interior theme matches that of the exterior

6. The Drive

- Blistering performance combined with incredible driver engagement
- 4.0L Twin-turbocharged V8 is provides phenomenal power and torque
- The fastest lap times of any road car McLaren has built to date
- The McLaren Senna delivers the most raw and aggressive driving experience that McLaren offers

What Is The McLaren Senna To You

From the abstract stage of the project to the final concrete design, the McLaren Senna has always been about converting the most ambitious performance figures into a shape that tells a story of speed, thrill and heritage.

The McLaren Senna required true design, the kind of design that extracts from each component as many attributes as possible, optimising strength, weight and aerodynamics thus providing a visual language that expresses the stunning capabilities of the car.

Esteban Palazzo, Senior Designer, McLaren Senna

The McLaren Senna asks the question that is the heart and soul of McLaren: how can we go faster? The formula is simple: power, light weight, downforce and grip. To deliver this in a car which you enjoy driving to the track as much as on it has really caught the imagination of those involved in its creation.

This is a car that has inspired the team to find something extra and to be bold in achieving new levels of performance. The result is a car that from the moment you first walk up to the McLaren Senna, to the instant you brake and turn in later than you thought possible, your only thought is "please let there be one more lap..."

Marcus Waite, Chief Engineer, McLaren Senna

2. The Short Story

Key Selling Points of the McLaren Senna

Design

- The **completely new design language** focusses on on-track performance.
- **Form follows function** – every surface is designed with performance in mind.
- The dramatic super-lightweight **carbon fibre dihedral doors** which extend into the roof add even more drama.
- The **carbon fibre Monocage III** chassis provides a strong, stiff and safe structure whilst keeping weight to a minimum.
- The extensive use of carbon fibre makes the McLaren Senna the **lightest car in the McLaren range**.

Driver Engagement

- The McLaren Senna delivers **the most raw and aggressive driving experience** that McLaren offers.
- Driver engagement has been **the key focus** for the engineering and technology in this car.
- The McLaren Senna's **Race mode** provides the ultimate on-track setup.
- **Variable Drift Control** allows the driver determine the amount of freedom the traction control allows before intervening.

Performance and Vehicle Dynamics

- **More power and less weight** provides the McLaren Senna with breath-taking levels of performance.
- The McLaren M840TR **4.0L twin-turbocharged V8** generates **800 PS and 800 Nm of torque.**
- **RaceActive Chassis Control II** provides sensational handling but not at the expense of ride quality.
- The **K damper system** provides RaceActive Chassis Control II with an additional degree of suspension freedom.

Usability & Personalisation

- The **glasshouse cabin creates a** feeling of space inside the McLaren Senna and further increases the feeling of connection with the road.
- **Static adaptive headlights** improve the field of vision for the driver.
- This ultimate track weapon is still available with **driver assistance technologies** such as parking sensors, rear view camera and vehicle lift.
- **McLaren Special Operations** have developed a huge range of customisation options, so that the customer can create a car that it truly unique.

Technical Highlights

01 Powertrain
4.0L Twin-Turbocharged V8

02 Power
800 PS

03 Torque
800 Nm

04 Dry Weight (lightest)
1,198 kgs

More technical information about the McLaren Senna will be released in due course.

Standard Content

Powertrain

- M840TR 4.0L (3,994 cc) twin-turbocharged V8 engine 800 PS / 800 Nm
- Twin electrically-actuated twin scroll turbochargers
- Eco stop/start system with deactivation switch
- Central exit Inconel lightweight exhaust system
- Exhaust heat shield – dark stealth
- 7-speed + reverse Seamless Shift Gearbox (SSG)
- 3x powertrain modes (Comfort, Sport, Track)
- Twin multi-plate clutches
- Open differential
- Launch control
- McLaren brake steer
- Spinning wheel pullaway

Suspension

- RaceActive Chassis Control (RCC) II with adaptive damping and K dampers
- 4x handling modes (Comfort, Sport, Track, Race)
- Vehicle lift

Wheels, Tyres & Brakes

- Wheel sizes: 19 × 8.0 J front and 20 × 10.0 J rear
- Tyre sizes: 245 / 35 / R19 front and 315 / 30 / R20 rear
- Ultra-lightweight 9-spoke centre lock high grade super-forged alloy wheels
  - Gloss black wheel finish
- Pirelli P Zero™ Trofeo R tyres
- Carbon ceramic (CCM-R) brake discs
- 6-piston forged monobloc aluminium calipers front
- 4-piston forged aluminium calipers rear
- Brake calipers: Black with Silver printed McLaren logo
- Centre lock wheel nuts
- Tyre pressure monitoring system (TPMS) + tyre temperature gauge

Aerodynamics

- Active front aero blades
- Active rear wing with air brake and drag reduction system (DRS)
- Visible engineering air brake mechanism

Standard Content

Driver Assistance Technologies

- Anti-Lock Braking System (ABS)
- Traction Control System (TCS)
- Dynamic Electronic Stability Control (DESC)
- Variable Drift Control (VDC)
- Hill hold assist
- Brake pad wear sensors – front & rear
- Brake disc wipe technology
- Brake assist technology
- Cruise control & speed limit function (LIM)
- Electronic parking brake

Body Structure

- Carbon fibre Monocage III
- Aluminium machined stocks
- Composite rear upper structure with integrated roll cage
- Composite door opening panel
- Composite windscreen surround
- Front extruded aluminium crash structure
- Composite front crash beam integrated into bumper panel
- Front aluminium sub-frame
- Rear aluminium engine frame
- Composite rear bumper beam including rear crash structure
- Front and rear structural floors
- Exposed engine bay
- Engine beautification – visible details through apertures

Standard Content

Exterior Lighting

- Full LED headlights with static adaptive functionality
- Sequential LED indicators
- Automatic headlight levelling
- Follow me home headlights (adjustable time)
- Automatic lights (in conjunction with rain-light sensor)
- Automatic LED daytime running lights
- Automatic LED rear lights
- Central high mounted stop light (CHMSL)
- Dual function LED rear fog / reverse light
- Rear reflectors and side markers

Exterior Features

- Twin-hinged McLaren F1 style carbon fibre dihedral doors
- Glass side window with McLaren F1 style half height drop glass
- Soft close doors
- Lightweight thin glass windscreen
- Electrically folding heated door mirrors (with dip in reverse functionality)
- Carbon fibre exterior body panels
- Dual front wipers with separate washer jets

Exterior Design

- Exterior door upper - Gloss Black carbon fibre
- Lower door panel - Gloss Black carbon fibre
- Interior bulkhead upper – satin finish visual carbon fibre
- Front aero blades & fender inners – body colour

Interior Features

- Super-lightweight carbon fibre racing seats - regular (adjustable passenger)
- Lightweight manual adjust steering column (reach and rake)
- Rear view mirror
- Interior LED map lights x2 with touch sensitive operation
- Interior footwell lighting
- Sun visors with driver and passenger vanity mirrors
- Stowage in seat front pocket – Driver's side
- Model specific dedication plaque (1/2/3/4 of 500 etc)
- Machined from solid interior switches
- 3-point seatbelts – black
- 6-point harness fixing points
- Dual zone climate control (temperature, fan & direction)

Standard Content

Interior Design

- Carbon Black Alcantara interior
- Interior brightwork - Galvanic Grey brushed aluminium
- Visible door gas struts – Black
- Steering wheel - Alcantara
- Extended gear shift paddles – satin finish visual carbon fibre
- Sill finishers – carpet
- Non-slip driver footwell covering

Safety & Security

- Keyless entry and lock, keyless start
- 2 keys with unlock / lock / open + mechanical key function
- Electronic external door entry release button (both sides)
- Electronic external door locking button (both sides)
- Alarm (Including doors plus all service access panels)
- Tilt sensors
- Electronic immobiliser
- Driver & passenger airbag & side airbags
- Driver & passenger knee airbags
- Emergency fuel shut-off feature via engine ECU
- Vehicle tracking system

Infotainment

- 8" portrait ADI touch screen monitor
- On-board memory
- USB connectivity x2
- ADI navigation
- McLaren Track Telemetry (MTT) with lap time function

Interior Controls & Displays

- Folding driver display with slim display mode
- Engine stop/start ignition button
- Active Dynamics Panel with powertrain & handling switches (Comfort, Sport, Track)
- Race mode button
- Launch control button
- Transmission controls (DNR) – seat-mounted

Accessories

- Lithium ion vehicle battery charger
- Towing eye (front) and tyre repair kit (tyre weld)
- Car cover
- Centre lock wheel socket

Optional Content

Wheels, Tyres & Brakes	
▪ Wheel finish – satin raw metal	Non Cost Option
▪ Wheel finish – dark stealth	Non Cost Option
▪ Pirelli P Zero™ tyres	Non Cost Option
▪ Brake calipers: McLaren Orange with Black printed McLaren logo	Non Cost Option
▪ Brake calipers: Azura Blue with Black printed McLaren logo	Non Cost Option
▪ Brake calipers: Red with Black printed McLaren logo	Non Cost Option
Exterior Design	
▪ Exterior door upper – Gorilla Glass	Option – see Price List
▪ Lower door panel – Gorilla Glass	Option – see Price List
▪ Rear bulkhead – glass	Non Cost Option
▪ Front aero blades & fender inners – Red	Non Cost Option
▪ Front aero blades & fender inners – McLaren Orange	Non Cost Option
▪ Front aero blades & fender inners – Azura Blue	Non Cost Option

Optional Content

Interior Features	
▪ Super-lightweight carbon fibre racing seats – regular (fixed passenger)	Non Cost Option
▪ Super-lightweight carbon fibre racing seats – touring (adjustable passenger)	Non Cost Option
▪ Super-lightweight carbon fibre racing seats – touring (fixed passenger)	Non Cost Option
▪ Air conditioning	Non Cost Option
Interior Design	
▪ By McLaren designer interior	Non Cost Option
▪ Interior brightwork - Zircon brushed aluminium	Non Cost Option
▪ Leather steering wheel	Non Cost Option
▪ 3-point seatbelts – Red	Non Cost Option
▪ 3-point seatbelts – McLaren Orange	Non Cost Option
▪ Sill finishers – Alcantara	Non Cost Option
▪ Sill finishers - satin finish visual carbon fibre	Option – see Price List
▪ Visible door gas struts – McLaren Orange	Non Cost Option
▪ Visible door gas struts – Azura Blue	Non Cost Option
▪ Visible door gas struts – Red	Non Cost Option
Driver Assistance Technologies	
▪ 2 front and 4 rear parking sensors	Non Cost Option
▪ Rear view camera	Non Cost Option

Optional Content

Infotainment	
▪ Bowers & Wilkins 7-speaker branded audio system, including:	Option – see Price List
▪ Audio media player	
▪ AM/FM radio, DAB radio (Sirius XM for USA, Canada)	
▪ AUX in	
▪ Bluetooth telephony & smartphone integration	
▪ Audio output for satellite navigation comms	
▪ Voice control	
▪ McLaren Track Telemetry (MTT) with lap time function & three cameras	Option – see Price List
Retailer Accessories (retailer fitment – not fitted at factory)	
▪ Centre console storage	0 (Retailer Fitment)
▪ Cup holder insert – rear tunnel	0 (Retailer Fitment)
▪ Sacrificial front splitter element – plastic	0 (Retailer Fitment)
▪ Car Cover – indoor cover	0 (Retailer Fitment)
▪ Intercom system	0 (Retailer Fitment)
▪ Fitted and retained luggage	0 (Retailer Fitment)
▪ Centre lock wheel home pack:	0 (Retailer Fitment)
▪ Wrench and socket	
▪ Locking device	
▪ Slide hammer	
▪ Tyre pressure / tread gauge	

Optional Content

Accessories	
▪ Floor mats	Non Cost Option
▪ Warning triangle & first aid kit	Option – see Price List
▪ Fire extinguisher	Option – see Price List
MSO Defined Exterior	
▪ MSO Defined paint	Option – see Price List
MSO Defined Interior	
▪ MSO Defined 6-point harness – Black	Option – see Price List
▪ MSO Defined 6-point harness – Red	Option – see Price List
▪ MSO Defined 6-point harness - McLaren Orange	Option – see Price List
▪ MSO Defined 6-point harness – Blue	Option – see Price List
▪ MSO Defined push-to-drink system	Option – see Price List
▪ MSO Defined satin finish visual carbon fibre extended sill finishers	Option – see Price List

3. The Long Story

Exterior – Design

The brief for the McLaren Senna design team was completely different to any McLaren design brief that had been given before. It stated a singular purpose: every surface must be designed to reduce lap time and maximise performance.

With that in mind, the team faced a huge challenge, as the McLaren Senna had to comply with extremely tough engineering demands. To extract the maximum amount of performance from the car, they had to minimise weight, provide a phenomenal amount of downforce, minimise unnecessary drag and satisfy the increased cooling requirements of an extremely powerful engine. Not only that, but the car must work on the road even though it is designed to optimise track performance.

Even though the design language for the McLaren Senna is completely new, the car is still unmistakably a McLaren. Signature McLaren design DNA – such as the teardrop cabin, a short rear overhang, and a longer front overhang – can be seen on the car. It is the surroundings to these key underpinnings that have been taken in a completely new direction, creating an even more shrink-wrapped design, with the aerodynamic components "clipped" onto the signature teardrop shaped cabin – the fastest shape and most efficient natural shape.

To achieve the results demanded from the project, every surface on the outside of the McLaren Senna has a function. This gives the car a very modular appearance, with less visual flow between front and rear. This is the result of a design that puts aerodynamics first in the priority list, and deprioritises aesthetic fluidity.

Exterior – Design

The frontal area of the McLaren Senna separates the airflow and feeds it to different areas of the car. The huge front splitter and aggressive front air intakes channel air through the front radiator, over and around the front wheels and down the side of the teardrop cabin, whilst also minimising airflow under the car.

The side of the car, including the iconic dihedral doors, is responsible for feeding air into the radiators through the side air intakes. The dirty airflow from the front wheels is also effectively managed, as well as feeding the rear diffuser through lower side air intakes.

The rear bodywork – dominated by the huge top mounted active rear wing – combines effective cooling of the engine with keeping the rear of the McLaren Senna stuck to the ground. The large vents and gurney on the super-low rear deck create areas of low pressure, drawing hot air out of the engine bay.

The exhaust exits through the top of the rear deck to minimise impact on airflow. The rear wing, acting in conjunction with the diffuser, provides a phenomenal amount of rear downforce, allowing the driver to feel confident when cornering and effectively use the engine's power and torque.

Overall, the exterior of the McLaren Senna gives the car huge presence, expressing visually in every component its phenomenal capabilities. The completely new design approach employed has created a product that is as breath-taking to look at as it is to drive.

Exterior – Carbon Fibre Monocage III

Description

The carbon fibre Monocage III features a lower structure, upper structure and bulkhead made of carbon fibre, creating a lightweight and extremely strong centre around which the car is built.

Customer Benefits

Monocage III is a strong, rigid and ultra-lightweight chassis. The use of carbon fibre provides an extremely stiff structure and a lower centre of gravity compared to a chassis made of conventional materials, improving handling.

The stunning performance and strict weight targets of the McLaren Senna required the engineers to develop a rear bulkhead that provided a safe, strong structure in case of accident whilst keeping the centre of gravity of the car as low as possible. The carbon fibre bulkhead includes integrated roll over structures that are both stronger and lighter than traditional metal structures.

Building the upper structure from carbon fibre means that the A pillars and windscreen surround can be much slimmer, giving the driver better forward visibility on the road and the track.

The strength of the T-shaped carbon fibre roof allows the majority of the upper surface to be integrated into the stunning dihedral doors, easing ingress and egress. It also allows the upper surfaces to be glazed, making the cabin feel lighter and more spacious.

Options

The rear bulkhead of the Monocage III can be specified in glass as a non cost option, offering a fantastic view of the engine bay from the cabin.

Exterior – Dihedral Doors

Description

The stunning, super-lightweight, all Carbon Fibre twin-hinged dihedral doors of the McLaren Senna are inspired by the legendary McLaren F1 and McLaren P1™. They are integral to the car's groundbreaking aerodynamics and light weight.

Customer Benefits

The dihedral doors are not only a design signature of the car, but also aid usability. By incorporating part of the roof (known as the exterior door upper), getting into and out of the car is much easier. The doors open upwards and over the car rather than away from it, creating an aperture of sufficient size for the driver or passenger to easily enter or leave the cockpit, even when wearing a helmet and a race suit.

The design of the windows is inspired by the McLaren F1, with the top half of the glass fixed in position, and the bottom half of the glass opening. The means the motors used to power the windows can be smaller, saving weight.

As a result of the entire door being made entirely of carbon fibre, each one weighs less than 10 kilograms (excluding the glass).

Options

The exterior door uppers and the lower door panels of each door can be optioned in Gorilla Glass.

The glazed exterior door uppers allow more light into the cabin and add to the cockpit feeling experienced when sat in the car.

The glazed lower door panels further enhance the feeling of connection between the occupants and the road.

As standard, both parts are finished in gloss black.

Exterior – Front Aerodynamics

Front Splitter

The McLaren Senna's front splitter is 150 mm longer than the McLaren P1™ splitter and 75 mm longer than the McLaren P1™ GTR splitter, creating huge amounts of front downforce.

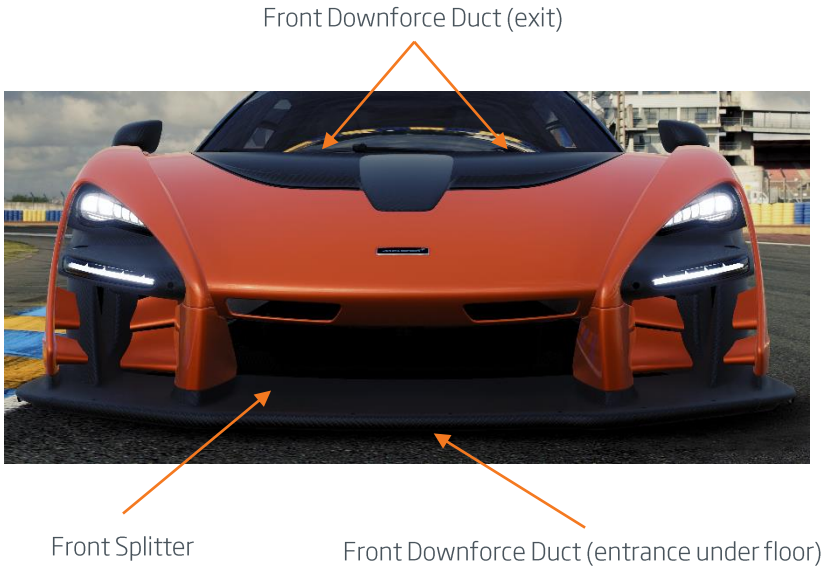
Front crash test rules require the splitter to break under impact to absorb and dissipate energy, meaning the leading edge is just 0.8 mm thick. In spite of this, the clever design means that there is less than 10 mm of deflection at 150 mph, meaning the splitter is still operating extremely efficiently even at these high speeds.

The front section of the splitter can also be easily removed and replaced, meaning that any damage caused by large kerbs at race circuits can be easily rectified without having to replace the entire splitter.

Front Downforce Duct

The front downforce duct is an intake set within the flat underfloor that redirects air from underneath the front of the car. It is formed of a large intake in the floor which splits around the HVAC unit in the front body before exiting through twin vents at the base of the windscreen.

This duct – affectionately known by the engineering team as the 'wrong trousers' duct due to its inverted Y-shape – creates an area of low pressure under the car. This has a similar effect that lowering the ride height would have, generating a significant amount of front downforce.



Exterior – Front Aerodynamics

Front Clamshell

The aggressive front clamshell is designed to move air efficiently around the car's cabin and provide good airflow to feed the side air intakes. This – combined with the airflow from the front bumper ducts – provides the high temperature radiators with the air they need.

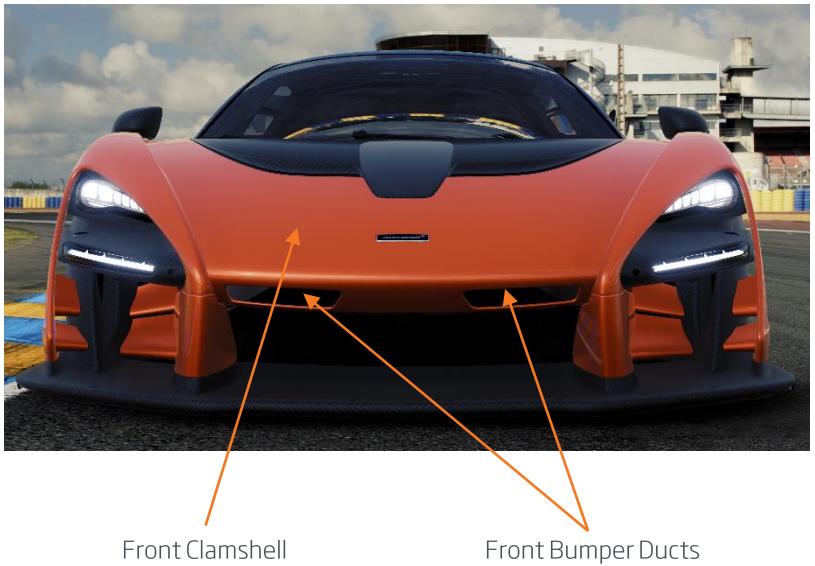
The clamshell captures the air flowing over the front of the car, and channels it through deep grooves over the wheel arches and down the side of the car between the teardrop shaped cabin and the door blades.

Front Bumper Ducts

The front bumper ducts are the two central ducts located in the front bodywork of the McLaren Senna above the central air intake for the low temperature radiator. They guide air from the front of the car through the front clamshell, generating downforce.

These intricate passages pass between the front lights and large inner clamshell vents, exiting into the front wheel arches. The air then vents from front wheel arches through the door blades and down the side of the car.

This flow from the door blade helps to keep the air flowing from the front clamshell attached to the side of the car, flowing into the side air intakes to feed the high temperature radiators.



Exterior – Front Aerodynamics

Front Aero Blades

Located inside the front bodywork underneath the day time running lights are two front aero blades. The aero blade located closest to the front of the car is active, with the rearward blade being fixed. The aero blades work in unison with the active rear wing to maintain optimal aerodynamic balance at all times, whether accelerating, cornering or braking.

When accelerating, the active aero blade moves to a steeper angle. This gives the front of the car more downforce, balancing out the higher levels of downforce that the diffuser and wing provide at the rear of the car as the speed builds.

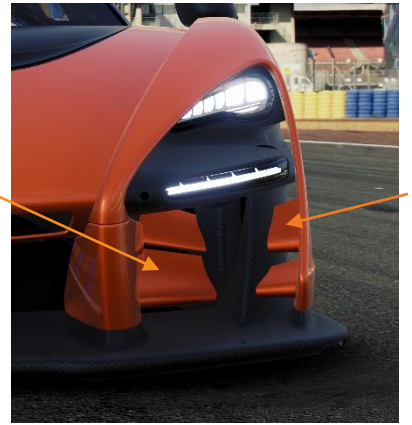
Under braking, the active aero blade moves to a shallower low downforce position, stabilising the car, maintaining vehicle balance and ensuring the car doesn't become too nose heavy.

When the car is travelling above 250 km/h (156 mph), the active aero blade is trimmed to maintain optimum downforce levels. Without this, downforce levels would continue to increase to a point that would impart significant loads on the suspension and tyres.

Front Fender Aero Ducts

The front fender aero ducts are attached to the inner edge of the front fender, and are both above and below the day time running lights. The intricate winglets within the ducts provide front downforce.

The ducts also help move air efficiently around the front wheels before exiting through the vents forward of the front wheels. The airflow then flows away down the side of the car without interfering with the airflow feeding the side air intakes.



Exterior – Rear Aerodynamics

Rear Deck

The McLaren Senna features the lowest rear deck of any McLaren road car to date, a full 18 cm lower at the trailing edge than the McLaren 720S. This completes the teardrop shape of the car – the most efficient shape in nature – as well as ensuring the airflow to the active rear wing is as clean as possible, maximising its aerodynamic efficiency.

The huge louvres in the rear deck – which vent hot air from the engine and the high temperature radiators – are angled so that the hot air doesn't have an impact on the airflow to the rear wing.

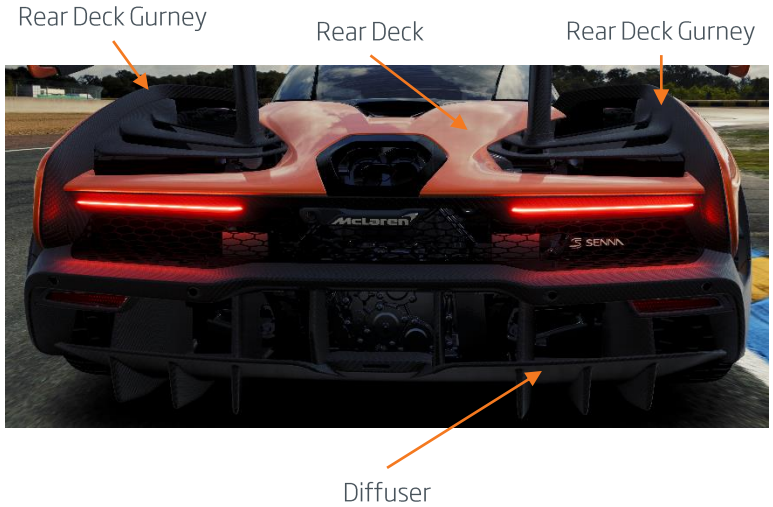
The exhaust exits through the rear deck. They are placed as rearward as possible and angled upwards to not disturb the diffuser or the rear wing. The high exit design also ensures that the rear diffuser is unimpeded.

Rear Deck Gurneys

The rear deck gurneys push air that is flowing around the sides of the cabin away from the rear deck and down the sides of the rear body. This creates an area of low pressure above the rear deck louvres, drawing hot air out and improving the cooling efficiency of the car.

Diffuser

The McLaren Senna features a completely flat floor, feeding clean air to the rear of the vehicle and the aggressive double diffuser. Crafted from a single piece of carbon fibre, it starts under the rear axle, and as it increases it height, accelerates air out from under the vehicle. This creates a low-pressure zone and sucks the car to the ground, improving traction and rear grip.



Exterior – Rear Aerodynamics

Active Rear Wing

The massive double-element Carbon Fibre active rear wing is the most dramatic exterior design feature of the McLaren Senna. It constantly and automatically adjusts its angle to shorten braking distances, optimise downforce levels, reduce drag when required and fine-tune the aerodynamic balance of the car.

The rear wing features a 'swan neck' design, meaning that it is mounted from above rather than below. This keeps the underside of the wing clean and clear, improving its efficiency providing a huge downforce gain. The rear wing pylons are also made of Carbon Fibre, with aerospace-grade aluminium used for the machined-from-solid wing mounts. This extremely lightweight yet strong construction can support over 180 times its own weight in downforce.

The rear wing works in conjunction with the front active aero blades to ensure front-to-rear aero balance remains consistent irrespective of speed. When the car is travelling above 250 km/h (156 mph), it moves into a lower downforce position. This reduces drag to maintain an optimum downforce level which would otherwise continue to increase with speed to a point that it would impart significant loads on the suspension and tyres.

When braking, the rear wing moves to the fully deployed airbrake position, creating drag to improve stopping distances, prevent a shift in the aerodynamic balance, and minimise weight transfer.

Exterior – Cooling

Description

The cooling system features three radiators; two HTRs (High Temperature Radiators) mounted behind each door while the LTR (Low Temperature Radiator) is positioned in the centre at the front of the car.

Customer Benefits

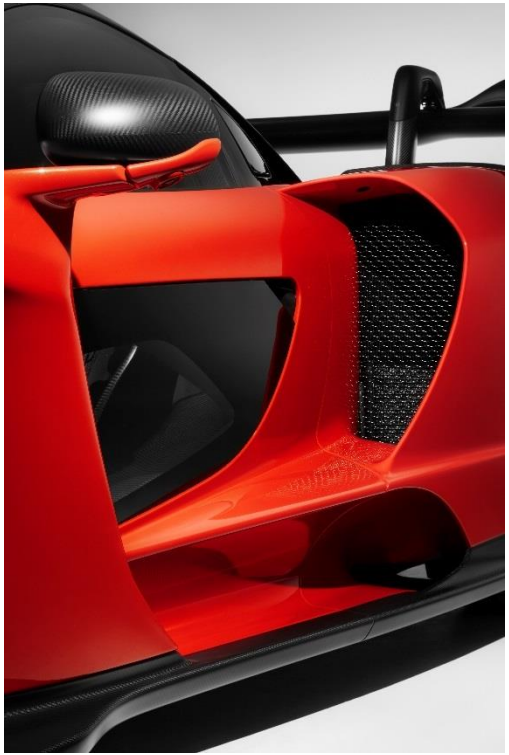
The design and engineering teams faced a huge challenge when designing the McLaren Senna's cooling system. Its engine requires more cooling as a result of the increased power and torque levels, whilst not compromising the aerodynamics of the car.

In order to optimise the active front aerodynamics, the two side-mounted LTRs seen on the McLaren Super Series and Sports Series have been replaced with a single LTR mounted in the centre of the nose of the car.

Cool air is driven into the central intake, through the radiator, and exits via the two large vents in the inner clamshell. The LTR cools the water cooled charge air and the transmission oil.

The two HTRs are located in front of the rear wheels. These are fed by air channeled down the side of the doors. The air then exits via the top of the rear deck. The gurney on the rear bodywork creates an area of low pressure at the HTR exits, drawing hot air out from the HTRs and the engine bay, increasing the efficiency of the radiators, and ensuring the cooling requirements of the car can be met.

The HTRs are responsible for cooling the engine, turbochargers, engine oil cooler, transmission oil cooler and heater unit.



Exterior – Headlights

Full LED Headlights

The full LED headlights feature 21 LEDs apiece, with four LEDs providing the main beam, five for the dipped beam, and the remaining 12 utilised for the static adaptive functionality. LEDs are more efficient, lighter and better performing than conventional lighting system, providing a fantastic field of vision to the driver. Each lighting unit is also over 1kg lighter than those used on the McLaren P1™.

Static Adaptive Functionality

The McLaren Senna is the first Hypercar to feature static adaptive headlights – an extremely innovative feature designed to improve both driver and pedestrian safety. The system moves the dipped headlight beam focus according to steering movements, allowing both the road ahead and surrounding areas to remain illuminated while turning.

The system is fully digital, utilising an array of LED-lights with variable intensity which become brighter or dimmer in relation to the direction of turn. This innovative solution removes the need for mechanical motors within the headlight clusters, making them significantly lighter, smaller and easier to package. It also offers up to 15 degrees of light bending.

The function is active as soon as the headlights are switched on and operates at all speeds (most competitor systems only operate up to 70mph). It can also be turned off in situations where a stationary light beam is preferred to give the driver maximum flexibility.

Automatic Headlight Levelling

The self-levelling headlights greatly improve the driver's long-range visibility. The dipped beam is raised half a degree if the car's speed is detected at or above 120 kph (75 mph) for 0.5 seconds and lowered if the speed drops to or below 110 kph (68 mph) for 0.5 seconds.

This is an important safety feature when travelling at high speed as the driver can remain focused on the road ahead instead of having to manually adjusting the headlights.

Exterior – Front Lights

Day Time Running Lights

The Daytime Running Lights (DTRLs) – each made up of 24 white LEDs – are arranged in thin lighting blades on the McLaren Senna, saving space and minimising their impact on the aerodynamics at the front of the car. The DTRLs are illuminated at all times as a safety feature, except if the indicators are switched on, as which point the indicators take priority.

Sequential LED Indicators

The sequential LED indicators – integrated into the same lighting blade as the DTRLs – are made up of 23 amber LEDs in each blade. The white LEDs of the DTRLs are turned off when the amber indicator LEDs are switched on.

Not only are they perfectly in sync with the car's beautiful design, but they also offer significant safety improvements. By more clearly illuminating the direction in which the driver intends to turn, they send clearer signals to other road users compared to traditional indicators.

Positional Lighting

The white LEDs used for the DTRLs are illuminated to a lower intensity when the headlights of the McLaren Senna are turned on to mark the position of the side of the car. The positional lights are turned off if the indicators are switched on.

Use Abroad Function

The front lighting system has been designed to not glare oncoming vehicles when driving. The asymmetric dipped beam is designed to light up the near side of the road more intensely. The same headlight setting applies for driving on the left-hand or right-hand side of the road.

Exterior – Side & Rear Lights

Side Repeaters

The side repeater indicators are integrated into the vents in front of the front wheels of the McLaren Senna. They feature only 1 LED each side to ensure that they are as light as possible.

Central High Mounted Stop Light

The central high mounted stop light is made up of a thin strip of 20 LEDs.

Fog / Reversing Light

The fog and reversing light are combined into 1 light, located in the centre of rear diffuser. As with all the lights on the McLaren Senna, this light is also LED into order to minimise weight and power consumption.

The lighting unit has been designed to be the lightest possible, and as such weighs only 50 grams, which is 700 grams lighter than the unit on the McLaren P1™.

Exterior – Rear Lights

Rear Lights

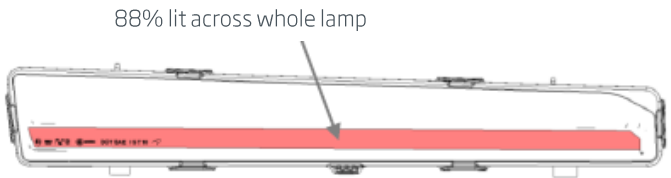
The LED rear lights are a completely new design for the McLaren Senna, and continue the low, thin, wide design concept seen on the front of the car. The rear lights combine three functions into one unit: tail lights, brake lights and indicators.

Each rear lighting unit is made up of only 9 components (compared to 20 on the 720S) and a single blade of LEDs, reducing the component count and the overall weight. As a result, each unit weighs only 1 kilogram, half as much as a McLaren P1™ or 720S rear lighting cluster.

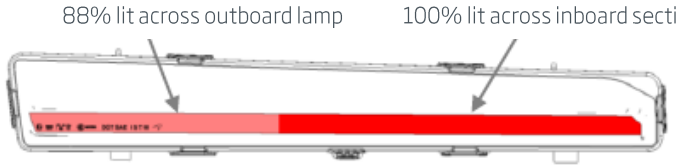
Each unit consists of 60 red and 24 amber LEDs. The 60 red LEDs are used for the tail light function, and are illuminated at 88% brightness. As with the front DTRLs, the tail lights are illuminated at all times. When the brakes are applied, the 36 innermost red LEDs glow at 100% brightness, performing the brake light function. The 24 outermost LEDs remain at 88% brightness.

The sequential LED rear indicators use the 24 amber LEDs, located in the outer section of the lighting blade, illuminating at 100% brightness and flooding over the 24 outermost red tail light LEDs when the indicators or hazard lights are pressed. The 36 innermost LEDs remain at 88% brightness, performing the tail light function.

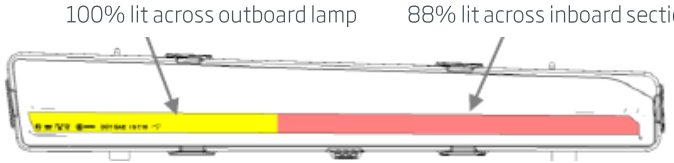
Tail Lights



Brake Lights



Indicators



Exterior – Wheels

Ultra-lightweight 9-spoke centre lock high grade super-forged alloy wheels

This 9-spoke forged alloy wheel is designed to be extremely light, minimizing unsprung mass by using an high grade alloy and a manufacturing process that allows the rim to be very thin whilst maintaining its strength.

The centre lock feature – inspired by McLaren's extensive range of GT racing cars – allows quick and easy wheel changes at the circuit in between track sessions.

Options
Wheels are available in 3 finishes (see right). There is no price change when alternating between the 3 wheel finishes.

Gloss Black

Satin Raw Metal

Dark Stealth

Chassis – Brakes

Description

The braking system consists of racing-developed CCM-R Carbon Ceramic discs with 6-piston forged monobloc aluminium calipers front and 4-piston forged aluminium calipers rear. The brake calipers are finished in black with silver printed McLaren logo as standard.

Customer Benefits

The braking system is the most advanced ever fitted to a McLaren road car. Such are the braking requirements of the McLaren Senna, the car is fitted with CCM-R brake discs, originally developed for racing. Each front disc measures 390 mm x 34 mm and takes seven months to create – seven times longer than a conventional carbon ceramic disc.

The cooling vanes are machined into each disc rather than conventionally moulded, allowing us to control vane design, optimising the design for the maximum amount of cooling.

The CCM-R discs have four times the thermal conductivity and are 60 per cent stronger than the CCM discs fitted to the 720S, which offers three key benefits:

1. Over a typical track cycle, the CCM-R discs are around 150 degrees cooler than conventional CCM discs.
2. Smaller front brake discs can be fitted to the car compared to conventional CCM discs, reducing unsprung mass.
3. The discs require less cooling, reducing the amount brake ducting needed on the car. This further reduces weight, improves aerodynamic efficiency and makes the ducting easier to package.

The McLaren Senna also features the same brake boosting system as fitted to the McLaren P1™ GTR. This system helps to improve braking feel at low speeds and when the brakes are still cold, as well as ensuring the car has a very linear braking feel – the harder the brake pedal is pushed, the stronger the stopping force.

The brake pad material is also unique to the car, and has been specifically designed to work with the CCM-R brake discs.

Chassis – Brakes

Customer Benefits

The McLaren Senna is fitted with Monobloc front brake calipers, meaning that the caliper is forged then machined from a single piece of aluminum rather than being made up of two separate forged parts bolted together.

The benefits of monobloc calipers are that they are stronger, stiffer, can operate at a higher temperature and are lighter than conventional 2 piece calipers. The monobloc calipers offer best stiffness to weight ratio ever featured on a McLaren road car.

The calipers have been designed with the same philosophy as a Formula 1 brake caliper: the harder the car is braking, the more efficient the caliper becomes. Most calipers are made to sit squarely on the disc when stationary, and then twist slightly under braking, becoming less effective.

The calipers are designed to work the other way around. When under heavy braking, the calipers twist and become square, meaning that they are at their most efficient when the demands placed upon them are the greatest.

The front calipers feature six ventilated front pistons – a first for McLaren – allowing even better cooling. The front pistons are installed into the calipers at an angle. This means that when the brakes are pressed and the caliper flexes, the pistons are pushing squarely onto the caliper, ensuring maximum braking efficiency.

Such has been the focus on extreme weight saving on the McLaren Senna, the calipers feature a painted McLaren logo rather than the raised McLaren logo seen on the McLaren 720S.

Options

The brake calipers are available in four different colours: black, McLaren Orange, Red and Azura Blue.

Chassis – Brake Caliper Colours

Black brake calipers with a silver printed McLaren logo come as standard on the McLaren Senna. Customers can also choose from 3 optional brake caliper colours with a black printed McLaren logo, detailed below.

Standard

Black Calipers,
Silver Printed Logo

McLaren Orange Calipers,
Silver Printed Logo

Optional

Azura Blue Calipers,
Silver Printed Logo

Red Calipers,
Silver Printed Logo

Chassis – Tyres

Description

McLaren and tyre partner Pirelli have worked closely together to create a range of tyres that are specifically designed to meet the requirements of the McLaren Senna.

Pirelli P Zero™ Trofeo R Tyres

McLaren and Pirelli have developed a bespoke P Zero™ Trofeo R tyre structure, tyre shape and compound combination for the McLaren Senna, aimed at customers who intend to use their car regularly on track.

Due to the high demands that the car places upon its tyres, the tyre side wall structure has been a key focus. Its design has been optimised for cornering and stability stiffness, lateral grip, braking performance and a consistent response between the front and rear axle.

Pirelli P Zero™ Tyres

McLaren and Pirelli have developed a P Zero™ tyre specifically designed for the McLaren Senna. The P Zero™ tyre provides the optimum balance of handling, performance, grip and comfort for use in a wide range of road conditions.

Its focus is on road usage where there is a high probability of mixed dry and wet driving conditions or where the tyre temperature is likely to remain low.

Options

Pirelli P Zero™ Trofeo R tyres are fitted to the McLaren Senna as standard. Pirelli P Zero™ tyres are available as a non cost option.

Pirelli Sottozero™ winter tyres are also available on the McLaren Senna as dealer fit options.

Chassis – Steering

Description

An electro-hydraulic steering rack maximises feel compared to a fully electric system.

Customer Benefits

The McLaren Senna's steering rack has been designed with refinement and feel as the key parameters. Electro-Hydraulic power steering is utilised throughout the McLaren range, insuring a natural feel that can not be replicated with a fully electric setup.

The fast steering rack ratio has been chosen to allow quick changes of direction and to improve ease of control when driving quickly, all pivotal to a car such as the McLaren Senna.

Suspension – Driver Assistance Technologies

Description

The McLaren Senna features a range of driver assistance technologies. The intervention level of these systems can be adjusted depending on driver preference and whether the car is on road or track.

Electronic Stability Control

Electronic Stability Control (ESC) applies the brakes to each wheel individually when it senses vehicle destabilization or oversteer, allowing the car to recover its stablility.

Traction Control System

The Traction Control System (TCS) briefly cuts the engine when it senses the rear wheels reaching their grip limit. This restriction of power and torque allows the rear wheels to retain grip and control the oversteer.

Handling and Powertrain Mode Changes

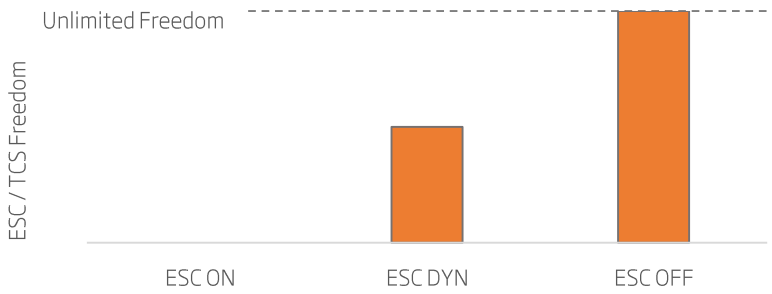
The ESC and TCS calibrations are not affected by which handling or powertrain mode (Comfort, Sport, Track) the car is in. For details of how Race mode impacts the ESC and TCS, see the Race mode slide.

Three Settings

The level of wheel spin and oversteer that ESC and TCS permit before intervening depends on which ESC mode the car is in. There are three modes:

- ESC On: ESC and TCS will intervene as soon as there is oversteer or wheel spin. Full control for manoeuvers such as high speed lane changes.
- ESC Dynamic: ESC and TCS introduces more freedom into the system, allowing the vehicle to go beyond the adhesion limit, but helping the driver controlling it's behaviour.
- ESC Off: ESC and TCS are tuned off – there is no intervention.

If the Variable Drift Control app is active, the TCS setting is controlled by the app, irrespective of which ESC setting is selected (see next slide).



Suspension – Variable Drift Control (VDC)

Description

Unique to McLaren, Variable Drift Control (VDC) allows the driver to adjust the intervention level of the Traction Control System(TCS) independentlyof the Electronic Stability Control (ESC) setting.

The driver can easily make adjustments to the VDC to suit their preferences using a slider control on the Central Infotainment Screen. The system is close to what would be found in a GT racing car, giving the driver the ability to select how much freedom they receive from TCS before it intervenes and how strong the interventions will be.

This adjustability allows the driver to hone their car control skills, over time moving from the stage where the car's systems are intervening regularly to a stage where they are not intervening at all. It also can be used to find the ultimate lap time performance through adjusting the level of TCS intervention, just as a professional GT racing driver would do.

VDC also continuously estimates the grip level between the tyres and the road surface, therefore optimising the system for the conditions.

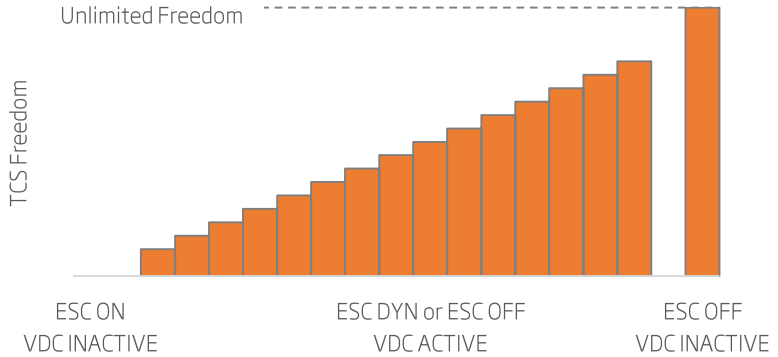
Overall, VDC offers a more enjoyable and engaging experience, unlocking new levels of driving freedom and excitement.

VDC Use & Availability

VDC is available when the ESC is set in 'Dynamic' or 'Off'. The Active Dynamics Panel must also be activated or the car be in 'Race' mode.

If the driver activates VDC, the central infotainment screen will show the level of VDC freedom selected. VDC can only be adjusted when the car is travelling in a straight line. Drivers can save their bespoke settings in 'favourites' for future use. The app will also memorize the last setting used next time the app is opened.

To turn off the VDC the driver can press the "Inactive" button in the app on the central infotainment screen.



Suspension – RaceActive Chassis Control II

Description

RaceActive Chassis Control II (RCC II) – making its debut on the McLaren Senna – provides the driver with a staggering breadth of ability on road or track. The system delivers a great balance of body control and ride comfort combined with a true and engaging level of feedback.

Customer Benefits

RCC II makes a leap forward over RCC I used on the McLaren P1™ through the use of constant vehicle dynamics monitoring as well as monitoring driver inputs. The adaptive dampers are interconnected hydraulically, both left to right and front to back, with two valves per damper to independently adjust for compression and rebound.

Data from multiple sensors – including four wheel accelerometers, two pressure sensors per damper, and multiple body sensors – enables the car to read the road surface. This is combined with accelerator, braking and steering driver inputs and fed back to the Chassis Control Unit (CCU), painting a detailed picture of what the car is doing.

This is information is then analysed and reacted to in a mere 2 milliseconds by an incredibly advanced algorithm developed as part of a PHD at the University of Cambridge.

This helps RCC II create the perfect damping response, meaning a suitable reaction is defined and implemented before the body is affected by the road surface, rather than afterwards. Crucially for the driver, the only sensation is an instantaneous dynamic response to their inputs.

The CCU also has within it a model of the amount of downforce that is acting on the car at any speed. RCC II can then take downforce into account when monitoring vehicle dynamics and factor this in when calculating the response.

This incredibly advanced system ensures that all four tyres maintain contact with the ground for more of the time as well as providing fantastic body control. This significantly increases grip, delivering stunning lap times that simply would not be achievable without it.

RCC II is distinguished from the ProActive Chassis Control II system used on the 720S by the addition of the K damper system (see next slide for details).

Suspension – K Dampers

Description

The K damper system on the McLaren Senna replaces the mechanical coil springs with a hydraulic system, provides RaceActive Chassis Control II with an additional degree of suspension freedom.

Customer Benefits

The K damper system was introduced on the McLaren P1™, and has been re-engineered for the even higher demands placed on it by the McLaren Senna. The car features four K dampers; two at the front of the car and two at the rear. The K dampers are hydraulically connected left to right.

Replacing the mechanical system with K dampers to control heave and pitch provides many benefits:

1. The ride height of the vehicle can be easily changed, allowing the provision of Race mode on the McLaren Senna, which gives huge aerodynamic improves on the track.
2. The stiffness of the hydraulic system can be changed between handling modes, something not possible with mechanical springs. This means that when the car is in Race mode, it can be stiffened as it is lowered, ensuring the car does not contact the ground.
3. By hydraulically connecting the left and right hand side of the car, the K dampers allow for a stiff front axle but relatively soft individual wheel stiffness. This reduces pitch (the tilting of the car's nose upwards or downwards, under heavy breaking or acceleration for example), and means the car can easily absorb single wheel inputs such as a pot hole or a kerb on a race circuit.
4. The stiffness of the K dampers is controllable. As the level of downforce acting on the car exponentially increases as speed builds, the K damper stiffness also exponentially increases to compensate.

The non-linearity of the K dampers has been increased substantially compared to the McLaren P1™ – at 150mph the McLaren Senna is much stiffer than the McLaren P1™, while it is actually softer than the McLaren P1™ at low speeds. This non linearity gives great traction, drivability and comfort at low speeds as well as improving downforce levels and stability at high speeds.

Suspension – Suspension Components

Springs

The K dampers on the McLaren Senna carry out the control of heave and pitch, roles usually fulfilled by mechanical coil springs. However, the car does still feature very small, lightweight and comparatively soft springs.

The springs play a supporting role to the K dampers, providing a base level of control and helping to maintain the self levelling of the car.

Wishbones

The McLaren Senna features double lower and upper wishbones at the front and rear, allowing a much better control of each wheel throughout the travel of the suspension that could be achieved with a single wishbone setup. The suspension geometry is optimized so that it works effectively at both the Race mode and normal ride heights.

The front lower wishbone is aerodynamically shaped, aiding powertrain cooling. The steel front lower wishbones are hollow, making them extremely light whilst still remaining very strong. All other wishbones are forged aluminium.

K Damper Accumulators

Part of the K damper system are the four Carbon Fibre accumulators that allow the spring characteristics of the car to be comprehensively changed between handling modes, by acting as hydraulic springs. The accumulators are split into two by a diaphragm, containing gas in one side and allowing hydraulic fluid to flow into and out of the other.

When transitioning into Race mode, the oil pressure in the system is increased, forcing the gas in the accumulators to be compressed into a smaller volume. Increasing the compression of the gas within the accumulators makes them behave like stiffer springs, providing race-car like stiffness and ensuring the car does not contact the ground.

Roll Accumulators

Attached to each of the four adaptive dampers is a small aluminium accumulator. These are diagonally linked across the car, as well as being linked front to back. These work together to form a hydraulic anti-roll bar. As with the K damper accumulators, the pressure of the gas inside can be altered to either soften or stiffen the car depending on suspension setting (Comfort, Sport, Track, Race).

Powertrain – Engine

Description

M840TR 4.0-litre (3,994 cc) twin-turbocharged V8 with 800 PS (588 kW) and 800 Nm (590 lb ft) of torque. In total, 41% of the M840TR engine is new compared to the M838TQ in the McLaren P1™.

Customer Benefits

The new McLaren M840TR is based upon the highly successful M840T that is installed in the McLaren 720S, with some key new and upgraded features that boost power and torque. These changes - in addition to the increased displacement of 4.0 litres (from 3.8 litres in the McLaren P1™) – combine to produce the most powerful internal combustion engine ever fitted to a McLaren road car.

The improved features over the M840T include new cams, air intake system, piston profile, a Carbon Fibre plenum and Ion sensing. The new cams are assembled rather than cast, saving 1.5 kgs per engine. The pistons have been reprofiled and the pins coated in a Diamond-Like Carbon coating to account for the increase in power output.

A key feature of the M840TR are the twin scroll turbochargers. The turbine wheel in the turbocharger is extremely light, allowing the turbocharger to spool up quickly, reducing turbo lag and increasing power output. Furthermore, the electrically controlled waste gates easily adapt to the engine's needs, improving fuel consumption and reducing emissions. The dump valve has also been moved to improve the sound of the powertrain.

The fuel delivery system utilises *Advanced PFI (Port Fuel Injection).* This system – developed originally for the McLaren P1™ – features double the number of fuel injectors (up from 8 to 16) allowing for more precise fuel control into the engine. This improves engine smoothness, fuel efficiency and power.

The high power output of the M840TR inevitably means that a large amount of engine cooling is required. The cylinder head water jackets and water channels keep the engine at the optimum operating temperature as well as contributing massively to the power output of the engine.

Powertrain – Engine

Ion Sensing

Ion sensing – new to the McLaren Senna – is an innovative system where spark plug not only ignites the air and fuel mixture, but also monitors the combustion process, providing direct, in-cylinder information to the ECU.

This means that the combustion of each individual cylinder can be precisely controlled, increasing power output and providing better knock detection and control (incorrect timing of combustion, which is inefficient and can damage the engine).

Engine Air Intake

The carbon fibre 'snorkel' air intake on the roof – inspired by both the McLaren F1 and McLaren P1™ – is the largest engine intake seen on a road-legal McLaren and feeds air into the engine. It is positioned up in the freestream of air above the car and is separated from the body for optimal performance and minimum impact on the car's aerodynamics.

It is made of carbon fibre to reduce weight, lowering the centre of gravity of the car. By being located directly above the engine, it was possible to create the most direct route for the air from snorkel to plenum, reducing the complexity of the intake system and further reducing its weight.

Carbon Fibre Plenum

The beautifully designed carbon fibre plenum takes the air from the snorkel and feeds it to each of the cylinders. It shaped has been designed to cope with the extra demand that the 800 PS M840TR places upon it.

It is made of one piece of carbon fibre, which reduces weight and lowers the centre of gravity of the car. The plenum weights just 2.9 kgs, over 40% less than the plenum on the 720S.

Powertrain – Fuel System

The McLaren Senna's fuel delivery system is an uprated version of the system used on the 720S. The phenomenal 800 PS power output of the M840TR engine means that two fuel pumps are required in order to achieve the required fuel flow instead of one.

The fuel delivery module was designed to accommodate either a one or two pump design, meaning the McLaren Senna's fuel system could therefore be largely identical to the 720S while satisfying the demand for increased fuel flow at the required fuel pressure.

The multiple pump system functions in a master-slave relationship. This allows the 'master' pump to provide the majority of the fuel flow while the 'slave' pump tops up the flow at the higher demands.

This configuration uses much less power than a single larger pump running at high rpm, and also uses less power than both pumps running in parallel at equal rpm. This increase in efficiency also improves evaporative emissions by generating less heat within the fuel tank.

The other benefit of a multiple pump system is that it allows some redundancy in the case of failure. If one pump were to fail, the other can supply sufficient fuel to the engine to safely continue driving the vehicle.

Powertrain – Gearbox

Description

The McLaren Senna is fitted with a 7-speed Seamless Shift Gearbox (SSG) providing quick and smooth gear changes and either manual or automatic settings.

Customer Benefits

The 7-speed SSG gearbox blends the superfast gear changes required on the race circuit with the smooth changes more suited to road driving. It features twin clutches that preselect the next gear before it is required, providing an near instant response. Clutch control is also extremely refined, making pulling away and manoeuvring easy.

The gearbox can be left in automatic mode or changed to manual mode. When in manual mode, the driver determines when to change gear using the steering wheel-mounted paddles, with the gearbox only overriding under certain circumstances:

- The gearbox will not change down if doing so would over rev the engine, causing damage.
- The gearbox will change down automatically when the revs are very low to prevent the engine from stalling.

When in automatic mode, the car will change gear at the optimal point for the either efficiency or acceleration, depending on what is required. The driver can still override the gearbox by using the paddles.

The speed and aggressiveness of the gear changes varies depending on which powertrain mode is selected on the Active Dynamics Panel, and are optimised for the different requirements of each mode (see setup changes slides for full details). When in Track mode, the McLaren Senna offers the quickest gear change times in the McLaren range.

Powertrain – Exhaust

Description

The McLaren Senna features a lightweight titanium and Inconel exhaust system that generates a clean, crisp note fitting of such a high performance car.

Customer Benefits

The exhaust system is available in two variants; a triple exit system featuring exhaust valves, and a twin exit system without exhaust valves. The fitment of these two variants depends on which market the car is destined for.

The exhaust exits are located to the very rear of the rear deck, with the titanium finishers emerging from the bodywork. They are as rearward as possible and angled upwards to not disturb the diffuser or the rear wing. The high exit design also ensures that the rear diffuser is unimpeded.

The exhaust valves on the triple exit system are controlled electronically and operate in open or closed positions, changing the volume of the exhaust dependent on engine speed and load conditions.

At higher engine speeds or load conditions the valves are open. The gases bypass the muffler and flow straight out of the top two exhaust exits, increasing the volume of the engine.

At lower engine speeds or load conditions the valves are closed. The gases from the engine are directed into the larger muffler, before flowing out of the bottom of the three exhaust exits, reducing the volume of the engine.

The twin exit exhaust system is fitted in markets that do not require exhaust valves due to noise legislation. The muffler silencer box is removed along with the third exhaust exit and a unique, twin-exit titanium finisher has been designed.

Setup – Control Panels

Active Dynamics Panel

The Active Dynamics Panel is a key feature of the McLaren Senna, allowing the driver to change to settings of the handling and the powertrain separately from each other. Once the driver activates the panel, they can then choose between Comfort mode, Sport mode and Track mode.

In developing this feature, our engineers refined the driving experience to offer both fantastic on track performance and on road usability depending on the driver's selection.

The inclusion of the Comfort mode allows the Non-Active mode (default on ignition) to become more focused, with rapid gearshifts and throttle reactions. The driver can dial the car down into Comfort mode, or focus the car further in Sport mode or Track mode.

For full details of the changes in each powertrain and handling mode, please see the following slides.

Setup – Control Panels

Roof Control Panel

This control panel is located in the centre of the car in the roof, and further adds to the cockpit feeling that drivers experience when sat in the McLaren Senna. The panel includes the engine start button, door releases, window switches, central locking button, courtesy lights and Race mode button (see below).

There is also a button that turns the dual zone climate control fan to its maximum speed to cool the car down before or after track sessions.

Race Mode

Activated using a button in the roof control panel, Race mode allows the driver to further adjust the handling settings and the car and reduce the ride height to provide the ultimate setup for the circuit.

Race mode can be activated when the Active Dynamics Panel is active and in any of the three modes (Comfort, Sport, Track). For full details of the changes in Race mode, please see the following slides.

Setup – Powertrain Modes

	Non Active	Comfort	Sport	Track / Race
Engine	No change			Loud Start is active (European markets only)
Stop /Start	Available	Available	Not Available	Not Available
Gearbox	Auto: same as Comfort mode Manual: same as Track mode	Gearshifts are focused on comfort	Ignition cut gearshifts, developed targeting maximum engagement for the driver Spinning wheel pullaway active if ESP OFF	Inertia push gearshifts. The shifts have been developed for the maximum performance Spinning wheel pullaway active if ESP OFF
Exhaust	No change			

Setup – Handling Modes

		Non Active	Comfort	Sport	Track
Steering		No change			
ESC		Fully active	No change. ESC settings controlled only by ESC button		
TCS		Fully active	No change. VDC settings controlled by ESC button or by VDC app		
VDC		Not available	Consistent feeling. Recalibrated to take into account other factors that change between modes		
RCC II	Roll Stiffness	Same as Sport mode	Optimized for road driving	Stiffer than Comfort mode	Stiffer than Sport mode
	Adaptive Damping	Same as Sport mode	Softer setup – optimized for comfortable road driving	Optimized for sporty road driving (country roads)	Optimized for track and sporty road driving (flat, smooth roads)
	K Dampers	No change			
Ride Height		No change. Vehicle lift available in all modes			
Active Aero		No change			

Setup – Race Mode

Steering		Changed to maintain same steering feel as on other modes while compensating for lower ride height, higher downforce etc.
ESC / TCS (VDC Inactive)	ESC On	Slightly more freedom as the road legislation requirements are removed. The ideal mode for driver coaches with on track beginners
	ESC Dynamic	Set up by McLaren test drivers to provide the best lap time possible. More freedom, but will still step in if the car gets too out of shape
	ESC Off	No change
VDC Active (TCS Only)		Slight recalibration to take into account other Race mode changes (lower ride height, more downforce, etc.)
Roll Stiffness		Highest roll stiffness, higher than Track mode
Adaptive Damping		Damping optimized for track running
K Dampers		Increased heave stiffness to compensate for higher downforce and improved body control
Ride Height		Right height is -39mm lower at the front axle and -30mm lower at the rear axle
Active Aero		Active aero blades and active rear wing tuned for optimal track running

Interior – Design

The interior of the McLaren Senna replicates the design philosophy of the exterior: reduce lap time and maximise performance. The team were also given the challenge of keeping the weight of the interior to an absolute minimum, using trim materials only where necessary. As a result, where material has been used, it has some sort of functionality – any material that existed purely for aesthetic reasons was removed on the grounds of weight saving, highlighting the beauty of functionality.

Another key requirement of the interior is to create a driver focused and engaging environment that replicates the performance of the McLaren Senna. The horizontal dashboard is inspired by high performance racing cars, ergonomically in the best position and using the least amount of material to save weight. The glazing in the lower section of the doors, above the seats and in the rear bulkhead further accentuates the aerospace cockpit feeling of the cabin.

The central infotainment screen is mounted on a carbon fibre arm and angled toward the driver to improve vision and avoid reflections. The Active Dynamics Panel is integrated into the bottom of the screen in perfect reach of the driver.

The stripped back, lightweight brief presented a unique set of challenges. Not only did the design have to provide the interior with a distinct visual identity – an extremely difficult task with so little interior trim to utilise – but it also had to show the quality finish expected from an Ultimate Series product. The design team therefore had to innovate to create a visual identity and feeling of quality within such tight parameters.

A prime example of this innovation is seen when looking at the visible door gas struts. These parts – usually hidden within the structure – are exposed on the McLaren Senna in order to reduce the weight of the doors. The design team have therefore incorporated them into the interior theme of the car, linking their colour to the colour of the seat perforation, front aero blades & front fender inners and brake calipers.

The entire dashboard is made from a single piece of Carbon Fibre, painted in a soft black paint finish. The finish removes any reflective glare from the windscreen, adds a quality finish to the dashboard, and weighs significantly less than if the dash was trimmed in leather or Alcantara.

Interior – Design

The interior trim is available in either Alcantara or leather. The Alcantara is designed for those customers who want the lightest interior possible, with the leather option adding a touch of luxury to the car. The optional perforated finish on the seats is designed with driving and performance in mind, increasing airflow through the material and keeping the driver cooler when at maximum attack on the track.

The visual carbon fibre chassis of the McLaren Senna dominates the interior, and can be seen on the bulkhead, doors, roof, foot wells and centre console. The carbon fibre has been prepped and finished to a very high standard to show the lightweight engineering integrity of the car as well as the high quality interior standard that is expected in an Ultimate Series car.

Overall, the interior design of the McLaren Senna creates a driving environment suitable for the phenomenal performance that the car offers. A minimalist design that focusses on lightweight – where every part and trim piece has a function – help to create a raw and incredibly engaging driving experience.

Interior – Central Infotainment Screen

Description

The centrally-mounted 8-inch high resolution touch screen monitor is the hub for all of the vehicle's functions.

Customer Benefits

A brand new interface featuring an edgeless glass screen has been developed, allowing the driver to run multiple applications simultaneously, flicking through them on a vertical carousel.

The screen is mounted on a lightweight carbon fibre arm, and tilted towards the driver, making adjustments easy when on the move. The climate control function remains visible at the bottom of the screen at all times.

The system uses a number of apps to show a range of applications on the screen, including satellite navigation, McLaren Track Telemetry, rear view camera and climate control. The information shown on the central screen can also be synchronised with the folding driver display.

The Active Dynamics Panel is attached to the bottom of the central infotainment screen. The switches are in easy view and reach of the driver, allowing easy powertrain and handling settings changes.

Interior – Folding Driver Display

Folding Driver Display

This innovative feature allows the driver display to transform between full display mode and slim display mode. At the touch of a button next to the steering wheel, the driver can alternate between the two modes depending on if they require the more detailed information offered by the full display or the concise information offered by the slim display.

When the Active Dynamics Panel is activated, the display defaults to full display when in Comfort or Sport mode, and slim display when in Track mode. The customer can change these default to their own preferences via the settings menu.

Slim Display Mode

The slim display only displays the most important information. The driver's already excellent forward visibility is further enhanced and the dashboard is given an even cleaner appearance. It is perfect for use on track, and some drivers may also prefer the simplicity and focus that it offers in everyday driving. It is also perfect for night time driving, as the slim display mode reduces the glare from the screen in the dark.

The display shows the gear that the car is in and the speed of the car – fixed at each end – with the horizontal rev counter taking a central position. The rev counter is replaced with any temporary messages such as warnings or information if required.

On the top edge of the display are the shift lights, perfectly positioned to help drivers perform optimal gear changes whilst keeping their eyes on the track ahead.

When activating or deactivating Race mode, the slim display shows the same information as when in full display mode.

Interior – Folding Driver Display

Full Display Mode

In full display mode, there are different layouts which coincide with the driver's selected mode: Comfort, Sport, Track & Race.

- Comfort: understated and sophisticated with muted colours and a balanced layout. The left hand carousel allows users to see three items of content at a time, including the trip computer, turn by turn navigation, the song playing, phone, and vehicle information (subject to infotainment system being selected).
- Sport: ups the excitement with high contrast orange design and a layout that recognises the importance of gear position when driving in a Sport mode.
- Track: increases the prominence of gear position and engine speed. Infotainment content (subject to infotainment selection) in the display is reduced to one item at a time – still accessible through a carousel, leaving the driver to fully engage in driving.
- Race: when activating Race mode, the display will first show a warning and accept message to the driver. Once the driver accepts this and the car starts the transition, the screen shows the transition completion percentage in 1% increments and the front and rear ride height reduction in 1mm increments. This is reversed when deactivating Race mode.

Interior – McLaren Track Telemetry

Description

The latest version of the McLaren Track Telemetry (MTT) system is standard on the McLaren Senna, allowing users to record on-track data, analyze their performance and hone their driving skills.

Customer Benefits

The MTT system was designed and developed specifically to capture the car's performance on track. It includes measurement of throttle angle and lateral/longitudinal G-force, lap timing and speed measurement. This real-time information is controlled from the central infotainment screen, where the driver can set up a track session, take part in the session, and then analyse the data.

During a track session, summary telemetry and live timing data can be viewed in the driver's eyeline on the folding driver display (in full display mode). More comprehensive information including G-maps, throttle position, full lap history and more is available on the central infotainment screen.

All telemetry data collected with can be downloaded onto an external medium for detailed review after driving. If the 3 cameras are also specified, customers can review the camera footage together with all the telemetry data for even more in depth analysis of their driving.

Options

McLaren Track Telemetry is also available with three cameras located at the top of the windscreen, in the rear bumper and in the cabin (in the headlining in the centre behind the seats, forward facing) so drivers can record their track driving sessions. These cameras can be specified as a cost option.

Interior – Technology

Parking Assistance

Front & Rear Parking Sensors

The McLaren Senna is available with 2 front and 4 rear parking sensors as a non cost option (fitted as standard in some markets).

Rear View Camera

Located in the rear bumper, the rear view camera aides reversing and parking, with the camera's image shown in the central infotainment screen. Digital rear view assist, where the driver can choose to view the image from the rear camera when driving forwards, is also included. This feature is especially useful if the car is fitted with a solid rear bulkhead.

The rear view camera is a non cost option (standard in some markets).

Vehicle Lift

Vehicle lift – operated by a stalk on the steering column – allows the driver to raise the nose and the rear of the car to clear obstacles such as speed humps or sharp gradient changes such as driveways. It uses the same hydraulic system used to lower the car when Race mode is activated.

This is fitted to the McLaren Senna as standard.

Interior – Bowers & Wilkins Audio System

Description

McLaren has collaborated with Bowers & Wilkins to create a world-class 7-speaker audio system which has been specially designed for the McLaren Senna. This marks the first time a Bowers & Wilkins system has appeared in the McLaren Ultimate Series.

Customer Benefits

McLaren and Bowers & Wilkins worked closely on the McLaren Senna to create a system that is as light as possible whilst still providing a high audio quality. The speakers are placed in acoustically beneficial locations and utilise high performance materials. As a result, performance is maximised and sound becomes another key element in the user experience.

The Bowers & Wilkins audio system comprises of:

- 1x 10 L subwoofer, located centrally behind the seats
- 2x 100 mm kevlar mid-range drivers, one in each door
- 1x 80 mm mid range driver, located in the centre of the dashboard
- 3x 25 mm double dome tweeter, one in each door and one in the centre of the dashboard

The ground-breaking system delivers pure, completely engaging sound through the implementation of key Bowers & Wilkins' acoustic technologies such as double dome tweeters and kevlar midrange drivers.

The performance of an automotive sound system depends far more on the quality of the drive units' design, construction and integration to the structure of the car than it does on the number of speakers. The drive units and speaker cones utilise numerous state-of-the-art technologies and are positioned for optimum acoustics.

The double-dome aluminium Nautilus tweeters – more commonly found in Hi-Fi loudspeakers – are precisely located inside the cockpit and use a thin, light aluminium dome bonded to a slightly thicker aluminium ring. This helps to prevent distortion and delivers authentic high notes for a more engaging listening experience.

The tweeters also feature Nautilus diffusers: spiraling channels that dissipate reflected sound waves that emanate from the rear of the drive unit. The result is sound that's superbly detailed, with unwanted resonances reduced to a minimum.

Interior – Bowers & Wilkins Audio System

Options

The Bowers & Wilkins audio system is a cost option on the McLaren Senna. When the option is selected, the following features are also included:

- Audio media player
- AM/FM radio, DAB radio (Sirius XM for USA, Canada)
- AUX in
- Bluetooth telephony & smartphone integration
- Audio output for satellite navigation comms
- Voice control

If the audio system is not selected, the satellite navigation will give directions through the central infotainment screen and the driver display, but will not include voice instructions. Audible warning tones for safety features still operate whether the stereo is selected or not.

Interior – Super-Lightweight Racing Seats

Description

The super-lightweight racing seats – developed specifically for the McLaren Senna – provide the level of support and comfort required in a car with such high levels of performance.

Customer Benefits

The super-lightweight Carbon Fibre racing seats in the McLaren Senna are constructed using highly innovative double skin technology. An air filled balloon is trapped inside the seat shell during the moulding process, producing an extremely stiff and light hollow structure. The seat shells are 33% lighter than the same shell manufactured using conventional carbon fibre production processes, weighing in at only 2.9 kgs each.

Whilst weight saving was extremely important in the design of the seats, so was the need for the driver and passenger to feel comfortable when in the car on track or on the road.

The comfort characteristics of the seats were developed over months of static and dynamic evaluations. The seats use individual pads on high pressure points instead of a complete foam layup, which make the them comfortable to sit in whilst saving 475 grams per seat.

The result of this extensive work is a seat that provides the "tailored suit" feeling that is expected from a race seat whilst not compromising the level of comfort that is a key part of the McLaren DNA.

Options

The racing seats are available in two sizes: regular and touring. They are also available with either a fixed or an adjustable passenger seat. These variants are all non cost options.

Interior – Heating and Ventilation

Dual Zone Climate Control

Dual zone climate control are installed as standard on the McLaren Senna, providing automatic fan speed adjustment and independent temperature settings for the driver and passenger. The controls are accessed through an app on the central infotainment screen.

The most important controls are displayed permanently at the bottom of the central infotainment screen to allow easy access for mode, temperature and fan speed.

The system features three face vents that can be opened and closed by twisting a fin either horizontally or vertically. They can also be easily adjusted for direction.

The automatic fan speed adjustment function has two modes: Auto or Auto Lo. Auto Lo uses lower fan speeds to obtain the desired cabin temperature whilst limiting fan noise within the cabin.

There is also a button located in the roof panel which turns the fan to its maximum speed to cool the car down before or after track sessions.

Air Conditioning

Full air conditioning – controlled in the same way as dual zone climate control – is also available as a non cost option.

Interior – MSO Defined Push-to-Drink System

The MSO Defined push-to-drink system allows the driver to easily rehydrate when on the circuit and wearing a race helmet.

The lightweight carbon fibre dispensing unit is installed in between the driver and passenger and provides a smooth delivery of fluid using a self-priming electric pump, operated by the driver at the push of a button.

The button is mounted to the MSO Defined 6-point harness using Velcro straps, meaning the driver can easily adjust its position to suit their preference.

The system uses a quick release mechanism for the 1.0 litre drinks bottles – allowing for a quick and efficient interchange – and is air tight to avoid spillages whilst changing bottles. The drinking hose is easy to remove to clean the system.

Options

The MSO Defined push-to-drink system is available as a cost option on the McLaren Senna.

The MSO Defined 6-point harness must also be specified in order to specify the push-to-drink system.

Interior – ‘By McLaren’ Designer Interiors

‘By McLaren’ Designer Interior – Jet Black Leather,
Azura Blue Perforation

- Jet Black leather
- Black stitching
- Interior brightwork - Zircon brushed aluminium
- Seats - Jet Black leather with Azura Blue perforation
- Headlining – Carbon Black alcantara
- Sill finishers – Carbon Black alcantara
- Steering wheel – Jet Black leather with Carbon Black stitching
- 3-point seatbelt – Carbon Black

- Options:
  - Sill finishers – satin finish visual carbon fibre
  - MSO Defined extended sill finishers –satin finish visual carbon fibre
  - Steering wheel – Carbon Black Alcantara with Carbon Black stitching
  - 3-point seatbelt – McLaren Orange, Red
  - MSO Defined 6-point harness – Black, Red, McLaren Orange, Blue

Interior – ‘By McLaren’ Designer Interiors

‘By McLaren’ Designer Interior – Jet Black Leather,
McLaren Orange Perforation

- Jet Black leather
- Black stitching
- Interior brightwork - Zircon brushed aluminium
- Seats - Jet Black leather with McLaren Orange perforation
- Headlining – Carbon Black Alcantara
- Sill finishers – Carbon Black Alcantara
- Steering wheel – Jet Black leather with Carbon Black stitching
- 3-point seatbelt – Carbon Black

- Options:
  - Sill finishers – satin finish visual carbon fibre
  - MSO Defined extended sill finishers –satin finish visual carbon fibre
  - Steering wheel – Carbon Black Alcantara with Carbon Black stitching
  - 3-point seatbelt – McLaren Orange, Red
  - MSO Defined 6-point harness – Black, Red, McLaren Orange, Blue

Interior – ‘By McLaren’ Designer Interiors

‘By McLaren’ Designer Interior – Carbon Black Alcantara, Azura Blue Perforation

- Carbon Black Alcantara
- Black stitching
- Interior brightwork - Zircon brushed aluminium
- Seats - Carbon Black Alcantara with Azura Blue perforation
- Headlining – Carbon Black Alcantara
- Sill finishers – Carbon Black Alcantara
- Steering wheel – Carbon Black Alcantara with Carbon Black stitching
- 3-point seatbelt – Carbon Black

- Options:
  - Sill finishers – satin finish visual carbon fibre
  - MSO Defined extended sill finishers –satin finish visual carbon fibre
  - Steering wheel – Carbon Black Alcantara with Carbon Black stitching
  - 3-point seatbelt – McLaren Orange, Red
  - MSO Defined 6-point harness – Black, Red, McLaren Orange, Blue

Interior – ‘By McLaren’ Designer Interiors

‘By McLaren’ Designer Interior – Carbon Black Alcantara, McLaren Orange Perforation

- Carbon Black Alcantara
- Black stitching
- Interior brightwork - Zircon brushed aluminium
- Seats - Carbon Black Alcantara with McLaren Orange perforation
- Headlining – Carbon Black Alcantara
- Sill finishers – Carbon Black Alcantara
- Steering wheel – Carbon Black Alcantara with Carbon Black stitching
- 3-point seatbelt – Carbon Black

- Options:
  - Sill finishers – satin finish visual carbon fibre
  - MSO Defined extended sill finishers –satin finish visual carbon fibre
  - Steering wheel – Carbon Black Alcantara with Carbon Black stitching
  - 3-point seatbelt – McLaren Orange, Red
  - MSO Defined 6-point harness – Black, Red, McLaren Orange, Blue

Interior – ‘By McLaren’ Designer Interiors

‘By McLaren’ Designer Interior – Carbon Black Alcantara, Red Perforation

- Carbon Black Alcantara
- Black stitching
- Interior brightwork - Galvanic Grey brushed aluminium
- Seats - Carbon Black Alcantara with Red perforation
- Headlining – Carbon Black Alcantara
- Sill finishers – Carbon Black Alcantara
- Steering wheel – Carbon Black Alcantara with Carbon Black stitching
- 3-Point seatbelt – Carbon Black

- Options:
  - Sill finishers – satin finish visual carbon fibre
  - MSO Defined extended sill finishers –satin finish visual carbon fibre
  - Steering wheel – Carbon Black Alcantara with Carbon Black stitching
  - 3-point seatbelt – McLaren Orange, Red
  - MSO Defined 6-point harness – Black, Red, McLaren Orange, Blue

Interior – Carbon Black Alcantara Interior

Carbon Black Alcantara

- Carbon Black Alcantara
- Black stitching
- Interior brightwork - Galvanic Grey brushed aluminium
- Seats - Carbon Black Alcantara
- Headlining – Carbon Black Alcantara
- Steering wheel – Carbon Black Alcantara with Carbon Black stitching
- 3-point seatbelt – Carbon Black

- Options:
  - Sill finishers – satin finish visual carbon fibre
  - MSO Defined extended sill finishers –satin finish visual carbon fibre
  - Steering wheel – Carbon Black Alcantara with Carbon Black stitching
  - 3-point seatbelt – McLaren Orange, Red
  - MSO Defined 6-point harness – Black, Red, McLaren Orange, Blue

Interior – Seatbelt Colours

The 3-point seatbelts are available in a choice of three colours. The colour choices are all non cost options. The MSO 6-point racing harnesses are available in a choice of four colours. Whilst the harnesses are a cost option, the colour choices are all non cost options.

If the 6-point harnesses are selected, customers are able to choose any combination of the below colours. Please note that the red 3-point seatbelts are not colour matched to the red 6-point racing harnesses.

3-point seatbelt colours

Black

McLaren Orange

Red

6-point harness colours

Black

McLaren Orange

Red

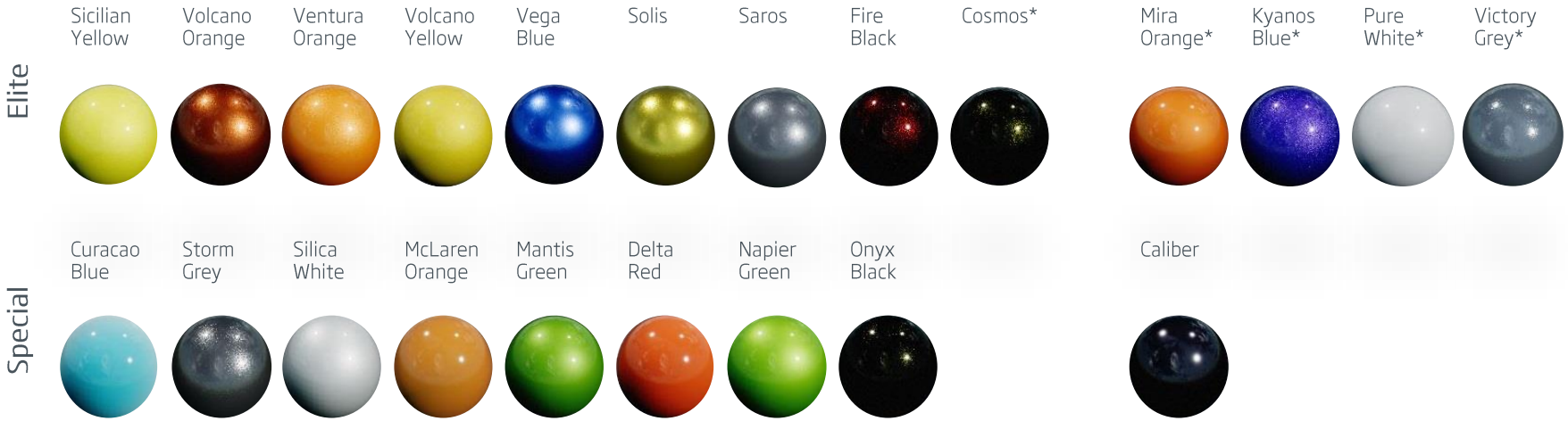
Blue

Paint – Exterior Paint Options

Special and Elite paints are all a non cost option on the McLaren Senna.

*These paints are included in the 5 'By McLaren' specifications .

New colours introduced on the McLaren Senna



Paint – MSO Defined Exterior Paint Options

MSO Defined paints are a cost option on the McLaren Senna.

MSO Defined

New colours introduced on the McLaren Senna

‘By McLaren’ Specifications – Overview

The designers at McLaren have created five ‘By McLaren’ specifications for the McLaren Senna, combining the interior and exterior colour and trim combinations that compliment each other the most. There is no mechanical of performance difference between the specifications.

The five specifications are:

- McLaren Senna Stealth Cosmos
- McLaren Senna Trophy Mira
- McLaren Senna Trophy Kyanos
- McLaren Senna Vision Pure
- McLaren Senna Vision Victory

The options available as part of the specifications are also all available individually so the customer can create a car design that is tailored to their specific tastes.

The five specifications are available as non cost options on the McLaren Senna.

‘By McLaren’ Specifications – Stealth Cosmos

- Cosmos paint
- Front aero blades & fender inners – Red
- Wheel finish – dark stealth
- Brake calipers – Red with Black printed McLaren logo

- ‘By McLaren’ designer interior – Carbon Black Alcantara, Red perforation
- Interior brightwork – Galvanic Grey brushed aluminium
- Visible door gas struts – Red

‘By McLaren’ Specifications – Trophy Mira

- Mira Orange paint
- Front aero blades & fender inners – Azura Blue
- Brake calipers – Azura Blue with Black printed McLaren logo
- Wheel finish – dark stealth

- ‘By McLaren’ designer interior – Jet Black leather, Azura Blue perforation
- Interior brightwork – Zircon brushed aluminium
- Visible door gas struts – Azura Blue

‘By McLaren’ Specifications – Trophy Kyanos

- Kyanos Blue paint
- Front aero blades & fender inners – McLaren Orange
- Brake calipers – McLaren Orange with Black printed McLaren logo
- Wheel finish – satin raw metal

- ‘By McLaren’ designer interior – Jet Black leather, McLaren Orange perforation
- Interior brightwork – Zircon brushed aluminium
- Visible door gas struts – McLaren Orange

‘By McLaren’ Specifications – Vision Pure

- Pure White paint
- Front aero blades & fender inners – Azura Blue
- Brake caliper – Azura Blue with Black printed McLaren logo
- Wheel finish – gloss black

- ‘By McLaren’ designer interior – Carbon Black Alcantara, Azura Blue perforation
- Interior brightwork – Zircon brushed aluminium
- Visible door gas struts – Azura Blue

‘By McLaren’ Specifications – Vision Victory

- Victory Grey paint
- Front aero blades & fender inners – McLaren Orange
- Brake calipers – McLaren Orange with Black printed McLaren logo
- Wheel finish – satin raw metal

- ‘By McLaren’ designer interior – Carbon Black Alcantara, McLaren Orange perforation
- Interior brightwork – Zircon brushed aluminium
- Visible door gas struts – McLaren Orange

MSO Bespoke

MSO (McLaren Special Operations) was established to help customers to realise their dreams. MSO Bespoke sits at the very heart of that mission, offering an almost limitless level of customisation.

Here is a selection of the type of customisation that MSO Bespoke can provide on the McLaren Senna:

Interior:

- Interior trim in alternative colours
- Headrests with embroidery or embossing
- Laser etched logos on throttle pedal
- Door gas struts in unique colours
- Limo tint wrap applied to glazed exterior door uppers and lower door panels
- Carpet floor mats to match bespoke interior
- Interior carbon fibre in coloured tints

Exterior:

- Visual carbon fibre body – see next slide for details
- Paint colours offered in either a gloss or satin finish
- Paint detailing – pin-stripes, accent lines, body stripes, etc.
- Rear wing endplates – unique colours and logos
- Wheel finishes
- Brake caliper colours
- Coloured centre lock wheel nuts
- 24 carat gold exhaust heatshield
- Exhaust finishers

MSO Bespoke – Visual Carbon Fibre Body

Visual Carbon Fibre Body

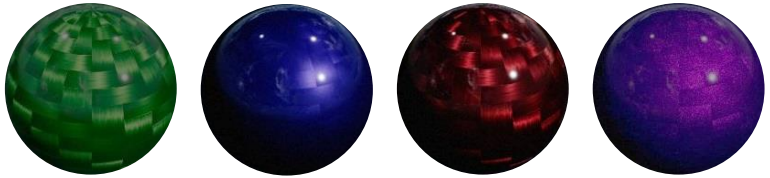
A highlight of the MSO Bespoke offering on the McLaren Senna is the visual carbon fibre body. The panels on a visual carbon fibre bodied car go through a different manufacturing process to ensure the 2x2 carbon fibre twill is aligned in perfect symmetry.

All body panels below the vehicle waistline – painted in body-colour as standard - are changed to visual carbon fibre with a satin finish. All body panels above vehicle waistline switch to visual carbon fibre in a gloss finish, maintaining the car's signature feature lines. This split can also be reversed so that below the waistline features a gloss finish and above the waistline features a satin finish.

Tinted Visual Carbon Fibre Body

Customers can choose to have a tinted visual carbon fibre body where the weave of the carbon fibre is still visible, but in a colour of the customers choice. The carbon fibre panels go through a lacquering process within the MSO facility to ensure perfect colour harmony and highest quality finish.

MSO have developed four colours for the tinted carbon fibre: Green, Blue, Red and Purple. Other tint colours can be developed if requests are made for them.



Green Blue Red Purple

Market Specific Content

- The static adaptive headlight functionality, automatic headlight levelling and sequential LED indicators are deactivated in the USA, Canada and Chile.
- Warning triangle & first aid kit is fitted as standard in the following countries: Austria, Belgium, France, Germany, Italy, Monaco, Netherlands, Spain, Switzerland, Sweden, Hong Kong, Indonesia, South Korea, Taiwan, Bahrain, Kuwait, Lebanon, Qatar, Saudi Arabia, South Africa, UAE, Brazil, Chile, Mexico.
- The first aid kit is not available in Japan, the warning triangle is fitted as standard in Japan.
- The fire extinguisher is fitted as standard in the following countries: Belgium, Netherlands, Bahrain, Kuwait, Lebanon, Qatar, Saudi Arabia, UAE, Brazil, Mexico.
- The emergency lamp is only available in Japan, where it is a fitted as standard dealer fit.
- Driver & passenger knee airbags are fitted as standard in Canada, USA, Chile.
- 2 front and 4 rear parking sensors are fitted as standard in the following markets: Canada, USA, Hong Kong, Chile.
- Rear view camera is fitted as standard in the following markets: Canada, USA, Hong Kong, Chile.
- The twin exit exhaust without exhaust valves is fitted in the following markets: USA, Canada, Bahrain, Kuwait, Lebanon, Qatar, Saudi Arabia, UAE.
- The triple exit exhaust with exhaust valves is fitted in the following markets: UK, Austria, Belgium, France, Germany, Italy, Monaco, Netherlands, Spain, Switzerland, Sweden, Australia, Hong Kong, Indonesia, Japan, New Zealand, Singapore, South Korea, Taiwan, Thailand, South Africa, Brazil, Chile, Mexico.
- Adjustable passenger seats are not available in Canada, USA, Chile

Product Guide Amendments
Version 2 to Version 3

- Market Specific Content. Addition of restriction on adjustable seats
- CORRECTION: Chicane paint removed. Not part of core spec, available through MSO as part of Heritage pallet
- Removal: Gloss black and satin raw metal exhaust heatshields removed
- Removal: Side parking cameras removed