

MODEL FILE 75 · BUGATTI · HYPERCAR · FAMILY FILE · HALO PROTOCOL

BUGATTI CHIRON

8.0 W16 QUAD-TURBO · 1,500–1,600 PS · 500 CARS · 2016–2024

THE FAMILY IN BRIEF

THE FAMILY

The register separates: Chiron (1,500 PS) · Chiron Sport · 110 Ans Bugatti · Sport "Les Légendes du Ciel" (20) · Noire Éléance / Noire Sportive · Pur Sport (60) · Super Sport 300+ (30) · Super Sport (1,600 PS, longtail) · Profilée (a single car) · L'Ultime (the last Chiron built). The whole family was limited to 500 cars: production ended 2024. Divo, Centodieci and La Voiture Noire go to the separate Bugatti halo/coachbuild block later, despite the deep Chiron kinship. Fields: CHIRON_VARIANT plus the per-edition flags of the master list.

THE HONEST FRAME

The dossier's Fazit, adopted as the file's frame: the Chiron is MECHANICALLY NOT THE HORROR CAR its running costs suggest. W16 and DCT show remarkably little systemic trouble — the costs come from three factors: extreme technical safety requirements + tiny volume + exclusively specialist care. And the most important purchase point is not a component: HAS THE CAR REMAINED FULLY INSIDE THE BUGATTI AFTERSALES ECOSYSTEM? A Chiron with complete Bugatti history, done Major, correct tyres/wheels, closed campaigns and a running Passeport or CPO is a different asset from an optically identical car without that paper.

POWERTRAIN & STRUCTURE

THE W16 · LOW OBSERVED
FAILURE RATE

8.0-litre W16, four turbochargers, 7-speed DCT, permanent AWD — 1,500 or 1,600 PS by variant. The interesting PPI finding at ten years of fleet age: NO reliable systemic series of crank, piston, timing-chain or core-engine damage — W16_CORE_ENGINE = LOW OBSERVED FAILURE RATE. Which means low FREQUENCY, extreme CONSEQUENCE — a failure is not cheap, it is just not common. PPI: cold start, oil pressure and level, misfires, turbo target/actual values, smoke, hot restart, cooling, fault history — plus the fullest possible Bugatti diagnostic pull. And on barely-driven cars the storage-and-movement question outranks 5,000-versus-10,000 km entirely.

TURBOS, DCT & REPORTED
EXPOSURE

Four turbos are enormous THEORETICAL exposure — and there is no Chiron turbo epidemic: boost, actuators, oil traces, noises, temperatures, charge path checked; replacement FACTORY QUOTE ONLY. The DCT digests 1,600 Nm and counts as exceptionally robust: cold D/R, manoeuvring, full-load shifts, adaptations, oil service, temperatures — no systemic pattern. The economics are recorded with the dossier's discipline: publicly reported figures (≈€170k gearbox, approaching €800k for a complete W16, five-figure single body and light parts) are NOT Bugatti list prices and are stored as REPORTED REPLACEMENT EXPOSURE —
ENGINE_REPLACEMENT = EXTREME / FACTORY QUOTE is professionally better than a fake-precise number.

COOLING, TUB & ACTIVE
AERO

The thermal management is enormously complex: ALL cooling circuits, pumps, radiators, expansion tanks, lines, fans — and a real HEAT SOAK after a proper drive: a Chiron is not inspected over five kilometres. The CARBON MONOCOQUE is CRITICAL, per the Carrera GT/P1 discipline: tub, suspension pickups, floor, sills, crash structures — composite NDT on any accident suspicion, a paint gauge proves nothing here. ACTIVE AERO: rear wing, airbrake, end positions, actuators, sensors, software — and because Super Sport and Pur Sport carry clearly different aero architectures, the check is VARIANT-SPECIFIC.

THE VARIANTS

PUR SPORT · ITS OWN PPI

Not a Chiron with a different wing: 15% shorter gearing, springs at 166/200 N/mm against the 100/150 baseline, different geometry, new ball joints, Michelin Cup 2 R, optional magnesium wheels with aero rings. Fields: PURSPORT_BALL_JOINTS, CAMBER_SETUP, MAGNESIUM_WHEELS, AERO_RINGS, CUP2R_STATUS, TRACK_HISTORY — chassis and wheels prioritised clearly above the engine here. And the real safety case: campaign BUGCR025 — possible sidewall cracking of the REAR TYRES on certain MY2020/21 cars, sudden pressure loss not excluded, few cars affected per KBA data: BUGCR025_COMPLETE = CRITICAL where the VIN is affected.

SUPER SPORT & 300+ · THE
HIGH-SPEED FILE

Longtail body, 1,600 PS — and the PPI shifts wholesale to tyres, wheels, aero and high-speed release: CORRECT_SS_WHEEL_SPEC, CORRECT_TYRE_SPEC, HIGH_SPEED_APPROVAL, LONGTAIL_AERO, TOP_SPEED_KEY/MODE. The lesson has a campaign number: BUGCR034 (2023) — TWO cars found with a wrong wheel configuration that could cause LOSS OF CONTROL in top-speed mode. On a normal car a wrong wheel is cosmetic: at 400+ km/h it is CRITICAL — which is why every wheel is identified by PART NUMBER and variant approval, never by "looks original".

PROFILÉE & THE COLLECTOR
EDITIONS

The Profilée is a single car — technically close to the Pur Sport (1,500 PS, 15% shorter gearing, special chassis, modified aero, 380 km/h), built because all 500 slots were taken: near-Pur-Sport PPI plus extreme provenance verification. For 110 Ans, Les Légendes du Ciel, Noire, 300+, Profilée and L'Ultime the collector audit dominates: build sheet, original paint and spec, stitching, edition plaques, bespoke carbon, matching wheels, factory configuration — on these cars a wrong repaint or a missing original component can be economically heavier than a technical defect.

FACTORY ACTIONS · THE VIN MATRIX

SEVEN CAMPAIGNS

The register carries the dossier's matrix, verified where NHTSA-filed:
17-11-001BUGC (MY2017: faulty weld on the driver-seat frame — backrest could tip)
· 18-06-002BUGC (MY2016–18: misfitted heat shield could impair the side airbags) · BUGCR033 / NHTSA 20V-732 (Chiron, Chiron Sport, Divo: after Handling Mode the ESC could fail to fully reactivate after an ignition cycle — software VR17.4/VR3.2, VERIFIED) · BUGCR032 (MY2018–20: possible driveshaft failure — ONE car affected per KBA) · BUGCR025 (Pur Sport rear tyres) · BUGCR027 / NHTSA 22V-198 (a SINGLE 2018 Chiron: one front frame-support bolt possibly not correctly torqued — VERIFIED) · BUGCR034 (wrong wheels, two cars). The structural lesson, in the dossier's words: Bugatti campaigns are often limited to single chassis numbers — THE VIN QUERY BEATS EVERY GENERAL RECALL LIST.

OWNERSHIP · THE ECOSYSTEM

THE SERVICE ARCHITECTURE

OEM-documented, and the anchor of the economics: ANNUAL service · a Low Service of up to 14 workshop hours · every four years a MAJOR SERVICE of roughly 72 workshop hours. The first four years ran on the standard service/warranty package; afterwards the car can enter PASSEPORT TRANQUILLITÉ — four-year plan, Bugatti-trained technicians, Major included, partly extended coverage — VEHICLE-BOUND and transferring to the new owner on sale, with an 85-POINT CHECK required for entry. Bugatti CPO adds a 110-point check and a limited 12-month warranty on used Veyron/Chiron. Fields: ORIGINAL_SERVICE_PACKAGE, PASSEPORT_TRANQUILLITE, EXTENDED_SERVICE, EXPIRY_DATE, BUGATTI_CPO — a Chiron with a running Passeport or CPO is a materially different asset.

NETWORK, TRANSPORT &
MOLSHEIM

The network is small and deliberately specialised: 34 dealers worldwide in 2021 — and not every showroom is an equal service partner for every complex job: SERVICE_PARTNER_LEVEL is its own field, with the "Service Partners of Excellence" (around six worldwide, Bugatti London among them) able to carry complex and special repairs. Germany: the Dörr Group with Munich and Frankfurt as long-standing partners, 88 Bugattis resident per late 2024; Zürich repeatedly decorated as a top service point. FLYING DOCTORS have travelled to customers since the Veyron era, and the Passeport programme includes a premium 24/7 recovery concept — a Chiron does not go on the next ADAC flatbed. And no: the car does NOT have to go to Molsheim for normal maintenance — the partner network carries annual and Major services: the works is engaged for deep repairs, restoration, heritage and personalisation.

THE COST DISCIPLINE

The register separates strictly, per the dossier. OEM-DOCUMENTED: the hours and the rhythm (14 h low, ≈72 h Major, annual/four-year). OWNER/PRESS-REPORTED: ≈\$34k for a Major, ≈€85.7k for six years of scheduled care beyond the first four, ≈\$15k for a Super Sport BG2 tyre set — stored as reported, not as list. The Veyron myths are defused: the Chiron moved to a normal wheel-bead geometry, so the \$42k tyre-and-wheel spiral does NOT carry over — TYRE_COST = VARIANT/SPEC/MARKET DEPENDENT, no flat €35k figure. The MI budget frame: ROUTINE RESERVE ≈€15–30k/year long-term where packages do not apply · MAJOR YEARS ≈€30–50k+ · tyres high four to low five figures by spec · and a SIX-FIGURE LIQUIDITY RESERVE — not because €100k breaks every year, but because a single Bugatti part can break the calculation. Tyre AGE beats tread: owners average ≈1,200–1,300 miles a year — DOT, flat spots, storage, carcass and the correct BG/BG2/Cup specification decide, not profile depth.

500

Chiron slots, production ended 2024 — with campaigns that sometimes cover one single VIN

72

Workshop hours in the four-yearly Major Service — the OEM-documented anchor of the economics

7

Campaigns in the VIN matrix: the VIN query beats every general recall list

Sources: Bugatti factory data (family structure and limits — 500 total, Pur Sport 60, SS 300+ 30, Les Légendes du Ciel 20, Profilée single car; W16/DCT architecture; Pur Sport 166/200 N/mm and 15% gearing; service architecture 14 h/72 h, Passeport Tranquillité with 85-point entry, CPO 110-point, Flying Doctors, Service Partners of Excellence, Dörr Group, 88 cars in Germany); campaign matrix per KBA/AutoScout24 documentation (17-11-001BUGC, 18-06-002BUGC, BUGCR025, BUGCR032, BUGCR034) and NHTSA filings (BUGCR033 = 20V-732 ESC software VR17.4/VR3.2; BUGCR027 = 22V-198 single-car frame bolt) — both verified September 2026; cost figures separated OEM-documented vs owner/press-reported per the dossier (€170k DCT / ≈€800k W16 / \$34k Major / \$15k BG2 as REPORTED EXPOSURE, not list). No bands per halo protocol — single files decide.