

MODEL FILE 28 · V10 LINEAGE · LAMBORGHINI

## LAMBORGHINI HURACÁN

V10 · 2014–2024 · LP 610-4 → PERFORMANTE → EVO → STO → TECNICA → STERRATO

## THE FAMILY IN BRIEF

## VARIANTS

LP 610-4 coupé/Spyder (610 CV, AWD, first series Lamborghini with the LDF dual clutch) · LP 580-2 coupé/Spyder (580 CV, RWD, deliberately driver-oriented) · Avio (250 cars, LP610-based) · Performante coupé/Spyder (640 CV, AWD, ALA) · EVO coupé/Spyder (640 CV, LDVI, rear steer, 8.4-inch HMI) · EVO RWD coupé/Spyder (610 CV, P-TCS) · EVO Fluo Capsule (design series) · EVO GT Celebration (36) · STO (640 CV, RWD, over 75 per cent carbon, CCM-R) · Tecnica (640 CV, RWD, rear steer) · Sterrato (610 CV, AWD, 44 mm higher, 1,499 cars — the only regular series with a fixed number, containing the Alpha (50) and All-Terrain Ad Personam (12) sub-editions) · 60th Anniversary trio (STO, Tecnica, EVO Spyder: 60 each) · STJ (STO-based, 10 cars, the V10 finale). The Polizia cars built for the Italian State Police are a factory curiosity, not a market variant. Super Trofeo, GT3, GT3 EVO and EVO2 run as race-car files. Production ended 2024 with the Sterrato closing the naturally aspirated V10 era: register sums exceed 27,000 cars (the exact factory closing total stays open pending the ledger): the hybrid Temerario succeeds.

## WHY IT MATTERS

Fundamentally a very good, very mature car: unlike the Gallardo there is NO single mechanical Achilles heel like the E-Gear clutch. The V10 is robust, the LDF is robust, AWD and RWD work reliably. The real used-car risk is the BIOGRAPHY: accident history, rental and event use, tuning and twin-turbo past, track use, and expensive carbon, brake and aero components. A normal LP610/EVO is an astonishingly uncomplicated supercar: Performante, STO, Sterrato and STJ each get their own PPI branch.

## INSPECTION ZONES · THE COMMON PLATFORM

## V10 · VERY ROBUST

The 5.2 uses MPI AND direct injection together (factory-documented on the Performante): the port injection keeps intake valves clean: and the fleet shows no convincing evidence of carbon build-up, timing-chain problems, bottom-end failure, high oil consumption or valvetrain failure: V10 CORE ENGINE = VERY ROBUST. Early cars carry reports of ticking, fuel-rail and injector replacement and misfires (particularly early 2015 builds): carried as EARLY FIELD/SERVICE PATTERN, never as an injector epidemic. Cold start: the V10 is mechanically loud: a light injector tick or valvetrain noise is not automatically abnormal: uneven start, unstable idle, smoke or fuel smell are.

## MISFIRES &amp; MANIFOLDS

An engine lamp is not “engine broken”: Huracán causes span coil, plug, injector, cam sensor, low voltage and fuel system: buyer guides describe sensor-driven rough-running and limp cases while mechanically very little fails. PPI reads misfire counters bank 1 and bank 2, cam-sensor faults and fuel trims. Exhaust manifolds: cracks and leaks are a named field theme: cold ticking or puffing is investigated: but not every injector tick is diagnosed as an exhaust leak. Factory exhaust valves can stick or rattle, and aftermarket systems (Capristo, Akrapovic, IPE, Novitec, cat-deletes, valve controllers) are very common: valve function, welds, cats, O2 readiness.

## LDF DCT

One of the biggest reliability gains of the family: the LDF is related to the Audi R8 DCT family and the old Gallardo E-Gear worries practically no longer apply — no “clutch every 15,000 km”: DCT = HIGH-COST BUT LOW FAILURE FREQUENCY. Protocol cold: D, R, R→D, slow manoeuvring, 1→2, 2→1: warm: stop-and-go, reverse, gradient, full acceleration, manual downshifts: watching for shudder, delayed engagement, slip, warnings, oil leakage. Individual used cars show low-speed shudder: currently a MODERATE/INSPECTION PATTERN, not a fundamental weakness. And the ECU can carry real usage history: a documented case shows LAUNCH-CONTROL ACTIVATION COUNTS read out diagnostically: LAUNCH\_CONTROL\_HISTORY, TRACK\_USE and RENTAL\_HISTORY are data fields: when the Lamborghini diagnosis delivers operating history, it is stored.

## AWD, RWD &amp; USE PROFILE

AWD (LP610, Performante, EVO, Sterrato): electronically controlled: the Performante pairs Haldex Generation V with a mechanical rear locking differential: front diff, driveshafts, CV joints, torque distribution, leaks: no grinding, clunking or binding on tight full lock: no strong failure series. RWD (LP580-2, EVO RWD, STO, Tecnica, STJ): technically simpler: rear tyres, differential, drift and track use, accident history weighted higher instead: the 580-2 is especially drift-friendly: a car with constantly new rear tyres needs an explanation. Twin-turbo conversions are even more widespread than on the Gallardo: a car returned to stock can hide everything: charge-pipe marks, extra holes, altered fuel system, engine-internals invoices, ECU traces: FORMER\_TWIN\_TURBO = YES/NO/UNKNOWN, HIGH MI relevance.

## LOW VOLTAGE &amp; LIFT

Far more robust than Diablo or early Gallardo — the Audi/VW architecture helps massively — but low voltage is the recurring supercar theme: documented EVO patterns include battery discharge on standing, error messages and LIFT problems. Order of operations: BATTERY → SENSOR → HYDRAULIC/ACTUATOR: voltage is stabilised before any big diagnosis, and lift hardware is never ordered first. The front lift itself is probably the most frequent practical point: several cycles cold, hold, lower, again warm: documented cases of sinking after raising and confused sensor logic: STRONG FIELD/AGE PATTERN, rarely existential. MagneRide: leakage, connectors, mode response: no fleet problem, but ageing-relevant on early LP610s.

## EVO SYSTEMS &amp; HMI

The EVO adds LDVI as the coordinating layer: with multiple simultaneous steering, ESC, AWD or suspension warnings, sensors, dynamics communication and voltage are checked before any module swap. Rear steer (two electromechanical actuators): position values left and right, faults, calibration: mandatory after rear damage, kerb strikes or suspension work. The 8.4-inch HMI shows occasional freezes, glitches and slow boots: LOW/MEDIUM, no relevant hardware series.

## BODY, UNDERBODY &amp; WEAR

Hybrid structure of aluminium and carbon/composite — NOT the Aventador full-carbon monocoque: an accident is more repairable, but sloppy aluminium repairs stay expensive: front rails, shock towers, sills, rear frame, carbon bulkhead regions, mounting points. The car is LOW: splitter, front underside, brake ducts and floor damage are a named used-car finding: a Huracán PPI without a lift is incomplete — the car always goes UP. Windscreens are small but expensive (several thousand with camera hardware): chips, camera area, glass marking, ADAS calibration on later cars. Wheels: inner lips and kerb life (London, Monaco, Dubai, LA): inspect the insides. CCM: surfaces, chips, oxidation, pads: on track cars the brake FLUID matters — long-lived discs do not stop fluid from boiling. Spyder soft tops (LP610, LP580, Performante, EVO, EVO RWD): reliable, two cold cycles and one warm: no convincing roof failure series, and water/seal findings carry NO STRONG FIELD PATTERN. High mileage is relaxed with full history — a 60,000 km Huracán is not a 60,000 km Countach: the car is built for regular use. Low mileage is not perfect: old tyres, dead battery, sticky valves, lift issues, seals, unexercised DCT and AWD.

## VARIANT BRANCHES · WHERE THE PPI SPLITS

## PERFORMANTE · ALA &amp; CARBON

The 2017 technology leap: 640 CV, lighter, Forged Composites, and ALA as the first series application of active aero vectoring. ALA PPI: front flaps, internal rear-wing channels, actuators and valves, vacuum control, faults: and after ANY accident the internal aero channels must be original, free and correctly connected — Performante panels that merely fit visually are not enough. Forged Composite audit (aero, engine cover, diffuser, interior, wing): cracks, delamination, clearcoat repair, wrong replacement panels, sanding: visible-composite originality is market-value relevant. Individual owner reports of valve or engine damage exist: carried precisely as LOW-CONFIDENCE OWNER FIELD REPORT — the basis for a “Performante valve problem” does not exist, and exactly here the file stays clean. Spyder adds the roof block plus water paths.

## STO · A RACE-CAR AUDIT

Far more than a Huracán with a wing: RWD, rear steer, fixed direct steering ratio, over 75 per cent carbon body panels, the Cofango, CCM-R and extreme track orientation: the PPI approaches a GT3 road car. Cofango (hood and fenders as ONE carbon piece): hinges, latches, alignment, stone impact, underside, mounts, cracks — a relatively small front contact can hit an extremely expensive single part. Wing: manually adjustable in three positions: factory versus current setup, bolts, torque marks, end plates, mounts — track cars get adjusted, and badly torqued wing hardware is a real safety and value point. CCM-R is NOT normal CCM: F1-derived, about four times the thermal conductivity, 60 per cent higher stress resistance, 25 per cent more peak braking power: the database stores BRAKES = CCM-R. Magnesium wheels: cracks, kerb damage, repairs, repaint: NDT on suspicion: a welded magnesium wheel on an STO is HIGH — replace. Track use is PLAUSIBLE and not negative in itself: TRACK USE + PROPER SERVICE = ACCEPTABLE: tyres, brake heat, underbody, tow hook, fluid intervals, telemetry recorded. PPF is never an inspection substitute: the carbon underneath is verified.

## TECNICA &amp; STERRATO

Tecnica: mechanically EVO RWD plus rear steer, STO-like direct steering and clearly improved brake cooling: often driven harder than a standard EVO: brake ducts, underbody, engine cover, track history: no Tecnica-specific failure population. Sterrato: a completely different PPI. Doctrine: EXPECTED USE vs HEAVY IMPACT — stone chips, scratches and light skid-plate marks are what the car was BUILT for: a bent-up protection plate however can hide damaged structure underneath: underbody is priority number one (front protection, plates, sills, rear protection, mounting points, cooling lines). Roof intake: Lamborghini partly closed the low intakes and feeds the engine from the roof to keep sand, dust and gravel out: scoop, duct, filter box, dirt and water ingress: after real offroad use the air filter comes OUT — sand, dust, moisture. Suspension: 44 mm higher and reinforced: offroad load is not track load: dampers, arms, tie rods, bearings, bushings, alignment. Tyres: the specially developed Bridgestone Dueler run-flats are an authenticity AND function point — normal Huracán sport tyres are not equivalent. Rally mode, P-TCS and LDVI function-tested: a car with Rally-mode faults needs deep diagnosis.

## EDITIONS

Avio (250, five factory colours, double stripes, laser-hexagon Alcantara): mechanically a normal LP610 — a Huracán with Avio stripes is not an Avio: AVIO AUTHENTICITY by build sheet. EVO GT Celebration (36 = the 24 hours of Daytona plus the 12 of Sebring): EVO mechanics plus livery authenticity. Fluo Capsule: design series, normal EVO PPI. 60th Anniversary (2023): STO, Tecnica and EVO Spyder at 60 each, two colour configurations, 1-of-60 carbon plaque, special stitching: a collector layer on the base car. The race cars (Super Trofeo, GT3 generations) stay separate files: hours, history, cage, cell — never a road PPI.

## STJ · THE V10 FINALE

The last V10 special (2024, 10 cars, Super Trofeo Jota, STO-based): wing angle +3 degrees and about ten per cent more aero load, special Squadra Corse carbon flicks, four-way mechanically adjustable RACING dampers instead of the normal active components, centre-lock wheels on special Bridgestone Potenza Race. STJ PPI: normal STO damper logic explicitly does NOT apply: settings documented, left/right symmetry, adjusters, leaks, spring spec — a strangely set-up car is not defective, but the settings must be plausible: original Squadra Corse aero parts, wing angle, hardware, no aftermarket copies: at ten cars, authenticity dominates everything.

## RECALLS · FIVE CAMPAIGNS, ALL VERIFIED

## THE SOFTWARE PAIR

21V466: rear-camera software, MY2018–21, about 3,097 US/Canada vehicles: below roughly 5 °C and after a long sleep a bug could deactivate the reversing camera: software update. 23V826: the big one by population — 7,805 vehicles, MY2015–24, nearly the entire US run: Tourist Mode and AFS headlight functions could be active through wrong market configuration, producing non-compliant light distribution: software update deactivating the functions. Both stored per VIN.

## 22V081, 22V220 &amp; 22V422

22V081: MY2015–20, 4,796 US vehicles: the caps covering the horizontal headlight-adjustment screws were missing — regulatory relevant, mechanically trivial: blanking caps installed. 22V220: the serious one despite nine cars — certain EVO/STO builds left the factory with insufficient gearbox oil: short-term hydraulic pressure loss, clutch slippage, power loss, foaming oil in extreme operation and oil onto hot exhaust parts with fire risk: L62X-R.02.22: CRITICAL if VIN-applicable and open — and explicitly NO general Huracán DCT weakness. 22V422: 21 vehicles, certain 2022 EVO/STO: the bowden-cable securing clip in the LEFT exterior door handle possibly misassembled — the door might not open from outside: VIN-specific. Per-model-year vehicle queries return exactly these five campaigns: the VIN check runs at every car.

## COST DISCIPLINE · MI WORKING RANGES

## WORKING RANGES

Working ranges, not quotes (Sep 2026), for the standard car: annual service €1,500–3,000 · major service €3,000–6,000+ · DCT minor €2,000–5,000 · DCT clutch/mechatronic event €5,000–12,000+ · lift €2,000–6,000 · MagneRide damper possibly €2,000–5,000 per corner · exhaust/manifold €2,000–7,000+ · tyres €1,500–2,500 · CCM axle €7,000–15,000+ · full CCM €15,000–30,000+. STO/STJ: Cofango, CCM-R, magnesium wheels, carbon wing and body NEVER at normal Huracán prices — OEM QUOTE / COLLECTOR MULTIPLIER: one Cofango damage can exceed the car's normal mechanical repair value. Sterrato: specific underbody parts, roof intake, suspension and Dueler tyres are not standard EVO part prices either.

## BUYING NOTES · THE TWO CHECKS THAT MATTER

1 · BIOGRAPHY, NOT  
HARDWARE

The Huracán has no Achilles heel: it has a biography. Buy the car on accident file, rental and event history, launch counters, tune and turbo forensics, underbody and carbon condition: the V10 and the LDF will do their part. A 60,000 km car with full Lamborghini history, clean DCT, no accident and no mods is a relaxed purchase: a 12,000 km rental car can have lived far harder.

## 2 · CONFIDENCE DISCIPLINE

OEM or government confirmed: 21V466, 22V081, 22V220 (nine cars), 22V422 (21 cars), 23V826. Strong field/age patterns: battery and low-voltage sensitivity, front-lift sensor and hold issues, exhaust-valve wear, occasional sensor-driven misfire or limp mode, normal suspension and damper ageing. Moderate/inspection patterns: occasional DCT shudder, exhaust-manifold leaks, infotainment glitches. Low-confidence owner reports: individual Performante engine cases — noted, not generalised. NOT called common: catastrophic V10 failure, timing-chain failure, general LDF failure, universal AWD failure, systemic rear-steer or ALA failure, Spyder roof failure, Sterrato suspension failure.

## MARKET POSITION · LADDER AND VOLUME

## STATUS

Bands follow the transaction dataset — the family spans a genuine volume market (LP610/EVO) and a collector ladder (Performante, STO, 60th, Sterrato as its own niche, STJ at the top). Structural readings: biography and variant truth price first: STO and Sterrato price on their specific hardware being original and undamaged: and the closed V10 era positions the whole family the way the Aventador's end positioned the V12.

27,000+

Register sum: the best-selling Lamborghini ever, closed 2024 by the Sterrato

1,499

Sterrato: the only regular series with a fixed number — and a completely different PPI

5

US campaigns, all verified: 22V220 matters despite nine cars — oil onto hot exhaust

Sources: Lamborghini factory data (LDF first application, MPI+IDS, Performante ALA and Haldex V, EVO LDVI/rear steer/HMI, STO carbon share, Cofango and CCM-R data, Tecnica systems, Sterrato build and 1,499 number, Avio 250, GT Celebration 36, 60th trio, STJ specification); NHTSA campaigns 21V466, 22V081, 22V220 (L62X-R.02.22), 22V422 and 23V826 verified September 2026 with per-model-year queries returning exactly these five; production end 2024 and register totals as labeled (factory closing total open); Sterrato sub-editions (Alpha 50, All-Terrain Ad Personam 12) and Polizia noted per register sources; field patterns (battery/lift, launch-counter case, injector/rail, manifolds, DCT shudder) per named buyer-guide and specialist sources. Cost figures are MI working ranges; market bands follow the verification round.