= Jaguar XJ220 =

The Jaguar XJ220 is a two @-@ seater supercar produced by British luxury car manufacturer Jaguar from 1992 until 1994 , in collaboration with the specialist automotive and race engineering company Tom Walkinshaw Racing . Recording a top speed of 212 @.@ 3 mph (342 km / h) in 1992 the XJ220 could keep up with the fastest production car since 1987 , the Ruf CTR which also had reached 342 km / h at Nardo before being superseded by the McLaren F1 in 1993 when it recorded a top speed of 231 mph (372 km / h) . The Jaguar held the Nürburgring production car lap record between 1992 and 2000 with a time of 7 : 46 @.@ 36 .

The XJ220 was developed from a V12 @-@ engined 4 @-@ wheel drive concept car designed by an informal group of Jaguar employees working in their spare time . The group wished to create a modern version of the successful Jaguar 24 Hours of Le Mans racing cars of the 1950s and ' 60s that could be entered into FIA Group B competitions . The XJ220 made use of engineering work undertaken for Jaguar 's then current racing car family .

The initial XJ220 concept car was unveiled to the public at the 1988 British International Motor Show , held in Birmingham , England . Its positive reception prompted Jaguar to put the car into production ; some 1500 deposits of £ 50 @,@ 000 each were taken , and deliveries were planned for 1992 .

Engineering requirements resulted in significant changes to the specification of the XJ220 , most notably replacement of the Jaguar V12 engine by a turbocharged V6 engine . The changes to the specification and a collapse in the price of collectible cars brought about by the early 1990s recession resulted in many buyers choosing not to exercise their purchase options . A total of just 271 cars were produced by the time production ended , each with a retail price of £ 470 @,@ 000 in 1992 .

= = Conception = =

Jaguar were approached by racing team owner Tom Walkinshaw and encouraged to enter the Jaguar XJS into the 1981 European Touring Car Championship ; they succeeded in winning the competition in 1984 . Jaguar had started to provide factory support to racing team Group 44 Racing , who were using the Jaguar @-@ engined XJR @-@ 5 in the IMSA GT Championship , supplying V12 engines from 1983 onwards and supporting a Le Mans entry in 1984 . Tom Walkinshaw and Jaguar agreed to entering the FIA Group C World Sportscar Championship and developed the XJR @-@ 6 , which was powered by the Jaguar V12 engine ; the car was launched during the 1985 season .

TWR took over the IMSA GT Championship operation in 1988 and one model ? Jaguar XJR @-@ 9 ? was launched to compete in both series . The XJR @-@ 9 , which retained the Jaguar V12 engine , went on to win the 1988 24 Hours of Le Mans and World Sportscar Championship in the same year . The poor fuel consumption of the Jaguar V12 combined with new rules restricting refueling during races forced the replacement of the V12 engine in the XJR @-@ 9s successors , the XJR @-@ 10 and XJR @-@ 11 . The normally @-@ aspirated Austin Rover V64V engine , designed for the MG Metro 6R4 had recently been made redundant thanks to the Group B rally ban in 1987 , and the design rights were for sale . The compact , lightweight and fuel efficient nature of the small @-@ displacement , turbocharged engine was investigated by TWR , who considered it an ideal basis for a new engine to power the XJR @-@ 10 and purchased the design rights from Austin Rover Group .

Jaguar and their Director of Engineering , Jim Randle , felt these racing cars were too far removed from the product available to the general public , especially with the rule changes that mandated the replacement of the Jaguar V12 engine in the forthcoming XJR @-@ 10 and XJR @-@ 11 racing cars . Therefore , a project was initiated to design and build a car capable of winning Le Mans " in house " , just as the Jaguar C @-@ Type and D @-@ Type had done . The groundwork for the project was undertaken by Randle over Christmas 1987 , when he produced a 1 : 4 scale cardboard model of a potential Group B racing car .

The cardboard model was taken into the Jaguar styling studio and two mock @-@ ups were produced . One was said to be reminiscent of the Porsche 956 , the other took elements of the then current Jaguar XJ41 project and Malcolm Sayer 's work on the stillborn Jaguar XJ13 racing car . The second design , by Keith Helfet , was chosen as it was " more obviously Jaguar in its look " .

The project still had no official support , leaving Randle no option but to put together a team of volunteers to work evenings and weekends in their own time . The team came to be known as " The Saturday Club " , and consisted of twelve volunteers . To justify the resources consumed by the project , the XJ220 needed to provide meaningful data to the engineers on handling , aerodynamics ? particularly at high speeds ? and aluminium structures . These requirements , together with FIA racing regulations and various government regulations governing car design and safety influenced the overall design and engineering direction of the car .

= = Concept car = =

The FIA Group B regulations steered the concept towards a mid @-@ engine , all @-@ wheel @-@ drive layout , with a Jaguar V12 engine as the power source . The concept car was designed and built at very little cost to Jaguar , as Randle called in favours from component suppliers and engineering companies he and Jaguar had worked with in the past . In return he offered public recognition for their assistance and dangled the possibility of future contracts from Jaguar .

The name XJ220 was chosen as a continuation of the naming of the Jaguar XK120 , which referred to the top speed of the model in miles per hour . The concept car had a targeted top speed of 220 mph (350 km / h) so became the XJ220 . The XK120 , like the XJ220 , was an aluminium @-@ bodied sports car , and when launched was the fastest production car in the world .

= = = Engine and transmission = = =

Jaguar and engine designer Walter Hassan had previously created a 48 @-@ valve variant of their V12 engine specifically for motorsport use . It featured a double overhead camshaft layout with four valves per cylinder , compared with the single overhead camshaft and two valves per cylinder of the production engine , which was used in the Jaguar XJ and Jaguar XJS models at the time .

TWR had manufactured a number of these racing V12 engines during the 1980s and they had been raced competitively , with a 7 @-@ litre version of this engine featuring in the Le Mans winning Silk Cut Jaguar XJR @-@ 9 . Five of these engines still existed , all of which were fitted with dry sump lubrication . These engines were chosen and considered to be especially useful as the dry sump would lower the vehicle 's centre of gravity . The displacement of the V12 was set at 6 @.@ 2 litres (6222 cc) for the XJ220 . The engine fitted to the XJ220 concept had titanium connecting rods .

Jaguar had little experience with four @-@ wheel drive systems at the time , having previously only produced rear @-@ wheel drive cars . Randle approached Tony Rolt 's company , FF Developments to design the transmission and four @-@ wheel drive system for the XJ220 , with Rolt 's son Stuart running the project . Tony Rolt was the Technical Director of Ferguson Research , where he was heavily involved in the design of the four @-@ wheel drive system used in the Jensen FF , the first sports car to be fitted with such a transmission . Tony Rolt also had a long involvement with Jaguar , winning the 1953 24 Hours of Le Mans with the factory works team driving the Jaguar C @-@ Type .

The mid @-@ engine complicated the design of the four @-@ wheel drive system , and an innovative solution was needed to get drive from the rear of the engine to the front wheels . The chosen design took the front @-@ wheel drive from the central differential on the rear transaxle and sent it through the V in the centre of the engine using a quill drive , before joining an inverted differential . The clutch was a twin @-@ plate unit designed by AP Racing .

= = = Bodywork and interior = = =

The design brief for the exterior restricted the use of aerodynamic aids , and aimed for a stylish yet

functional body similar to the Jaguar D @-@ Type . Drag and lift were limited at the envisioned ground clearance for road use , but the design allowed for additional downforce when the car was set up for racing ; the body produced around 3 @,@ 000 lb (1 @,@ 400 kg) of downforce at 200 mph (320 km / h) . The design was also intended to have a variable rear wing that folded into the bodywork at lower speeds . Aerodynamic work was undertaken at the Motor Industry Research Association wind tunnel using a 1 : 4 scale model , as the project was unable to budget for a full @-@ scale mock @-@ up .

The bodywork for the concept car displayed in 1988 was hand built from aluminium by Park Sheet Metal , a specialist automotive engineering company that manufactures concept cars and low @-@ volume , niche models for various manufacturers , including Bentley . QCR Coatings undertook final painting of the bodyshell in silver . The concept also featured electrically operated scissor doors and a transparent engine cover to show off the V12 engine .

The concept car had a Connolly Leather @-@ trimmed interior produced by Callow & Maddox , and was fitted with front and rear heated windscreens , electric windows , air conditioning , heated electrically adjustable seats with an Alpine CD player . The dashboard was supplied by Veglia .

= = = Chassis = = =

The chassis was manufactured from aluminium using Alcan 's bonded aluminium structure vehicle technology (ASVT) , and had a wheelbase of 2845 mm . The design for the chassis featured rear wheel steering and packaged the fuel tank behind the centre bulkhead . Suspension design largely focused on road use , but a good compromise for racing use was achieved and the suspension height was adjustable . The concept car was fitted with a four @-@ channel anti @-@ lock braking system .

The concept car was larger than the production model at 5 @,@ 140 mm (202 in) in length and 2 @,@ 000 mm (79 in) wide . It weighed 1 @,@ 560 kg (3 @,@ 440 lb) .

= = = Launch = = =

The concept car was completed in the early hours of 18 October 1988 , the day it was due to be unveiled at the British International Motor Show , being held at the National Exhibition Centre , Birmingham . The vehicle was completed at 03 : 00 GMT , moved to Jaguar 's stand at 06 : 00 GMT and unveiled at 11 : 00 GMT .

Jaguar 's marketing department had allocated space on their stand at the motor show for the XJ220 , but had not seen the vehicle until its arrival . Jaguar chairman John Egan and Roger Putnam , who was in charge of Jaguar 's racing activities , were shown the vehicle the week before the motor show and signed off on the concept , allowing its unveiling . The car received an overwhelmingly positive reception by public and press , and a number of wealthy Jaguar enthusiasts handed over blank cheques to secure a purchase option should the XJ220 concept go into production . Ferrari 's display of their F40 model at the same event was overshadowed ; an estimated 90 @,@ 000 additional visitors came to see the Jaguar XJ220 .

The XJ220 was not initially intended to be a production car , but , following the reception of the concept and financial interest from serious buyers , a feasibility study was carried out by teams from TWR and Jaguar . Its conclusion was that such a car would be technically feasible (subject to engineering changes) , and that it would be financially viable . The announcement of a limited production run of 220 to 350 cars came on 20 December 1989 . The list price on 1 January 1990 was £ 290 @,@ 000 exclusive of value added tax , options and delivery charges , but by 1992 that had increased considerably owing to indexation of contracts . The offer was four times oversubscribed , and deposits of £ 50 @,@ 000 exclusive of Value Added Tax (VAT) were taken from around 1400 customers ; first deliveries were planned for mid @-@ 1992 .

= = Production version = =

Jaguar were unable to develop the XJ220 in house as their engineering resources were committed to working on the Jaguar XJ and Jaguar XJS models ; the re @-@ engineered and facelifted XJS was launched in May 1991 .

Jaguar and TWR had an existing joint venture , JaguarSport Ltd , formed in 1987 to produce racing cars . Jaguar 's board made the decision that subject to contractual agreement , TWR and JaguarSport would be responsible for the XJ220 . JaguarSport formed a new company , Project XJ220 Ltd , specifically to develop and build the XJ220 .

The team that should determine the necessary engineering work and assess the car 's financial viability was put in place during mid @-@ 1989 , working from the TWR workshops . Mike Moreton headed the team , joining TWR to run the XJ220 project . Moreton came from Ford Motorsports where he led the team responsible for the Ford Sierra RS500 Cosworth , and was a project manager for the Ford RS200 Group B rally car program . Richard Owen was appointed chief designer , and the remainder of the team was made up of Jaguar and TWR staff , including Pete Dodd , the only member of the group of twelve responsible for the XJ220 concept . The exterior and interior designers who had worked on the XJ220 prototype , Keith Helfet and Nick Hull , rejoined the project when it became clear that more design work would be needed .

= = = Development = = =

The development team looked at the two principal competitors , the Ferrari F40 and the Porsche 959 . These were powered by compact , lightweight engines ; both the Ferrari and the Porsche used forced induction to obtain high power outputs from small @-@ displacement engines . Ferrari used a 2 @.@ 9 @-@ litre twin turbo V8 that produced 478 PS (352 kW ; 471 hp) whilst Porsche used a 2 @.@ 9 @-@ litre twin @-@ turbo flat six producing 450 PS (330 kW ; 440 hp) , resulting in cars that were significantly lighter and smaller than the XJ220 concept : the Ferrari was lighter by 600 kg and 710 mm shorter , whilst the Porsche was 250 kg lighter and 870 mm shorter . The Porsche 's specifications were closer to the Jaguar 's , with four @-@ wheel drive and a luxurious interior . By comparison the rear @-@ wheel driven Ferrari had a very basic interior , with no carpets , door handles or a stereo .

= = = Engine = = =

The production XJ220 used a 3 @.@ 5 @-@ litre (3498 cc) twin turbocharged engine , which was given the designation Jaguar / TWR JV6 . This engine , which replaced the Jaguar V12 engine featured in the concept car , was a heavily redesigned and significantly altered version of the Austin Rover V64V V6 engine . The decision to change the engine was based on engine weight and dimensions , as well as to environmental emission considerations . Use of the shorter V6 engine design allowed the wheelbase of the XJ220 to be shortened and its weight to be reduced ; the V12 engine was definitively ruled out when it was determined it would have difficulty in meeting emissions legislation whilst producing the required power and torque .

TWR purchased the rights to the V64V engine from Austin Rover in 1989 and developed a completely new turbocharged engine , codenamed JV6 , under the auspices of Allan Scott , with proportions roughly similar to the V64V , and suitable for Sportcar racing . TWR redesigned all parts of the engine , increasing the displacement to 3 @.@ 5 litres , and adding two Garrett TO3 turbochargers . The JV6 engine would first be used in the JaguarSport XJR @-@ 10 and XJR @-@ 11 racing cars ; its compact dimensions and low weight made it an ideal candidate for the XJ220 . The engine had a 90 ° bank angle , four valves per cylinder and belt @-@ driven double overhead camshafts . It shares a number of design features with the Cosworth DFV Formula One engine .

The V64V engine chosen had a short but successful career as a purpose @-@ designed racing car engine . It was designed by Cosworth engine designer David Wood for Austin Rover Group 's Metro derived Group B rally car , the MG Metro 6R4 . The redesign work necessary to create the Jaguar / TWR JV6 engine was undertaken by Andrew Barnes , TWR 's Powertrain Manager , and also involved Swiss engine builder Max Heidegger who had designed and built the race engines used in

the XJR @-@ 10 and XJR @-@ 11 racing cars .

The XJ220 's engine had a bore and stroke of 94 mm × 84 mm (3 @.@ 70 by 3 @.@ 31 inches) , dry sump lubrication , Zytek multi point fuel injection with dual injectors and Zytek electronic engine management . The engine was manufactured with an aluminium cylinder block , aluminium cylinder heads with steel connecting rods and crankshaft , and in the standard state of tune , it produced a maximum power of 550 PS (400 kW ; 540 hp) at 7200 rpm and torque of 475 lb · ft (644 N · m) at 4500 rpm . The XJ220 can accelerate from 0 ? 60 miles per hour in 3 @.@ 6 seconds and reach a top speed of 213 miles per hour .

The exhaust system is equipped with two catalytic converters , which reduced the power output of the engine . During testing at the Nardò Ring in Italy the XJ220 , driven by 1990 Le Mans Winner Martin Brundle could achieve a top speed of 217 @.@ 1 miles per hour when these catalytic converters were removed and the rev limiter was increased to 7,900rpm ; owing to the circular nature of the track , a speed of 217 mph (349 km / h) is equivalent to 223 mph (359 km / h) on a straight , level road . The V64V engine had the additional benefit of being very economical for such a powerful petrol engine , it was capable of achieving 32 mpg @-@ imp (8 @.@ 8 L / 100 km ; 27 mpg @-@ US) , in contrast , the smallest @-@ engined Jaguar saloon of the time , the Jaguar XJ6 4 @.@ 0 could only achieve around 24 mpg @-@ imp (12 L / 100 km ; 20 mpg @-@ US) .

= = = Transmission = = =

Four @-@ wheel drive was decided against early in the development process , for a number of reasons . It was thought rear @-@ wheel drive would be adequate in the majority of situations , that the additional complexity of the four @-@ wheel drive system would hinder the development process and potentially be problematic for the customer . FF Developments were contracted to provide the gearbox / transaxle assembly , modifying their four @-@ wheel drive transaxle assembly from the XJ220 concept into a pure rear @-@ wheel drive design for the production car . A five @-@ speed gearbox is fitted ; a six @-@ speed gearbox was considered but deemed unnecessary , as the torque characteristics of the engine made a sixth gear redundant . The transaxle featured a viscous coupling limited slip differential to improve traction .

The transmission system featured triple @-@ cone synchromeshing on first and second gears to handle rapid starts , whilst remaining relatively easy for the driver to engage and providing positive feel .

AP Racing provided an 8 @.@ 5 in (22 cm) diameter clutch .

= = = Exterior = = =

The exterior retained the aluminium body panels of the XJ220 concept , but for the production vehicles , Abbey Panels of Coventry were contracted to provide the exterior panels . The scissor doors were dropped for the production model , and significant redesign work was carried out on the design when the wheelbase and overall length of the car was altered . Geoff Lawson , Design Director at Jaguar took a greater interest in the car and insisted the design had to be seen to be a Jaguar if it was to be successful in promoting the company . Keith Helfet returned to undertake the necessary redesign work mandated by the change in the wheelbase , which was reduced by 200 mm . The turbocharged engine required larger air intakes to feed the two intercoolers . Situated between the doors and the rear wheels , the air intakes were larger on the production version of the XJ220 than on the concept car . A number of small design changes for the body were tested in the wind tunnel ; the final version had a drag coefficient of 0 @.@ 36 with downforce of 3 @,@ 000 lb (1 @,@ 400 kg) at 200 mph (320 km / h) . The XJ220 was one of the first production cars to intentionally use underbody airflow and the venturi effect to generate downforce .

The rear lights used on the production XJ220 were taken from the Rover 200 .

= = = Chassis = = =

The production model utilised the same Alcan bonded honeycomb aluminium structure vehicle technology (ASVT) as the concept car for the chassis . The chassis design featured two box section rails which acted as the suspension mounting points and would provide an energy absorbing structure in the event of a frontal impact , these were successfully tested at speeds up to 30 mph (48 km / h) , an integral roll cage formed part of the chassis and monocoque , providing additional structural rigidity for the car and allowing the XJ220 to easily pass stringent crash testing .

The rear @-@ wheel steering was dropped from the production car to save weight and reduce complexity , as was the height adjustable suspension and active aerodynamic technology . The suspension fitted to the production model consisted of front and rear independent suspension , double unequal length wishbones , inboard coil springs and anti @-@ roll bars , with Bilstein gas @-@ filled dampers . The suspension was designed in accordance with the FIA Group C specifications .

The braking system was designed by AP Racing and featured ventilated and cross @-@ drilled discs of 13 in (33 cm) diameter at the front and 11 @.@ 8 in (30 cm) diameter at the rear . The calipers are four pot aluminium units . JaguarSport designed the handbrake , which are separate calipers acting on the rear brake discs . Feedback from enthusiasts and racing drivers resulted in the decision to drop the anti @-@ lock braking system from the production car . The braking system was installed without a servo , but a number of owners found the brakes to be difficult to judge when cold and subsequently requested a servo to be fitted .

Rack and pinion steering was fitted , with 2 @.@ 5 turns lock to lock ; no power assistance was fitted . The Bridgestone Expedia S.01 asymmetric uni @-@ directional tyres were specially developed for the XJ220 and had to be rateable to a top speed in excess of 220 miles per hour (350 km / h) , carry a doubling of load with the exceptionally high downforce at speed and maintain a compliant and comfortable ride . Rally alloy wheel specialists Speedline Corse designed the alloy wheels , these are both wider and have a larger diameter on the rear wheels ; 17 inches (43 cm) wheels are fitted to the front and 18 inches (46 cm) are fitted at the rear , with 255 / 55 ZR17 tyres at the front and 345 / 35 ZR18 tyres at the rear .

= = = Interior = = =

The interior was designed for two passengers and trimmed in leather . Leather trimmed sports seats are fitted together with electric windows and electrically adjustable heated mirrors . The dashboard unusually curves round and carries onto the drivers door , with a secondary instrument binnacle containing four analogue gauges , including a clock and voltmeter fitted on the front of the drivers door . Air conditioning and green tinted glazing was also fitted .

The luggage space consists of a small boot directly behind and above the rear portion of the engine , also trimmed in leather .

= = = Production = = =

The car was assembled in a purpose @-@ built factory at Wykham Mill , Bloxham near Banbury in Oxfordshire . HRH The Princess of Wales officially opened the factory and unveiled the first production XJ220 in October 1991 .

The JV6 engines used in the Jaguar racing cars were produced by Swiss engineer Max Heidegger , but delivering the number of engines required for the XJ220 program was considered beyond his capacity . TWR formed a division , TWR Road Engines , to manage the design , development , construction and testing of the engines for the production cars . The JV6 engine used in the XJ220 featured little commonality with the engines Heidegger built for use in the XJR racing cars , being specifically engineered to meet performance and in particular , the European emissions requirements , which the race engines didn 't have to meet .

FF Developments , in addition to their design work on the gearbox and rear axle assembly were given responsibility for their manufacture . The aluminium chassis components and body panels were manufactured and assembled at Abbey Panels factory in Coventry , before the body in white

was delivered to the assembly plant at Bloxham . The car , including chassis and body components , consists of approximately 3000 unique parts .

The first customer delivery occurred in June 1992 , and production rates averaged one car per day . The last XJ220 rolled off the production line in April 1994 ; the factory was then transferred to Aston Martin and used for the assembly of the Aston Martin DB7 until 2004 .

= = Reception = =

Press coverage of the concept XJ220 in 1988 was overwhelmingly positive and contributed to the decision in 1989 to put the XJ220 into limited production . The production version of the car was first shown to the public in October 1991 , at the Tokyo Motor Show . The first car was released for press review in autumn 1991 .

Autocar reviewer Andrew Frankel was the first journalist to road @-@ test the car and reported : " Savage acceleration really is a given here . What 's really incredible about the XJ220 is its ability to provide such performance in a way that never , ever intimidates . " He was particularly impressed with the throttle response , the driver 's ability to control the performance of the car very precisely , and the way in which the engine delivers its power progressively rather than in one short burst .

Performance Car reviewer John Barker was also impressed with the performance as well as the ride and stability of the car , writing " The V6 has a rumbly , loping note which , in league with a remarkably supple ride , belies the speed we are travelling at . I glance to the speedo and have trouble believing that it is indicating 170 mph . " Barker was also impressed with the engineering , saying " this car is catalysed , fully homologated and has passed the same tests that a Volvo needs before going on sale , " going on to discuss how the vehicle looked at home on the racetrack thanks to the design . Autocar 's verdict was " Right now , the XJ220 gives us a standard by which all other fast cars can be compared . For the few who will actually own and , hopefully , use their XJ220s , the fact that they are in command of the most accomplished supercar ever made should suffice . "

Critics of the car consider it underwhelming for such an expensive , powerful and high performance machine . Motoring journalists have been critical of the interior and the car itself for being too comfortable and lacking the sense of occasion present with other supercars . Commentators who approve of the interior have criticised the luggage space as being " largely useless " . Journalists and other commentators often bemoaned the lack of the Jaguar V12 engine and other technical components fitted to the concept car . Contemporary reviews pondered on whether the sales performance and residual values would have been improved by sticking more closely to the specification of the concept car .

Sales performance was disappointing . Jaguar had intended to produce up to 350 cars , but production ceased in 1994 with 275 production cars produced , not all of which had been sold ; some left @-@ hand drive examples were still available in 1997 . The recession left many of those who placed a deposit unable to complete the purchase . The index linking of contracts exacerbated the issue , and added almost £ 200 @,@ 000 to the purchase price between early 1990 and mid @-@ 1992 . The McLaren F1 suffered from similarly poor sales performance , with just 71 cars sold against McLaren 's target of 300 . McLaren 's F1 program eventually turned a small profit thanks to the sale and servicing of the 28 GTR racing variants produced .

The price of collectible cars collapsed as a result of the recession over the six @-@ year period from 1989 ? 94 ; for example , a highly collectible Ferrari 250 GTO sold for just $ 3 @.@ 5 million in 1994 , an $ 11 @.@ 1 million loss from its sale price in 1989 . The Jaguar XJ220 had attracted a significant number of speculators who hoped the scarcity of the XJ220 and enthusiasm for the Jaguar marque would push up prices overnight , allowing large profits to be made over a short period of time .

The market for supercars was growing when the production XJ220 was announced , with comparable cars immediately reselling after delivery for three and four times the list price . The Ferrari F40 had been selling for more than £ 800 @,@ 000 in 1990 , but like the XJ220 it was adversely affected by the recession , and by 1992 prices had dropped to between £ 100 @,@ 000 to £ 150 @,@ 000 .

Further complicating the sales situation was the announcement by JaguarSport of a road @-@ going version of the Jaguar XJR @-@ 9 , the last of the racing cars to feature the Jaguar V12 engine . The Jaguar XJR @-@ 15 was developed by TWR and styled by Peter Stevens whilst the XJ220 was being developed at Jaguar , and featured the V12 engine and a host of other technologies not adopted for the XJ220 , including carbon fibre construction and the option of a six @-@ speed racing gearbox . It was considerably rarer and more expensive than the XJ220 when it went on sale ; only 50 were built , each with a list price of £ 600 @,@ 000 ($ 1 million) in 1990 . It was designed primarily for racing but could be specified as a road @-@ legal vehicle . About half were built as road @-@ going variants , which added £ 55 @,@ 000 to the list price .

Jaguar customers attempting to withdraw from their contracted purchases were given the option to buy themselves out of their contracts , but by 1995 , the issue had resulted in legal action as buyers claimed the specification changes rendered any contracts void . Jaguar produced evidence clearly demonstrating that the vehicle specification shown in the contract matched the vehicle that was delivered , and the presiding judge , John Donaldson , quickly ruled in Jaguar 's favour . The last of the unsold XJ220s were sold for £ 127 @,@ 550 plus VAT in 1997 . While never officially approved for sale in the United States , the XJ220 was approved under the Show and Display exemption by 2001 .

The XJ220 remains popular with the contemporary motoring press ; Evo journalist David Vivian , writing a head @-@ to @-@ head test between the XJ220 and the Lamborghini Murcielago in 2009 , commented that " going ludicrously fast seems trivially easy " , and acknowledged that the decision to change the V12 engine for a turbocharged V6 engine has more recently become acceptable . Vivian was impressed by the car 's ride , handling and grip .

= = Racing = =

A racing version was introduced at the 1993 Autosport International motor show ; given the model name XJ220 @-@ C , it was built to compete in FISA GT racing . The XJ220 @-@ C driven by Win Percy won its first race , a round of the BRDC National Sports GT Challenge at Silverstone .

Three works XJ220 @-@ Cs were entered in the 1993 24 Hours of Le Mans race , in the newly created Grand Touring Class . John Nielsen , David Brabham and David Coulthard won the GT class , beating Porsche by two laps ; the other two cars retired , both through engine failure . However , the class win was revoked when the Jaguar XJ220 @-@ C was controversially disqualified for failing to run with catalytic converters . The Jaguars had passed scrutiny and completed the first day of qualifying when senior steward Alain Bertaut complained that Jaguar were not running catalytic converters . The cars had been entered under the IMSA GT category and Bertaut claimed that they needed to run with catalysts . The cars ran in the race under appeal . International Motor Sports Association (IMSA) officials wrote to the Automobile Club de l 'Ouest (ACO) (English : Automobile Club of the West) , organisers of the 24 Hours of Le Mans , confirming that the XJ220s had complied with IMSA rules . Jaguar won their appeal (supported by the FIA) but were nevertheless disqualified , as the ACO confirmed that the appeal had not been lodged in time .

Four cars were entered in the GT1 class for the 1995 24 Hours of Le Mans , two by PC Automotive Jaguar and two by Chamberlain Engineering , though the latter did not run their cars . Neither team had Jaguar or TWR backing ; both of PC Automotive 's cars were outpaced by the new McLaren F1 GTR . Richard Piper , Tiff Needell and James Weaver were holding fourth position until an engine failure during the night , ending their race , whilst the second XJ220 retired after leaving the road .

An XJ220 was also used in the Italian GT Championship , although without factory support ; it raced in Martini livery . The XJ220C was promoted in the United States in the @-@ made @-@ for @-@ TV " Fast Masters " racing series at Indianapolis Raceway Park , airing on ESPN in the summer of 1993 and featuring invited drivers over 50 years old in an elimination format .

TWR developed a further six XJ220 @-@ S road cars , featuring one @-@ piece carbon @-@ fiber @-@ reinforced polymer front and rear bodywork ; the engine was tuned to 700 PS (510 kW ; 690 hp) . The XJ220 @-@ S models did away with the hidden headlamps of the original and instead

opted for perspex covered lights . The S models were essentially road @-@ going versions of the XJ220 @-@ C racer , and as a result featured a much simpler race @-@ orientated interior with kevlar seats and the removal of the leather trim . Colin Goodwin , a writer for Autocar , tested an XJ220 @-@ S in June 1995 at Millbrook Proving Ground and set the lap record at an average speed of 180 @.@ 4 mph (290 @.@ 3 km / h) .

= = Jaguar XJ220 Pininfarina = =

The Jaguar XJ220 Pininfarina is a special XJ220 built in 1995 for the Sultan of Brunei and his brother Prince Jefri , who commissioned a number of rare and one @-@ off heavily modified cars based on expensive luxury cars . This car was modified by Pininfarina , with modifications including fixed headlights , new rear lights with a redesigned double @-@ vane rear wing , and a new interior package . The car also comes with dark green exterior paint .