

PURPO



ON ROAD FOR THE
FIRST TIME IN A
RACETRACK REFUGEE;
IAN KUAH TRIES THE
JAGUARSPO RT XJR-15.

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On first sight of the stunning XJR-15 prototype, Tom Walkinshaw was unusually enthusiastic: "It looks like it's doing two hundred miles an hour while it's standing still!" Now that may be the equivalent of a footballer's 'sick as a parrot', but when the TWR that became a Jaguar is away from a motor show's neon and the dull landscape of a racetrack, the element of truth to be found in every cliché is proved. Several other contemporary supercars offer as much visual interest – amongst them Jaguar's own XJ220 – but none of them were conceived first and foremost as racing cars, none of them feature *full* composite materials construction, and none of them cost as much...

There used to be a fine line between roadgoing sports cars and sports racing cars and, until the 1970s, more often than not

the two were one and the same. But the Bugatti Type 37 and Ferrari 166 of the '30s and '40s, and the D-Type Jaguar of the '50s, have given way to the wild track-biased Group C cars of today; the gap between road and race widening all the time. The latest bout of FISA rule changes results in a World Sportscar Championship machine that is little more than a Formula One car with enclosed bodywork.

But the spirit of the original competition is alive and well at JaguarSport. Bereft of the flowing Peter Stevens-designed bodywork, the XJR-15 boasts the basic tub and running gear of the Le Mans winning Jaguar XJR-9 (1-2-3 in 1988). It could thereby genuinely lay claim to being a modern day interpretation of the glorious C and D-Types. But it doesn't. Because officially, according to its makers at TWR, the XJR-15 was *not* built as a road car.

It has no type approval and – in marketing terms – would conflict with the forthcoming Jaguar XJ220. But they are quick to point out that if an owner should wish to drive the XJR-15 on the road, it conforms to construction and use regulations and it would thus be perfectly legal for them to do so. Hence the windscreen wipers, front and rear lights and even direction indicators on what is declared as a racer...

Each of the fifty XJR-15s built has cost its lucky owner the princely sum of one million US dollars. By the time all of them have been delivered – the last car is signed off at the turn of the year – the collectors and dealers will doubtless already be at work. But how many of them will appreciate what, in material terms, is passing through their hands?

Each car, for starters, takes three mechanics eight days to assemble from tub to finished article. The

Above: Head on, XJR-15 looks exceptionally smooth rather than unduly dramatic, though on circuit, in your mirrors, it doubtless has its moments...

"THE XJR-15 BOASTS THE BASIC TUB AND RUNNING GEAR OF THE LE MANS WINNING JAGUAR XJR-9."

elegant bodywork is made entirely from carbon composites as Dave Fullerton, head of design and development of composite materials at Tom Walkinshaw Racing (TWR), was keen to emphasise.

"The XJR-15 is the first roadable (note the careful choice of term) car in the world to feature this method of construction. Cars like the Ferrari F40 and the Bugatti EB110 use carbon fibre, too, but in both cases the material is not exploited. The F40 is a carbon lookalike chassis, while the EB110 was prototyped in aluminium and then productionised in carbon composites. It's like the detailing of some classical buildings where stone is carved to replicate traditional wood construction in shape and form, even though stone has totally different characteristics."

Elaborating his argument,

Fullerton continued. "In an ideal world, you would use carbon composites in a unidirectional way and use the strength of the material. Carbon is fairly brittle, but strong in compression, while Kevlar is strong in tension. Mixing the two gives you a very light, strong material with high resistance to both tension and compression.

"We set out with the intention of using carbon composites for the whole monocoque," he explained, "and making it share imposed loads as would an alloy body, rather than just being a lightweight shell cladding a metal spaceframe chassis. Using the material as a shell is just an expensive way of saving a little weight, you'd be better off in that scenario with glassfibre!"

In the final analysis the bottom of the car is carbon/Kevlar, while the rest is pure carbon with a

honeycomb core featuring aluminium or carbon inserts for strength. The characteristics of the material made it perfect for the compound curves of the sleek bodywork.

Those curves and the rich metallic blue paint conspire to highlight any blemishes or imperfections in the surface finish of the cars. Although TWR were pioneering certain aspects of the use of composite materials in the XJR-15, the emphasis on a quality was there from the start. Perfectionist Tom Walkinshaw would have it no other way, and just to make sure that the highest standards were met he started the 48th company in his TWR Group, Derby-based STEC, to produce the chassis and bodywork for the cars.

"New techniques are being developed all the time," Fullerton continues. "Right now, composites are

Below: As a track car this is a mighty performer, on road the 450bhp and 240mph are no less sensational.



expensive for major manufacturers to apply to production cars because of the time it takes to cure the materials. As new thermo setting plastics come on stream, that time will be reduced and costs will come down. This will make them a very attractive proposition for the big car makers."

This substantial investment in technology has paid handsome dividends in the finished XJR-15. As the soft rays of the low winter sun played on the car's surface during our time with the first roadgoing example, the mirror smooth finish belied its construction. It could have been hand formed aluminium with seven coats of paint for all I knew.

That winter light also enhanced the Jaguar's simple beauty; the XJR-15 is a shape with the minimum of adornments. In the best Miesian tradition, 'form follows function', but stylist

Peter Stevens – who was on the way from Lotus to McLaren at the time – also factored 'looking good' into the equation. Indeed, so elegant and almost feminine is the XJR-15 compared to many of its ilk you can barely imagine a field of sixteen cars doing wing-to-wing battle at three-figure speeds on the toughest Grand Prix circuits of the world...

But it happened. And excuse us indulging in the opportunity to recall the events in brief. Monaco, Silverstone and Spa Francorchamps. Three circuits, three pre-Grand Prix races, three prizes. For Monaco and Silverstone each winner would receive a new 6-litre V12 Jaguar XJR-S. Victory at Spa, however, saw the ante upped to one million US dollars. The JaguarSport Intercontinental Challenge was nothing if not spectacular.

Monaco, May 11th 1991. First round of world's most expensive one make championship. The XJR-15 is more than a handful in the tight, twisty corners of the narrow Monaco street circuit, but it's first class entertainment for the huge crowd of racing fans. Derek Warwick leads all the way home, surviving a dramatic slide leaving the Massenet left-hander that exits into Casino Square. Hard on his tail is David Brabham closely followed by American IMSA Jaguar star Davy Jones.

Silverstone, July 14th 1991. The most expensive demolition derby in history; 11 of the 16 entries suffer body damage, some of it major. The cars' suspension settings had been uprated slightly to try and curb the sudden oversteering tendency some drivers had experienced at Monaco, but otherwise the specification remained unchanged. No so

Below: Interior functional and comfortable without ever being luxuriant, but then such is the manner of the machine.



"SILVERSTONE, JULY 14TH 1991, THE MOST EXPENSIVE DEMOLITION DERBY IN HISTORY..."



Detailing excellent for a race car, underlining road potential; quality badging, headphones for occupants, fuel filler and complete rear light cluster.



the manner of the race. There is pushing, shoving and spinning and to survive is to finish well up the order. Juan Fangio (the maestro's nephew) wins from Bob Wollek.

Spa Francorchamps, August 25th 1991. With a million dollars at stake the race organisers are anxious to avoid the carnage of Silverstone. The drivers are thus told only that the race will be between six and fourteen laps, thereby removing the likelihood of kamikaze runs in the closing stages. Cor Euser takes pole position, but German saloon car ace Armin Hahne passes him early in the race. Warwick gets past, too, then crashes out on lap nine. Hahne wins from Euser and Win Percy to take the 3' x 1½' seven figure cheque.

So ended this most daring of enterprises, though TWR do have the option – not taken up as yet – of a second and final JaguarSport Intercontinental Challenge in 1992. Be it short or slightly longer term, the end of the XJR-15's life as a competition car is nigh. Unsurprisingly, as we have previously suggested, in some quarters the war paint is coming off and the road fund licence discs are going on...

To drive the XJR-15 you need be slim and fit. Physical logistics and the coming workrate demand it. Open the featherweight carbon door and your gaze falls on a nicely shaped and beautifully trimmed and padded bucket seat, covered with grey Connolly hide. In time honoured race car fashion you have no option but to put your boot squarely but gently on it

and climb in over the wide sills. A reluctance to desecrate the Connolly leather makes you hesitate as driver or passenger – a second seat has been added since departing the track – but there is little chance otherwise of a graceful entry or exit.

Once installed, take a look around. The cabin is tight but comfortable, the view forward panoramic through the huge curved glass windscreen, and partly framed by the single wiper. Visibility to the sides isn't bad either, but as with all mid-engined machinery how well you see behind depends on your adjustment of the wing mirrors. Headroom is adequate, more because you sit so low than because the roof is high.

The transparent area of the XJR-15's canopy to the rear is made from high temperature acrylic with a smoked grey finish. The top panel is actually bonded to the main structure and a roll cage that braces the roof. This section can be removed to gain access to the engine, but this involves the hefty task of dismantling the entire frame. Removing a dipstick has never been more difficult!

On the race prepared XJR-15s there is a thick rimmed 13" steering wheel. In this, Tom Walkinshaw's personal car, a special Nardi wheel with a flattened, inverted bottom is used. Despite my average height and build (*exceptionally average -Ed*), I appreciated the extra thigh room it gives. Ahead of the driver, set into the Kevlar panel that is dash, is a speedometer that reads to 220mph and a tachometer



that stops at 7000rpm with no red paint in sight. The 450bhp is developed at 6250rpm hence it isn't necessary. Also within the binnacle are four minor gauges, three away to the left noting oil pressure, temperature and volts, while alone on the right is a water temperature dial. On the front bulkhead are sited the emergency kill switch for the battery and no less than four further switches that have to be activated in sequence to start the engine. Ignition. Fuel-injection. Fuel pumps. Starter. Check.

To the driver's right, alongside the sill, is a short, stubby gearlever which controls six forward speeds with reverse to the left and forward. The 'box is a TWR racing unit with no synchromesh, though a five-speeder with synchromesh is available as an option at

£55,000, all but the price of the JaguarSport XJR-S cars given to the winners of the Monaco and Silverstone races...

Perhaps the most important piece of kit inside the car, for the less than hardy anyway, is the pair of ear defenders clamped around each headrest. During a jog around the country lanes, or even a few laps of the circuit, you will want to savour the burble and occasional scream from the 6-litre V12 Jaguar engine. On a long journey or under racing conditions you will not.

Strapped in comfortably I turn the red master switch clockwise and hit the top three toggle switches in sequence. Taking a deep breath I go for the fourth which has a spring return. A whir from somewhere aft and the fuel-air mixture thumps the twelve pistons

into life behind me, the engine catching first time as the Zytech electronic fuel and ignition management system plays nanny to 450 horses. Throttle response is sharp and angry and each blip of the pedal rocks the car with the promise of the 420lbs/ft of torque that reaching 4200rpm will bring.

The triple plate carbon-fibre clutch is heavy but progressive I discover, selecting first and then feeding in the power. When it starts and idles, the roadgoing engine – with a muffler aft of each manifold – is quiet from the outside. As you accelerate away it begins to snarl as you pass 3000rpm, and then works up through a howl into a scream as the revs build. At low rpm you can hear the racing gearbox clattering and clonking, but as crank speeds increase it turns into a high pitched whine. In

Above: Peter Stevens, the designer of the Lotus Elan and the forthcoming McLaren F1, styled JaguarSport XJR-15, a functional but beautiful form.

the confines of the cockpit the aural assault is amplified, the difference between open and protected ears being that of near pain and the sound level of a normal road car.

I take it easy at first, to establish the best change technique of the straight cut gears. It seems you just try and match revs and gear as best you can and punch the heavy, long throw lever into the required slot. This is no small capacity screamer.

With six litres to spare, the torque available is persuasive. The bottom end of the engine is to Jaguar's Group C specification, the top end from TWR's Group A XJ-S and in this state of tune there is bags of low down grunt. On the open road you can use fourth gear nearly everywhere, although this again is open to choice. Gear sets are available that give either staggering acceleration and a 185mph top speed, or super long legs for merely breathtaking acceleration and a top whack of 240mph.

In roadgoing form, the XJR-15 gets a slightly raised ride height, softer springs and dampers and Bridgestone RE71 tyres on the 9.5J x 17" and 13J x 17" OZ Racing alloys.

Considering its racing pedigree, ride quality is pretty good – at low speeds better than a Ferrari 348tb.

Whatever the XJR-15 might be like on a race track, it is totally docile on the road. Levels of grip are far beyond those transgressed by any sane man, except perhaps when exiting a tight corner in a low gear when the sheer grunt pushing you through can persuade the huge Bridgestones to relinquish some grip. Seat of the pants feel and communication is terrific and the steering nicely weighted so that smooth inputs are easy. When it comes to stopping, the huge AP racing brakes – with softer pads for road use – wash off speed with steely determination.

Compared to its trackside alter ego, the XJR-15 for the road feels less sharp, less razor edged. But because of its overall balance of controls and a chassis so responsive to throttle and steering, it is quite delightful once you are used to the heavy gearchange. On a race track, on slicks and on the limit, it could be something else, but then that's somebody else's problem!

Oh, and though the

JaguarSport car's 450bhp may not seem that much when compared on paper with many of today's supercars making 500bhp and more, remember that the XJR-15 is considerably lighter. At 2316lbs, it's no heavier than a Volkswagen Golf GTI...

The JaguarSport Intercontinental Challenge has left behind several important markers. For Tom Walkinshaw, the XJR-15 is a showcase for the engine, chassis and advanced body materials capabilities of his TWR Group. Almost complete mechanical reliability has been proven in the three hard races, and in its relatively soft state of tune the XJR-15 should live a long and happy life in normal road use.

The car also proves TWR's understanding of the correct use of composite materials, something to watch for in the coming months as they prepare to enter the Formula One fray with Benetton.

But for us road car freaks, just as important is the legacy of these fifty cars which fill so well the role of D-Type Jaguar of the 1990s. For as previous generations have thrilled to the road and track exploits of Jaguar, so now can we.

Below: Le Mans winning XJR-9 basis of the XJR-15 a little more evident from open, and extremely noisy, rear end.

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