

PERFORMANCE CAR

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— E X C L U S I V E —

CLAWS OUT!

ARDEN'S 330BHP BI-TURBO JAGUAR

SUPERCAR FINE ART PRINT – FREE WITH THIS ISSUE

RHINE GOLD

Take one thoroughly English Jaguar XJ6, one highly respected German tuner, stir in two Japanese turbochargers and a dash of style, and what do you get? You get the elegantly understated 330bhp, 160mph Arden Biturbo Jaguar which **Brian Laban** has been driving around the Lower Rhineland district from where it hails. Arden's philosophy is to build the customer exactly what he wants; say no more.

Creative crunch-time: it is 6.30 on a Thursday evening in early April and I am sitting in around £37,500-worth of spectacularly quick but elegantly understated motor car, not so much on as in the flood swollen Rhine.

The level of the river is precisely the level where photographer Tim has spotted a potential cover shot, first glimmer of creative promise in a long and so far desperately dispiriting day. This part of the Rhineland is not turning out to be a photographer's dream.

It isn't exactly paradise for the writer either. The dull brown water

is swirling and racing over the concrete bank where the locals usually take their evening constitutional, bobbing the boat from which a couple of old boys are optimistically dangling their fishing lines, and ebbing and flowing around the expensive, wide-shod BBS wheels of our Arden Biturbo Jaguar.

I am obeying photographer's orders, shuffling the car a couple of feet forward, a couple of feet back to get into position, all just a few inches from where the surging river meets the road in a sheer and deep wall.

The midnight blue metallic Jaguar with the





Photograph by Tim Androu

matt black trim and the mean demeanour has 330bhp on tap, twin turbochargers and an automatic gearbox. I am being very delicate with the throttle, very positive with the brakes and I can't help remembering all the things I've ever read about runaway autos. Tim is rushing to catch the sunset; I am wishing I was something sensible, like a milkman.

The Rhine itself is amazing here at Duisburg, one of the largest inland ports anywhere in the world. The huge ships and barges which are plying past every few minutes are thundering along like bats out of hell with the tide, out towards the Dutch border and the North Sea, or fighting almost at a standstill head-on into it, deeper into the industrial heartland of Germany.

Mercifully, they seem to create very little wash.

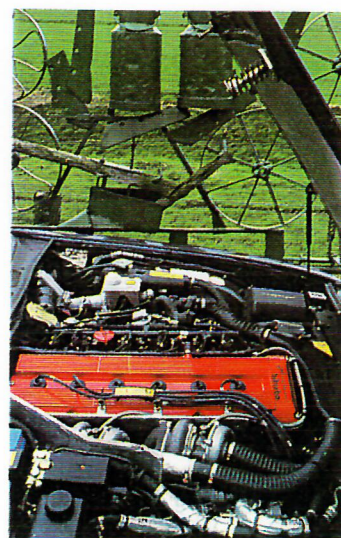
A canoeist is taking his chances around the confluence with the Ruhr where we are shooting; he's surging along as if on rapids with the flow and then fighting back head-down and struggling in the lee of the bank before playing it all again: savage amusement even from where I'm sitting with nothing more than my feet wet.

And then at about 8 o'clock with the church bells ringing in the distance, the *Terra Zwindrecht* storms into view, racing along on the tide, presumably from Cologne. On the four open-piggy-back decks of the *Terra Zwindrecht* I mentally calculate there are about 350 brand new Fords of various ilk, Scorpions and Sierras mainly but whatever they are it is an incredible sight.

And then it all falls into perspective: for Ford's mighty German factories, that whole cargo is just a few hours production; and Jochen Arden's total annual turnover in new Jaguars would barely fill half a deck. There's the difference between the common



Externally, Arden's changes to the XJ6 are subtle and beautifully finished. Under-bonnet part of conversion is also impressively neat, but rather more extreme in effect



herd and the connoisseur.

In Germany, even though things are gradually changing, any kind of Jaguar still has a degree of novelty; a twin-turbocharged, 330bhp, 160mph XJ saloon without a hint of brightwork and with the stealthy poise of a panther has the locals transfixed. Dodging the lapping waters I spell it out in broken German for the umpteenth time: 'Ist Arden Jaguar, sechs-Zylinder Motor mit zwei Turbolader, drei hundert dreiig PS, zwei hundert sechsig kph...' And always the reaction is the same: 'Ah yes, Arden - nice car, nice car...'

Never Jaguar, I noticed, always Arden...

We collected the nice car from Arden sales and PR man Heinz Richter, in Holland, at Amsterdam's Schiphol airport, and headed straight back for the German border near Arnhem and Nijmegen, just a few miles from Arden's base in Kleve.

If you must run a high performance car with German numberplates to a tight schedule in heavily speed-restricted Holland, it's just as well to have one like the Arden Biturbo, which keeps a relatively low-profile.

That's the first striking thing

about the car, it is actually quite subtle. The neatly fitted, beautifully finished bodywork changes don't scream aggression, just a little touch of individuality; the body-coloured nose and tail spoilers and the small sill extensions aren't big enough to shout boy-racer but they would warn the knowledgeable observer that this is not a cat to be teased.

We played ourselves into it easily, cruising quickly but not offensively quickly across Holland on the smooth, flat, boring A2 and A12 - with just the occasional burst of boost for reassurance and to ease the motorway tedium. And we began to notice



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the differences a little at a time.

Jochen Arden has said that he sells Jaguars first and Arden Jaguars second, and that soon becomes apparent. All the best of the XJ6's character is still what defines this car, the Arden touch of massively flexible added performance is all pure bonus.

If you need any further reminding, we love the basic product and we even run one as a long term test car, but there's never much resistance round here to more of a good thing.

Arden have a good base on which to start, with Jaguar's now well-established 3.6-litre AJ6 engine. The in-line, all-alloy, six-cylinder engine as it leaves Browns' Lane is almost square in configuration, at 91x92mm bore and stroke, for a capacity of 3590cc. With a compression ratio of 9.6:1, four valves per cylinder operated by chain-driven twin overhead cams, and Lucas electronic injection, it gives 221bhp at 5000rpm and 248lb ft of torque at 4000rpm.

As standard it is a much more refined engine now than when it first appeared but, being nitpicking, unless you are prepared to use the gears (manual or auto) it does still lack some of the slogging flexibility and low speed response of, say, a big BMW or Mercedes six.

That is certainly not something you could accuse Arden's Biturbo version of.

Arden's top-of-the-range XJ6 engine uses small twin IHI turbochargers with an air-to-air intercooler, a special stainless steel exhaust system, modified fuel injection and ignition profiles and modified pistons to bring the nominal compression ratio down to 8.5:1 (because they initially had numerous head problems with higher ratios).

It is a tremendously neat installation given the already crowded under-bonnet space and the necessary complexity of the

Michelin-shod BBS wheels complete changes to suspension and running gear - give plenty of grip but car could still be more firmly sprung and damped. Cabin is almost standard

plumbing, and it is the same whether or not the car has air conditioning.

Looking back from the nose of the car, the two IHI turbos sit adjacent to each other and at around cylinder head height to the left of the motor. The down pipes are specially cast in heat resistant alloy steel (with both Jaguar and Arden logos cast in) and there is a wall of heat shielding between the turbo installation and the bodyshell.

Most of the visible intake plumbing (separate air ducts for each turbo) passes around the front of the block and via an extra large air filter in the standard box, but with bigger trunking. There is a big air-to-air intercooler low down behind the centre grille of the new front dam, the underbonnet is neatly lined with a fitted aluminium foil heatshield and there is a small NACA duct let into the bonnet immediately above the two turbos, but apparently cooling has not been a problem and in all our time with the car, either at maximum speeds or crawling for photography, it never gave a moment's cause for concern, which is certainly more than can be said for some conversions.

Unlike some converted cars, the Biturbo retains full use of all the associated electronic gizmos in the standard package – the fuel computer still works for example, in all its modes.

And the only slightly flamboyant touch under the bonnet are the big bright red cam covers bearing the gleaming legend 'Arden Biturbo'.

The result of all that engine work is a bill for 29,500Dm plus taxes (say £10,950 with 15 per cent VAT), an increase in maximum power to 330bhp at 5500rpm and an increase in peak torque to 332lb ft at 3900rpm. Put it another way, peak power increases by almost exactly 50 per cent and peak torque by 34 per cent – and at marginally lower engine speed.

It is not difficult to imagine



that it will transform the car, but what is initially surprising is that it detracts nothing from the refined and essentially docile behaviour which Jaguar work so hard to achieve – not, that is until you really ask it to deliver.

Actually, there are two things which give the Biturbo away immediately as something out of the ordinary and they are the changed exhaust note and a very strange tickover. Where the stan-



dard car is barely audible the Arden Biturbo has a definite sporting edge (not loud, just different) and the tickover note hunts up and down almost musically as you

sit with engine idling in traffic.

There are other clues inside the car. The smaller, three-spoked leather rimmed wheel is a minor sign, the two additional VDO gauges set low down on either side of the gear selector are more revealing. One is a boost

gauge, reading from -1 to +1.5 bar, the other is an exhaust temperature gauge, reading from 150-900°C – turbochargers get very hot, especially in Germany where you can cruise at very high speeds forever on unrestricted autobahns.

Not so in Holland, where there is no trouble in keeping the temperature gauge down in the 6-800°C range where it should normally stay. In fact, it's apparently OK to run at up to 900°C, but if you do, you must remember to slow down towards journey's end and let the temperature come down before switching off the motor and causing probable turbo damage.

The boost gauge normally reads up to a maximum just short of 0.5 bar, at which point the power is really quite phenomenal even in this relatively big and weighty saloon.

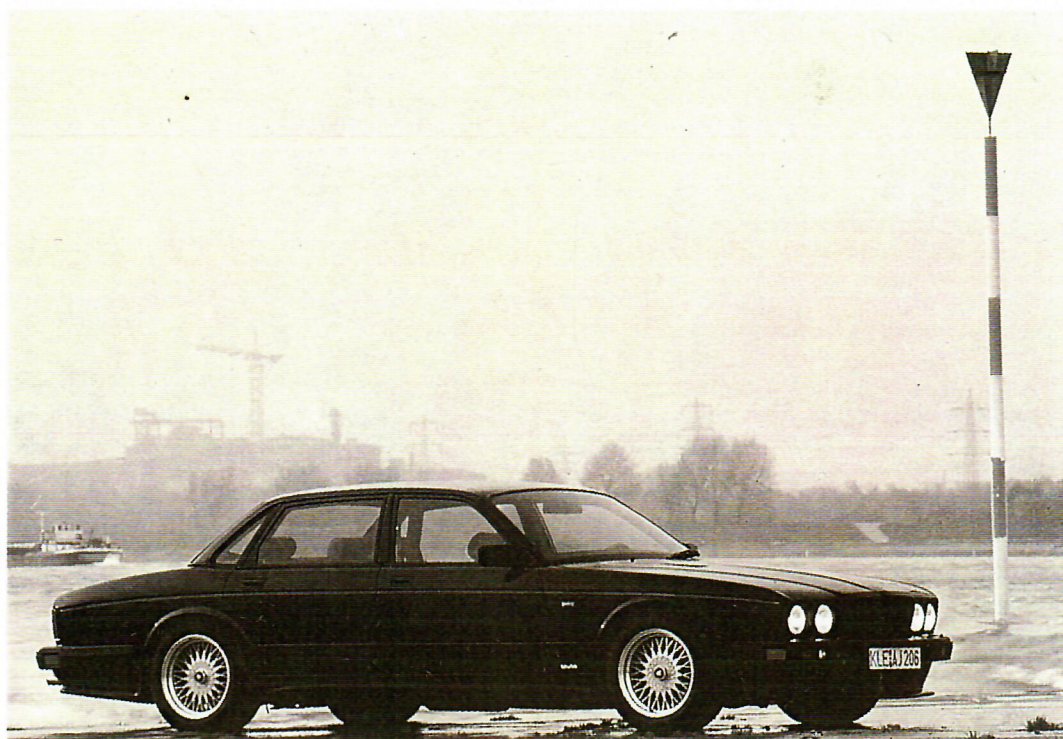
In fact the XJ6 weighs in at a hefty 3900lb, which gives the standard car a power to weight ratio of just 127bhp per ton, which is respectable but by no means exciting. Arden's 330bhp whips that up to a much more interesting 190bhp per ton – taking the XJ6 out of, say, Honda Legend and Vauxhall Senator territory and into the loftier reaches of maybe a Ferrari 328 or a 911 Targa.

It doesn't, of course, turn it into a sports car. Even with Arden's complete suspension package (with shorter, stiffer springs for a slightly lower ride-height, specially made Koni dampers all round and a degree of modification to the self-levelling system – to you 2900Dm, about £1000 with VAT), the XJS still feels like the executive saloon that it is. The ride is still compliant, noise levels low and the interior has that leather, Wilton and walnut ambience which seems to work so much better for Jaguar than it does for Mercedes or BMW – even though there's a lot more plastic in evidence around it these days and some of the instruments and switchgear are something less than up-market.

And, of course 'our' car was not the five-speed manual which we would have chosen as a customer, but the ZF four-speed auto equipped option which Arden showed off for the first time at this year's Geneva show and which he chooses to use as a demonstrator.

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Arden also reckons that the



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turbocharged car is actually quicker with the auto than with the manual 'box, because the ratios are better suited to the characteristics of their engine. If you really want to feel in charge, though, a manual has to be hard to argue against.

At least the Jaguar has the superb 'J-handle' change on its auto, effectively giving a degree of manual control over the top three gears, and the 'box itself obviously is well-gearred and responsive, but it still wouldn't be our first choice with this engine.

Still, matters of choice notwithstanding, on the autobahn the Arden Biturbo is in its element. Like the standard car, it will cruise all day at three figure speeds, but the big bonus is all that extra power in reserve for the times when you need that little bit more. Like picking off the middle lane dawdlers through the occasional overtaking lane gap, or taking advantage of the long open stretch that

opens out ahead and invites you to go for the big numbers.

It is an impressive engine, no argument, but so refined as to be incredibly deceptive. It feels smooth and lazy and then, all of a sudden, insistently but never violently, it begins to take off. The boost begins to build from about 2500rpm, though it's quite difficult to say when it actually moves into the positive because of the way the auto responds. There's enough power off-boost for the Jaguar rarely to be embarrassed anyway, so there isn't a great feeling of turbo lag and the two small compressors pick up boost very quickly. By 3000rpm the motor is pulling very strongly indeed, past maximum torque at 3900rpm and on to maximum power (and the redline) at 5500.

It starts to be particularly impressive anywhere above 100mph, where the intermediate flexibility is absolutely wonderful. With the automatic gearing, 100mph corresponds to about 3300rpm in fourth or 4800 in third. The full-bore up-changes come at about 87mph from second and 118mph from third, which is a good spread on the autobahn.

And the Biturbo goes on delivering for a very long time. On several suitably quiet stretches of three-lane autobahn, it would positively thunder round to maximum revs and slightly beyond on the rev-counter, the needle well off the end of the scale on the standard speedometer in the overdriven fourth gear – and, according to the calculator, pulling pretty well exactly the 260kph which Arden claim. That's just over 160mph, which is by no means shabby for a fully

Elegant Jaguar lines are still relatively rare sight in Germany, even in prosperous towns of the industrial Rhineland – but Jaguar market is growing steadily as image improves

equipped four-door, five-seater luxury car with a drag coefficient according to Jaguar of 0.37Cd.

At that, the exhaust sounds crisp but not over loud, the big Michelin tyres are whooshing slightly across the smooth surface, but no more, the wind noise is reasonable, the car is absolutely rock-steady and the temperature gauge, as expected, climbs towards the top of its scale. There is no more drama to it than that; it is 330bhp and 160mph of entirely usable potential.

But, of course, you say, there has to be more to it than that, and, up to a point, there is.

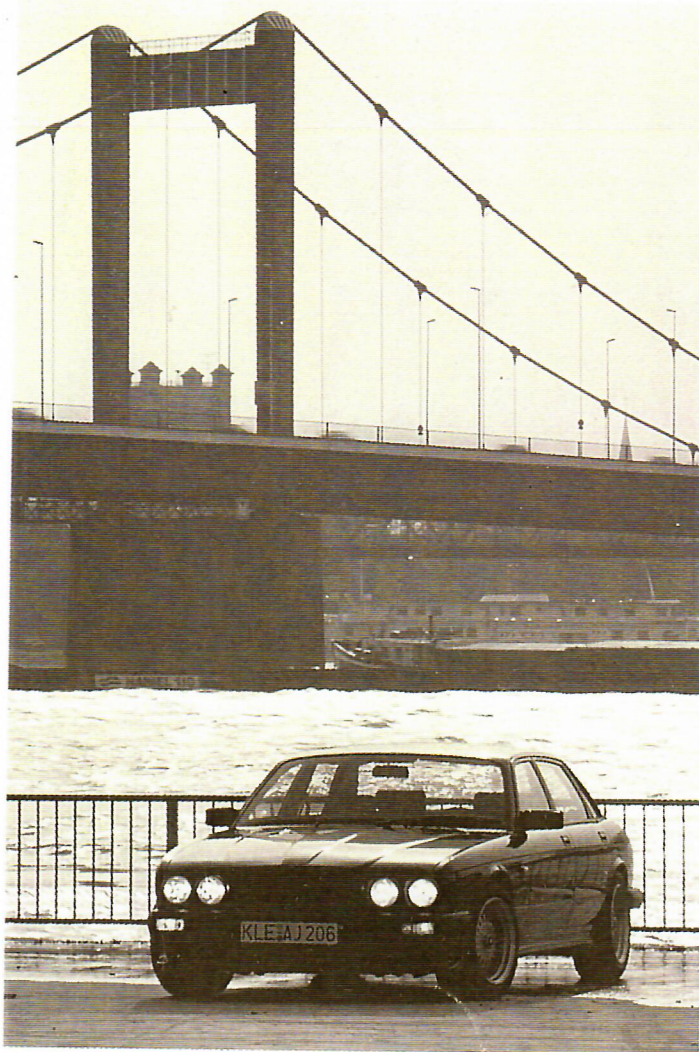
Having called in at Kleve (which has a much older English connection that Jochen's Jaguars, having been the Cleve in Anne of Cleves), we spent the rest of our first day with the car desperately searching for photographic locations – hence the dip in the Rhine. It was not our usual drive story, carefully planned and executed with military precision (so to speak); no to be honest, around the flat and visually dull Rhineland landscape, we had to make it up as we went along and the roads we found were pure pot-luck.

They varied from quite major roads with fantastically smooth surfaces and few corners, to appalling rough country backwaters where the car could usefully have been half its size.

The results varied; on the quicker roads which are nearer in character to an A-road than to a B-road, the car was fabulous. It isn't a surprise that Jim Randle's superbly controlled, all-wishbone suspended chassis can handle the extra power, and that's what happens. On these sort of roads, the suspension changes don't have much influence. In long, fast bends, the car settles in early and the assisted rack and pinion steering remains nicely weighted and quickly responsive – especially through the chunkier wheel.

There is very little body roll in steady state cornering and (on 240/45VR15 Michelin TRX tyres on wide BBS rims), a great deal of both grip and feel. It doesn't respond badly to lifting off in a corner even when approaching its limits, and it has terrific traction out of corners, even with this torque, which gives the pronounced anti-squat geometry something to think about. What's more, the standard Jaguar brakes are well capable of handling the added performance and never gave a moment's worry at any speed.

It is only as you move onto smaller and smaller roads that the Arden Jaguar, in this guise at



least, becomes frustrating. A few tenths of a second on the already blistering acceleration would be no price at all to pay for the added dimension of a manual gearbox.

The acceleration figures which Arden claims incidentally are 0-62mph in 6.8 seconds and 0-100 in 17.2 seconds – and at that the car is just getting into its stride.

What is wrong with the combination of turbo and auto on a twisty road (and in a big car) is having to strike the balance of control between the boost building and the auto responding – even, in extreme circumstances, kicking down.

Given open spaces and quick corners, that isn't a problem, but going hard at a twisty road, even using the 'Randle handle' gear selector effectively as a manual, the car leaves a nervous feeling of being no more than maybe 75 per cent certain of what's about to happen. And that leaves at least 25 per cent of frustration at not being able to exploit all that glorious power.

In the dry, it is no more than frustrating, in the wet it was occasionally worse than that, with the boost coming up rapidly accelerating out of a corner, the auto kicking down and the tail coming flying past the side win-

dow. It's eminently catchable but it shouldn't have to be.

Really, the demonstrator car is a compromise. The motor is absolutely fabulous, the finish and build quality are faultless, and the general credentials of the car are pure Jaguar, accentuated by Arden rather than dispensed with, and none the worse for that. For the executive in a hurry, it is probably the perfect driving machine; for a cynic with a hooligan streak, it is so easy to crave more.

The car is still quite softly damped in spite of the suspen-

sion changes. On flick-right/flick-left combinations the roll is too pronounced, it stops too sharply and rebounds too much before it settles properly. The steering in the same sort of corner feels over light, too sensitive. It all takes just too long to settle into the corners at the sort of pace it can now generate. It has terrific grip but not much poise in other words, and in these circumstances, turbos, auto and all, you need to be very brave to explore the outer limits.

And if you are going to buy a car like the Arden Biturbo, isn't that what you're going to want to do sometimes?

OK, I'll admit it; that is criticising a car for nothing worse than being in a configuration which I personally would never order. Give this one a manual gearbox and some slightly stiffer springing (even compromising ride a little) and it would be utterly sensational. And remember, Arden's whole philosophy is to give the customer exactly what he wants. Even the comprehensive price list for tuning modifications for the XJ and XJ-S says loud and clear: 'Please, consult us and we will build your individual Jaguar'. If this car is anything to go by, I have absolutely no doubt at all that Arden could do that without any of those little frustrations.

It would positively
thunder round to
maximum revs and
slightly beyond on
the rev-counter, the
needle well off the
end of the scale on
the standard speedo...

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