

BANG for BUCK

ALPHA

The Alfa 33 has always been appealing. Now that they are also affordable Mark Chillingworth checks out how to make them more exciting still



ALFA ROMEO BOXER

The Alfa Romeo boxer engine has been popular with tuners, racers and specialists ever since it hit the streets in 1972 in the venerable AlfaSud. This metamorphosed into the Alfa Romeo 33 in 1983/84. Having been replaced by the 146 and 145 recently, these are now bargain fast cars, with a true Italian driving style and handling characteristic; ie awkward but fun. With a stock of good 33s and the occasional Sud on the used market, now is the time to get one, tune it up and have some fun. We visited two of Britain's top Alfa tuners to see what you can do and for how much. BLS Automotive in Lincoln has been preparing the Alfa boxer engine for 22 years and presently prepares a number of competition 33s and Suds. Bianco Auto Developments of Mitcham also tune and race prepare the boxer unit. BLS offers four conversions for the 1.5- and 1.7-litre engine. It is at this point I must point out that these two engines are basically the same lump with a different bore, almost all the components, bar the pistons, are exactly the same. And there is the answer to one conversion you can do for extra power. If you have a 1.5 and it's not enough, find a 1.7 unit and throw it in, but make sure it is not one of the late injected unit, as this means putting in all the complicated electronics. The basic 1.5-litre engine produces 105bhp, while the 1.7 punches out a respectable

118bhp, a rise of 13 lucky horses. "It is a cheap and easy way to get some extra power and torque," Tom Shrub of BLS said. Bianco agrees and claims that this is the cheapest and easiest way to upgrade a Sud or a 33. ■

STEP ONE
£227 - 115bhp



For just over £250, BLS will do the simplest of changes to your car. Being a boxer engine means that each bank of cylinders has its own carburettor and also there is plenty of space under the bonnet. Thus you can throw on a massive pair of filters on to each carb, which are £32 each. If you are going to help it inhale, you had better help it exhale. BLS offers a 2in stainless steel exhaust system. They retain the standard manifolds as they are very good and cheap. Their system retails at £195 and is suitable for road or competition purposes. "This is a cheap and very easy way to free up the engine and it sounds very nice, if you do not want to do any dismantling," Tom said.

Bianco will add a decent exhaust system. "We usually use an Ansa, Supersprint or BTB system. In our experience a BTB is the best system you can fit," said Gary Walker a partner with Harry Wright at Bianco. They believe that although the Ansa system looks good it is very expensive, £268 for the middle and end parts. Bianco would keep the standard manifold and match it up with a BTB system. The Mitcham company advises that you use a K&N filter as in their experience these filter a lot of dirt out, but still let plenty of air in. In their competition cars they use Piper Cross filters, which allow even more air in, but for road use they feel the K&N is a better bet at keeping the dirt out. All this should give your Alfa a 10% increase in power. □



● Above: A pair of filters and a two inch exhaust system net you an extra 10bhp according to BLS



• Above: Even if you are not going to go to this extreme improving the power of your Boxer engine is simple to accomplish providing you have access to the required readies and an understanding insurance company



• Above: You can choose between road and race camshafts to go with your big valve head, but you will need these pulleys to time them in

STEP TWO £640 - 138bhp

Stage two for BLS would be to cam the car up, if it is a late 33 unit then they would dump the hydraulic tappets that these were built with and go back to the mechanical systems that were in the original units. BLS has a range of fast road and race cams for the boxer unit.

The late 33s have a 40mm inlet valve and BLS use these heads to get more flow. "We do

conventional gas flowing as well," Tom explained. They will also fit at this level an uprated mild cam which Holbay make for them. The head will always be flowed when this upgrade is requested. The gas flowing will set you back a credit card-damaging £350, the valves are £150 for a full set and the cams are £140 for the two. Not a cheap upgrade, but if you have already done the first step, then your 118bhp as standard 1.7 is now belting out 138bhp, which is very good.

It is at this point where Bianco points out

that none of these upgrades are any good unless the engine is sound to begin with. The Boxer unit is no spring chicken and many will have a high mileage. "At 90,000 they need new valve guides," they explain. "If the bottom end of the engine is good, then their next step would be to gas flow the head and the inlet manifolds. If it is a late 1.5 engine, which has the chamber head design on then they would also advise fitting a 40mm carburettor if your budget will stretch. When making these changes they would also consider fitting the 33 16valve big end bolts. These are

made from the same high quality steel as was used on Cosworth ends. Bianco expect a gas flowed head to add between 12 and 15% more power to your unit for £640. □

STEP THREE £800 - 153bhp

Things are getting tricky now, BLS has a special race head, in which they fit new larger valves. These are 41mm for the inlets and 35mm for the outlets. This job requires new valve seats and guides to suit the new valves.

Providing this extra induction are new larger carburetors which BLS advise to be fitted. The 1.5 has 36mm twin choke



• With bigger inlet and exhaust valves you can get over the 160bhp mark. Just remember you are going to have to shell out for a pair of 45's as well as new heads



down draughts as standard, and the 1.7 has 40's BLS recommend going larger on a stage three kit.

For Bianco stage three is as far as they go in general, unless you approach them with a good unit and a Sultan's cheque book. They will also gas flow the head and balance the crank as well. Added to this is that they would skim the block a little to raise the compression ratio, "Alfa's compression ratios are never what they quote, so you can raise it safely," Harry explained. Bianco would never fit any higher than a 40mm carburettor on a car under 2.0 litres, "You can experiment with different trumpets though," Gary explained, "We have fitted 40mm trumpets to 32mm carburettors, but make sure you run some sort of filtration," they say. □

STEP FOUR HANDLING

Bianco find that many Alfa drivers are satisfied with the healthy performance of the boxer unit, and if they do modify they leave it at the exhaust and filter stage, it's cheaper on the insurance. Although the Sud and 33 were legendary for being good handlers, there is room for improvement, and that is where CCC readers come into their own.

Bianco have worked in conjunction with a company and can now supply an uprated spring for the 33 model, "This will lower and stiffen the car," Gary explained. These are a reasonable £115 for a full set. The next stage would be to fit a decent pair of rear adjustable shocks from Koni. They would also replace all the rubber bushes in the suspension, "I would always use standard ones, we have used nylon ones and they just shake your teeth out," they said. At the front Bianco would fit a pair of Konis at £120 each.

STEP FIVE £1000-168bhp

Having got your car handling like a razor, now is the time to add even more power. BLS will give your Alfa a complete work over for the hefty sum above, steep as it sounds, you do get a lot for your money. The whole engine is lightened and balanced and a 33 16 valve clutch is added as this is a stronger unit. BLS also like to add the big end bolts from the 16 valve. Once everything is balanced they also raise the compression ratio from 9.5 to around 10.5:1 All this



● Above: With twin carbs and air filters sitting above a fully balanced engine you can reach the dizzy heights of 168bhp. Mind you if you haven't already fitted a 16V clutch now would be a good time to do it



braking, then either Mintex or Tarox drilled or grooved discs are a good option. A set of two Tarox grooved discs from Demon Tweaks is £110.84, and a set of four pads is £60.18. □

THE FINAL OPTION

BLS claims there is a final option if you cannot find a good 1.7 unit and the 105bhp from a 1.5 just does not quench your desires. BLS can re-bore a 1.5 from its original 84mm to 87mm. This enables the use of standard 1.7 pistons. All you have to do then is correct the compression ratio and you have yourself a rather unique Alfa 33 1.6. "It is a really cheap way of getting extra output," Tom said. BLS has done quite a few and the beauty of these is that you can retain all of the standard engine parts. The boring will set you back £150, a compression change £50 and a further £40 each for the pistons. "You cannot beat extra capacity," Tom said. Hold on mate you sound like an American. □



Right: Step three involves a new BLS head which incorporates larger valves

by changing all the hoses for steel braided examples, and running the system on a good high quality fluid or race fluid, but you must remember that race fluid must be changed every year as it loses its quality. They advise that you leave the rear as standard as these do little work, so you might as well save your cash. Up front they would use a Mintex or Tarox performance pad, not the competition ones as they never generate enough heat

adds between 40 and 50bhp to your engine, but BLS insist on a full engine overhaul before this work is carried out. This is not a way of making an extra buck, but ensuring that the donor engine for tuning is up to the extra stress that is to be placed on it. □

and you end up inspecting walls. If you have added a lot of power to your Alfa and you feel for security reasons that you should have more



STEP SIX £170-BRAKES

So your car now sports nearly 170bhp, if you have added this power and have not already uprated the brakes then you are either braver or more stupid than I. Bianco offers a brake up rating kit for the 33. They would start

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