

CLASSIC CAR WEEKLY

BUYING ■ SELLING ■ NEWS

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Tuning & Improving

Why...?

The simple answer to the question is: why not? Fiat's X1/9 had loads going for it when it was launched in 1972 – good looks, sweet steering and that removable targa-top, which was a brave thing to do at a time when all open-topped cars were going to be banned from the US market due to new Federal laws. Or so it was thought.

The X1/9's recipe for success was a simple one – a transverse 1.3-litre overhead cam engine lifted from the Fiat 128 (later, the Strada) and mounted behind the driver's left ear. In a car of tiny proportions it was always going to deliver fun in a realistically priced package.

The X1/9 remained in production for a long time – 1972-1989 – and received plenty of minor improvements along the way. This lack of major progress was seen as a bad thing in the Eighties, when the X1/9 came under the onslaught of a new generation of sporting hatchbacks, but it is good news in the classic sense – because it means there's a huge amount of parts commonality between the youngest and oldest cars. And that means the oldest cars in need of the most intense life support will never be short of spares.

Because there are plenty of bits in it from other cars in the Fiat empire, you can also practise in the black art of pulling bits from sister cars – and learning your parts bin is a game you and your friends will enjoy playing in the dark winter months. Or maybe not.

Most people who get into the X1/9 upgrading game do so because they are looking for more performance. The 1.3-litre version boasts 75bhp and, although that was enough to give the car a 100mph top speed and a 0-60mph time of around 13secs, many people came away thinking that the chassis could handle much more in the way of power. Later models were upgunned to 1.5-litres and 85bhp, but for speed demons that extra power was never going to be enough. The good news is that if you're single and keep it garaged, the X1/9 is an all-year round proposition, thanks to its solid roof panel, chuckable handling, useable boot capacity, and adequate performance – but with a little more of everything, the case for the defence becomes a whole lot more compelling, especially at current market prices.

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Specialists

■ Eurosport (UK), Cess Road, Martham,
Great Yarmouth, Norfolk, NR29 4RF,
01493 748981, www.eurosport-uk.co.uk/

Contacts

■ The X1/9 Owners Club,
www.x1-9ownersclub.org.uk



Cooling system

Being mid-engined, the X1/9's cooling system received a lot of attention during development, and the result is that it's pretty much up to the task of keeping the standard engine operating at its most efficient. Electric fans turn on after the engine has been cut in order to eliminate fuel evaporation – and keeping under bonnet temperatures to a minimum. It is susceptible to air locks, but if you're keeping things reasonably realistic with your tuning programme, standard will be okay as long as it's all in tip-top condition.

In cars that have received a replacement engine, such as the turbo or twin cam, the original radiators (there are two) should suffice, although a manual override for the electric fans should be fitted, as watching your temperature gauge will become second nature after a while.

Transmission

The standard gearbox is essentially tough, but suffers from a weak synchromesh, which results in crunchy changes. If you're sticking with the standard engine, this is a fine option, although if you go for much over 100bhp, then expect to do the odd rebuild or two. Many people who tune their X1/9s end up playing with ratios because the standard ultra-short gearing means high speed use can be a thrashy affair – and it limits top speed.

Electrics

Oh dear – this is an area of X1/9 ownership that will really need some work if you're using the car on a regular basis. Hopefully, these issues will be already sorted.

Current flow is compromised by crusty earths at the front of the car, so improvement can be effected by adding extra earths in drier places if necessary. Mysteriously drained batteries are caused by constant-live circuits, such as the headlamp motors, so a good tip for happy ownership is to fit a

Brakes

X1/9 brakes aren't the greatest in the world – when working well, they are adequate for a standard car, but put any more power through the wheels, and you will certainly need to upgrade.

Most owners who have already done this will have already raided the Italian car parts bin to get what they need. A common upgrade is to fit vented discs and calipers from the Uno Turbo. Some converters choose the calipers and discs from a larger car such as the Fiat Croma or Alfa Romeo

A bodykit can completely alter the delicate appearance of the original shape.



If you're going down the turbo or twin cam route (see Engine options, right), you'll more than likely be bringing the new engine's gearbox with you, and as these are very nice units in both cases, there should be little problems in doing this, other than sorting out new linkages – something the specialists stock. Early four-speeders can be upgraded by the fitment of the later five-speed unit from the X1/9 1500 – and that bolts straight on.

high capacity battery and replace a middle-aged alternator. The ignition system is also flaky, so a set of Magnecor HT leads and an overhaul of the distributor – cap, rotor arm etc.

It's possible to fit the entire ignition system from a newer – and therefore harder – car, such as the Tipo or Uno – and if you've gone with the later engine option, this will not be an issue. Other than that, there's not much more in the electrical department where there's scope for improvement.

33 for extra ultimate stopping power – the same with the rears – with new pads and discs being readily available off the shelf, and with the calipers being sourced secondhand with persistence.

More readily available is a Tarox big brake conversion kit – available off the shelf from any reputable classic car specialist or motor factor. Fitting updated EBC brake pads will provide a useful extra in terms of stopping power – and they work on any disc/caliper combination.

FIAT and BERTONE X1/9

A practical guide to enhancing the performance, safety and reliability of your classic car

Engine

Many purists would look at the X1/9 and conclude it's already well balanced, but we can understand why some would like to extract a little more power. The great thing about getting an Italian classic is that you're buying into a world of almost unlimited tuning and improving options. Although the single cam 1.3- and 1.5-litre engines are not exactly over-endowed in the muscle department, they rev willingly and have plenty of torque. However, many serious X1/9-heads have found the quickest and easiest way of getting more power is to dump the standard engine completely and put something else in with more guts.

Popular conversions are the Fiat Uno 1.3-litre Turbo engine, which is basically a blown and strengthened version of the original X1/9 1300's engine in the case of the 1984-1988 model. Standard power is 102bhp, and being turbocharged, it's easily tweaked beyond that by upping boost – and because it's almost identical in size and weight to the original engine, it doesn't upset the car's weight balance too much. It also fits to the original gearbox without modification.

The later 1.4-litre turbos (1988-1993) are trickier, as it's a physically larger engine, but – again – it has been done plenty of times before, and certain specialists will undertake the work without too much persuasion.

Obviously, with over 40 per cent extra power on board, there are other considerations to take into account, but we'll deal with those later. There are plenty of X1/9s that have been converted to turbo, and most specialists will undertake this work, as there is a wealth of information out there already.

Another popular conversion is to go for the classic Fiat Twin Cam engine. The easiest way down this route is to go for the 1.6- or 2-litre version from the Fiat Strada 105TC, 130TC or the Lancia Delta IE – but with 130bhp on tap in 2-litre form, you're looking at an exciting drive.

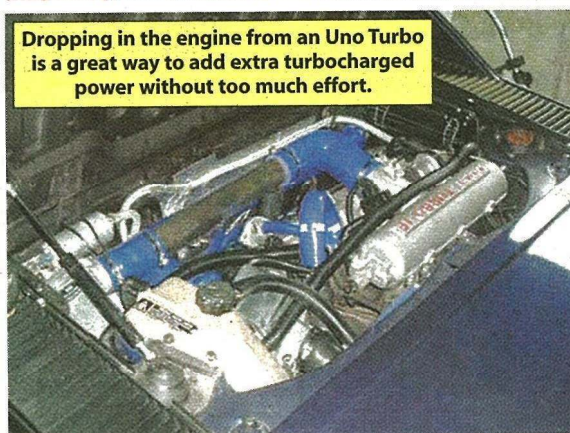
For the less adventurous and those who love originality, the standard fit 1.5-litre engine is eminently tuneable and if you push the boat out with uprated bottom end components and a stage four cylinder head, will produce up to 158bhp.

The traditional method of bolting on a Weber twin-choke carburettor and manifold is a popular way of boosting the X1/9's output without going to extremes, and both down-draft (DCNF) and side-draft (DCOE) twin-choke carburettors have been used (although side-draft means metalwork mods in the engine bay), and the DCNF is the preferred carburettor in the X1/9. Another bonus of going down this route is you lose the awful standard auto-choke.

What better to modify a classic Fiat than the company's classic Twin Cam engine?



Dropping in the engine from an Uno Turbo is a great way to add extra turbocharged power without too much effort.



Aftermarket camshafts are also available and prove useful for those undertaking an engine rebuild – and manufacturer of upgraded kit, Piper, claims an increase of 15BHP for its 'Ultimate Road' cam and 10bhp for its 'Race' cam – both of which will deliver a more peaky driving experience. Eurosport makes an effective four-into-one exhaust manifold, which releases a few more horses – and companies such as ANSA and CSC make stainless steel exhausts to bolt on, which not only produce a better sound, but also eke out one or two extra Bhp, as well as last longer than the standard mild steel example. For the final piece of the breathing system jigsaw, don't forget to install a good air filter from someone like K&N or Pipercross.

Suspension & Steering

The X1/9 has soft springs by sportscar standards, but because the rest of the design is right, they corner really well. Hard springs aren't everything, and lowering can be counterproductive. There is plenty of scope for improvement on from the X1/9's all-independent set-up

though, certainly in terms of the shock absorbers. First port of call will be fitting uprated dampers – especially if you do end up lowering the suspension. If you don't you'll be looking at a twitchy, rock-hard X1/9.

Wheels & Tyres

Most agree that if you're not upgrading the power output of your X1/9 there is nothing to be gained – and a lot to be lost – in bolting on bigger wheels and wider tyres. The X1/9 is blessed with wheels that look good out of the box.

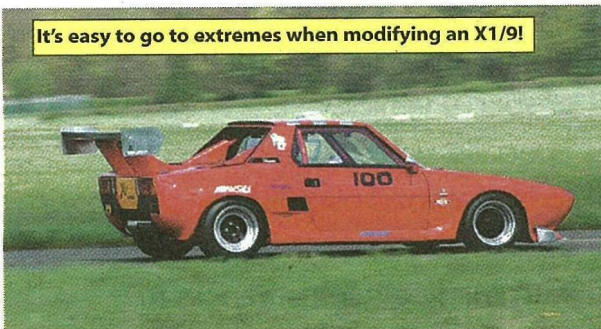
Handling can be twitchy at the limit, and the standard 175/70 13s at least deliver some progression when the rear end begins to step away. Put on low-profiles, and you gain more in the way of lateral

grip, but the payback is no warning of tail wagging episodes. Obviously, if you're upping the power to over 100bhp, more rubber is your only option – and the good news is that most Italian road car alloy wheels share the same wheel PCD, and if it fits on a Lancia, Alfa-Romeo or Fiat, it more than likely fits on the X1/9. Having said that, wider, larger diameter wheels will need the correct offset, or else you're looking at fitting a bodykit.

Any Other Business

We cannot talk about the X1/9 without taking a close look at the bodywork. Obviously the main news is rust – so make sure your shell is rot free and totally solid before even considering putting more power into the car. The main areas of concern are the boot floor, sills, rear arches, and rear suspension turrets found in the engine bay. If all of these are good, then your X1/9's ripe for a power upgrade. There are plenty of bodykits still available for the X1/9 – handy for those who've added wide wheels or who simply dislike the monolithic safety bumpers of the later 1500cc version. Popular upgrades are the Faran Eliminator and the Eurosport bodykits, and both give the X1/9 an agreeable wide-bodied look that will not please the fans of the original unadulterated version, even though they result in a baby-Ferrari look.

It's easy to go to extremes when modifying an X1/9!



Many thanks to Charis Whitcombe and Michael Ward of Auto Italia Magazine for helping out with photos for this feature

Fiat's junior mid-engined Ferrari is as sweet to drive as it's cute to look at. **KEITH ADAMS** takes a closer look at the X1/9 and discusses how to make it quicker and improve its dynamics

NEXT WEEK

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