

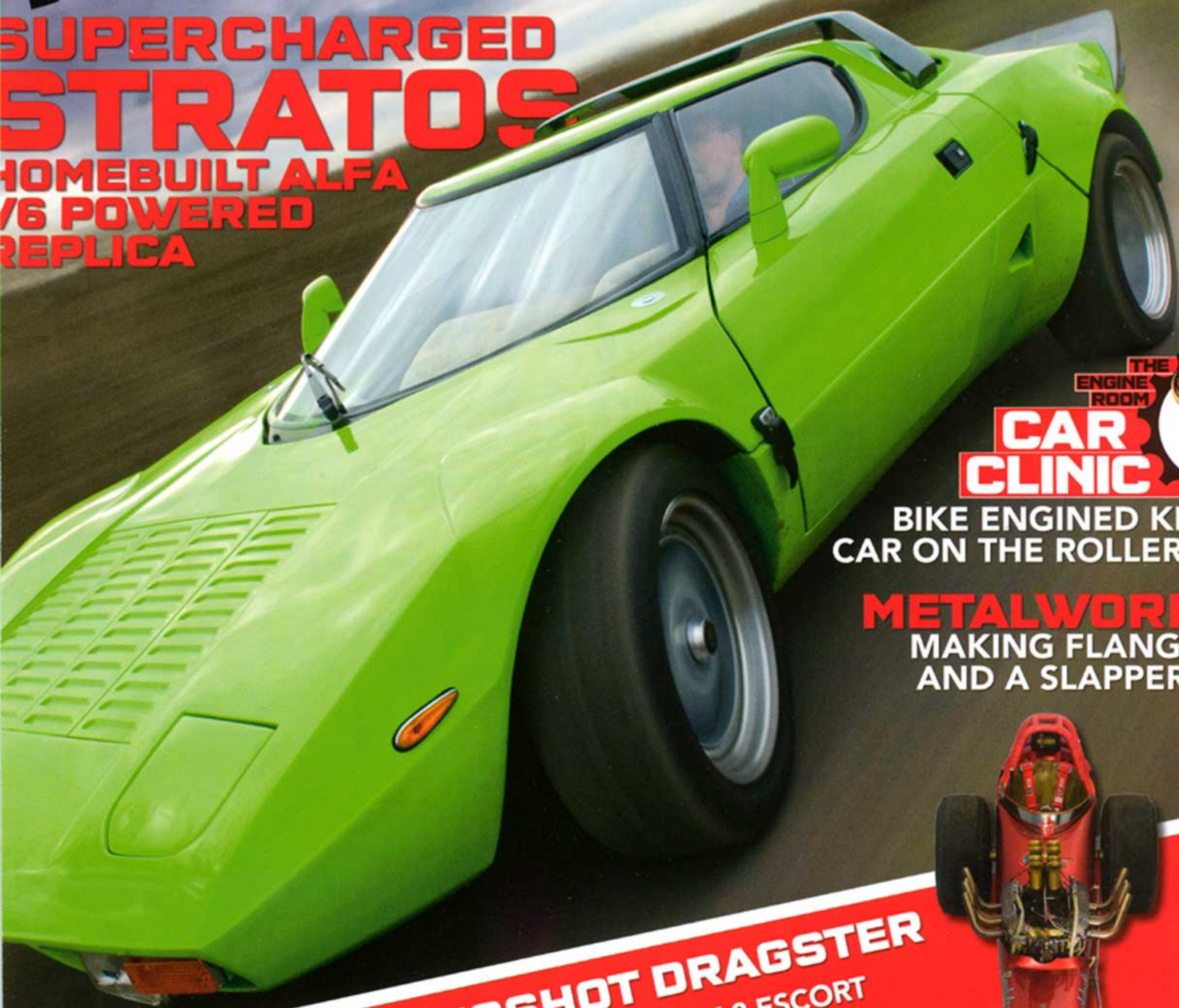
PPC

PRACTICAL PERFORMANCE CAR NEW LOOK



SMART CAR SMART MONEY?
BUYING SMART'S ROADSTER

SUPERCHARGED STRATOS
HOMEBUILT ALFA ROMEO V6 POWERED REPLICA



THE ENGINE ROOM

CAR CLINIC

BIKE ENGINED KIT CAR ON THE ROLLERS

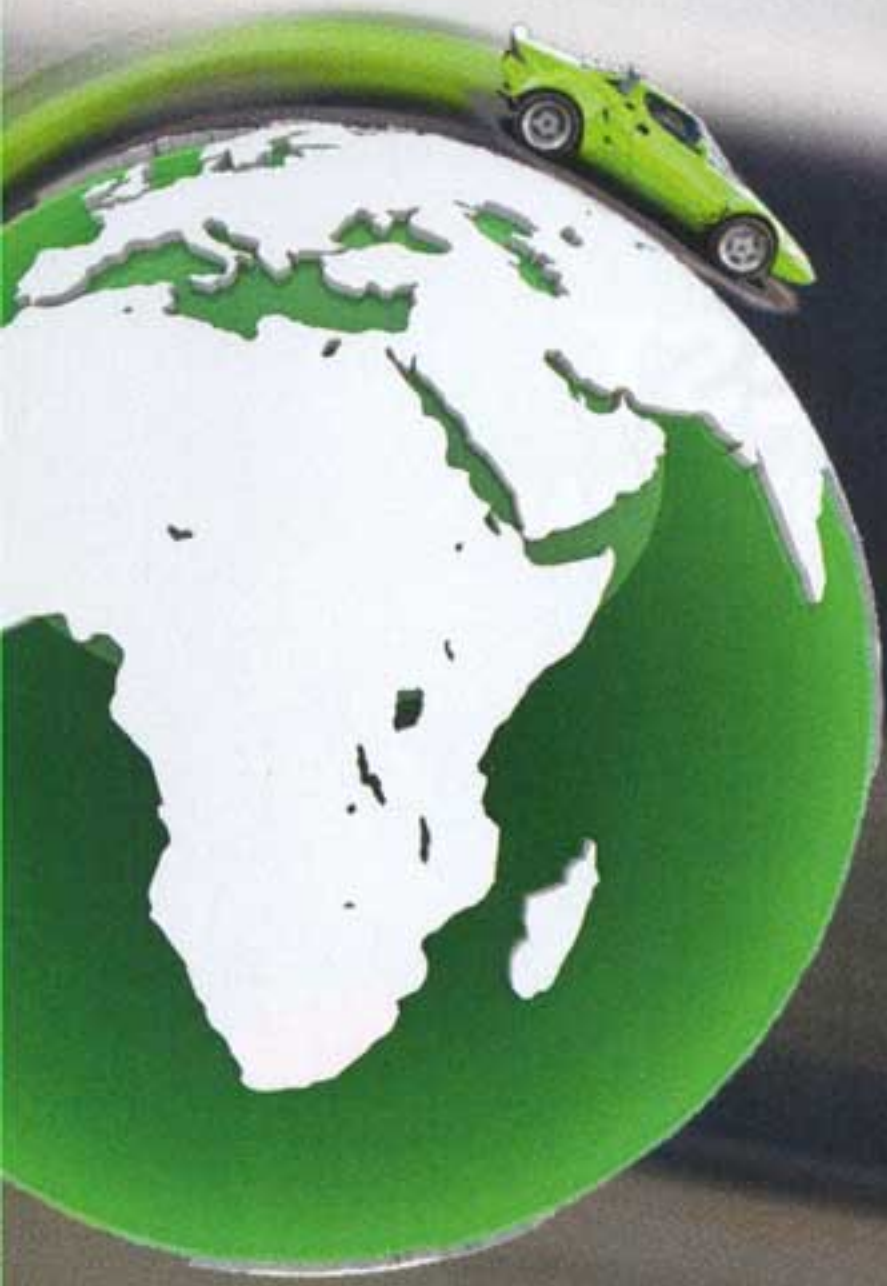
METALWORK
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APRIL 2009 ISSUE 60 £4.40





Green Party

WHAT'S BETTER THAN A V6 STRATOS REPLICAS? A BLOWN ONE, SAYS WILL HOLMAN



PHOTOGRAPHY: JAMES LIPMAN

→ 'It was just a trailer full of shit when I bought it,' says Chris Savage. He must have put a few hours in on this Stratos Replica then. Chris' obsession with what's possibly the most striking looking rally car of all time started with Saturday afternoons watching the rallying on the telly. 'In amongst all the Ford Escorts was this thing that looked like a UFO.' Years later Chris knew he'd never own a real one and even a replica was looking like it was out of reach.

'But I decided that if I didn't do something I'd never have one, so I started collecting bits and pieces – starting with a wiring loom and some bits and pieces from a Fiat X1-9. Then he saw the advert he'd been waiting for. 'Unfinished project'





is a phrase that crops up a lot in the world of kit cars and this one was cheap enough to give Chris an in into the world of Stratos replica ownership. But when Chris travelled down to the south coast to buy what had been advertised as a chassis and lots of bits, he was sorely disappointed.

'If I'd known what it was like before I'd driven all the way there I wouldn't have bothered. But having dragged a trailer hundreds of miles he handed over the cash and loaded it all up. 'It really was a load of shit too. But at least there was a lot of it.'

There was – including 10 wheels and tyres, three Fiat twin-cams and endless boxes of bits. Plus a chassis made by Carson Automotive Engineering (CAE). 'But it had been seriously hacked about. The guy had removed the A-posts and the roof pillars. He'd also attacked the body – I think he'd had some bizarre plan to turn it into a Ferrari F40 replica.' That's never a good idea. But the Lancia Stratos is so rare (see panel on page 12) that if you want one, unless you're the retired president of a now publicly owned bank and have a massive bonus to spend, a replica is your only option. Although Chris was starting to have his doubts.

'It was such a pile of junk that I just shoved it all in the garage and forgot about it for a bit.' When he dragged it out again he repaired the chassis, replacing the missing parts, and then spent weeks scraping the plastic coating off it that the previous owner had put on it. Then had the chassis painted. In his pile of bits Chris had a front and rear section of bodywork and a pair of doors but no central tub. He bought a new one from CAE and then ran out of money again. 'I'd spent about three grand including buying the car and it just sat in the garden for two years while my finances recouperated.' Which is when the real grief started.

'The glassfibre bodywork was in a real state. And I'd never done any glassfibre repairs before.' The doors themselves just didn't fit the car anymore and the holes for the Fiat X1-9 door handles (just like the real Stratos) had been hacked about to accept something else. Chris had to relaminate the skins and then split them from the frames. Then he fitted the frames

THE BUILD



The 'pile of shit.' Car as Chris bought it.



CAE Chassis after Chris repaired and painted it.



Chris did his own upholstery in Alcantara.



Panel gaps were brilliant before bodyshop cock-up.

into their apertures and, using spacers he adjusted the gap between skin and frame until the doors fitted into the body.

The story was similar at the rear arches, which had been cut into totally the wrong shape. Not only that, the rear section was quite badly damaged. Chris slowly got quite good at glassfibre repair as he completely remade the rear arches and laminated them into the shell before making the repairs invisible with a skim of filler and plenty of sanding down. By the time he'd finished he was feeling pretty chuffed with himself. 'Then my wheels arrived and my heart sank.'

This wasn't because the Image rims weren't what he wanted. It's just that lining them up on the car made it obvious that something was very wrong on the nearside rear arch. 'After I picked myself up again I realised that the car was actually an inch and a half narrower on that side where somebody had buggered about with it. I had to cut my wheelarch off and start again. That'll teach me to measure things properly in future.'

Other parts of the bodywork weren't as bad but it was still a long time before Chris was happy enough with his work to deliver the shell to the paint shop. And disaster struck here too. 'I'd spent ages getting the panel gaps really good. They were notoriously bad on the factory cars and they can be really bad on the replicas too but I got mine nice and even. Then the painters put the thing in the oven, all the glassfibre moved and the gaps opened up.'

The mechanical aspects of the car were more straightforward. 'One of the Fiat twin-cams looked really promising and had been repainted and cleaned up. I took it apart and was glad I did – it was only fit for the scrap heap. The other looked disgusting – covered in grime and oil. I took

1. Plenum on right contains charge cooler from Jag.

2. Eaton M62 supercharger came from Ford T-Bird.

3. Water injection is ready for higher boost figures.

4. Iconic round rear lights are from the tiny Fiat 850.





STRATOS HISTORY



The Stratos was the first car designed from scratch to compete in the World Rally Championship. Prototypes had Lancia Fulvia 1600cc V4s and the 2-litre Fiat twin cam but the 492 production cars had the Ferrari Dino's 2.4-litre V6, which made 280bhp in competition spec.

Cars were built with a steel chassis including roll over and crash protection and clothed in glassfibre panels. These were pure competition cars and panel fit was never brilliant so it's possible to build a replica to much higher standards than the original cars.

The car was highly effective and took the 1974, 75 and 76 titles before Lancia's owners, Fiat, pulled the plug and concentrated their efforts on the 131 Abarth. A couple of race cars were built with a turbocharged version of the Ferrari V6. They made 560bhp with a single KKK turbo but were, unsurprisingly, not totally reliable.



that apart and it had been rebuilt!

So Chris repainted it and in it went. The rest of the mechanical parts are a collection of Fiat and Lancia Beta parts, together with custom made front wishbones. Chris got the car through the SVA test in this form and planned to keep it on the road in this form for a couple of years.

'But I hated the Fiat engine. I already have a Westfield Se7en and I wanted the Stratos to be more of a GT car. But the 2-litre twin-cam was such a harsh motor. You have to rev the hell out of it to get the best from it and the vibration through the chassis was driving me nuts. It just wasn't the right engine for the car.

'I'd always planned to fit an Alfa V6 at a later date so I just moved that date forward – a lot. As part of my self

motivational technique I'd bought an Alfa 164 V6 and driven it around for a while. The engine in it seemed really sweet and ran well. So I pulled it out and completely stripped it. The realised the bits I'd need to put it all back together properly would cost me about £1500 – about £1200 more than the budget I had to rebuild the engine. It sat in bits in my garage, doing nothing.' So Chris did what any self suspecting PPC reader would do – he bought another running Alfa 164 for 300 quid, pulled the engine out, painted it and dropped it in. He ran it

using the standard Alfa Motronic ECU – 'it's very simple and only needs five wires to make it work.

'It was okay at first but didn't last very long. What started out as a tick soon became a knock, followed by clouds of



1. Chris has fitted air con to keep cabin temps down.

2. Styling is still dramatic nearly 40 years after launch.

3. Rad sits in front along with battery and pedal box.

4. Chris had to buy new central body section from CAE.

smoke from the exhaust. So I rebuilt the first engine properly. It turned out to be S spec with 10.5:1 compression ratio which wasn't ideal as I had ideas in my head of supercharging it.'

Chris couldn't afford custom pistons though, so he used standard one and a pair of Colombo Bariani mild road cams, 'because they were cheaper than standard Alfa ones.' With supercharging in mind, Chris wanted the flexibility of a stand-alone ECU so it was off to see PPC's Dave Walker for one of his Emerald ECUs. A rolling road session produced 198bhp from the 12-valve, 3-litre V6.

Chris toyed with the idea of using two Eaton M45s from BMW Minis as one wasn't big enough. But they wouldn't fit so he thought about an Eaton M112 from a Jag V8 but that was too big. The best match he came across was from an American Ford Thunderbird Super Coupe – an Eaton M62.

One Ebay click later and one was on its way to him.

He mounted it on top of the front bank of cylinders and managed to incorporate the charge cooler from a supercharged Jag into the Alfa plenum, although reckons he could have got away without it as with that 10.5:1 compression ratio he's kept the boost to 8psi.

But that's good enough for around 270bhp and in a car as small and light as the Stratos that's enough for proper kick-in-the-chest acceleration. That, coupled with styling that's still radical nearly 40 years after the Stratos's 1971 debut makes this a car that even people who aren't interested in cars stare at. And if they'd seen the 'pile of shit' it was a few years ago they'd find it even more amazing.