

Flower power



The last time this writer drove this particular 944 Turbo SE it smoked like Thomas the Tank Engine, and had about the same power as an 00-gauge model of said Really Useful Engine. In fact, it felt (and was), well, a bit of a dog. Oh, and worst of all, the interior decor featured pink checked seats.

So why is it that I'm now grinning from ear to ear and deriving an inordinate amount of pleasure from repeatedly driving the car up and down the same bit of winding Oxfordshire road? Because the car has been transformed. And I don't mean simply brought back to health, but really transformed.

The 944 Turbo has always been a great car, with a huge amount of performance for the money, but I've always considered it to be more of a lumbering – but none the less rapid – long-distance cruiser than a true sports car. It certainly wouldn't be my first choice as a trackday machine.

I suspect, though, that this one would be an absolute blast on the circuit. There's still some turbo lag, granted, but it's nowhere near as pronounced as that of a standard 944 Turbo, and the power comes in far more smoothly and gently, with bags of torque from low revs.

The throttle is much more sensitive to my right foot, too, and this can be used – in addition to more

conventional methods – to steer the car through bends. Likewise the handling is more neutral than that of the standard car, which errs towards understeer. Indeed, it's possible to create some hugely entertaining power-on oversteer with judicious use of said throttle pedal.

But this improved handling is at the expense of ride, as is often the case, and the car bumps violently over rough surfaces, the full roll-cage squeaking in protest. That said, on reasonable surfaces the ride is quite acceptable, and the car certainly feels solid and confident.

The brakes, which are pretty good in any 944 Turbo, are quite superb. They've obviously been updated, yet unlike some brake conversions don't require massive pedal pressures to make them do anything useful. Indeed, like the throttle, the brake pedal is remarkably sensitive to my right foot, and the system does just what I ask of it.

And there's still more. The gear change is very obviously a short-shift item, and it's an absolute joy

Known as the Silver Rose on account of its eye-catching colour scheme, the 944 Turbo SE is one of the rarest modern Porsches. And this restored and highly modified example is almost certainly unique, suggests Philip Raby. Photography by Michael Whitestone



Overbored block and 52 crankshaft give engine capacity of 2.8 litres. Internal mods improve piston cooling and oil return



to flick quickly from one ratio to the next. This really is an addictive piece of kit. But what on earth has happened to make it like this?

The first time I drove the car was in 2001 for a *Tried & Tested* story in this very magazine (see panel on page 68). On that occasion it was being sold by Oxfordshire-based independent Porsche specialist Autofarm for £6950.

One of Autofarm's regular customers, Nigel Wright, spotted the 944 and took pity on it. 'It was standing there looking rather sorry for itself,' he recalls, 'and I was after a new project, so I ended up buying it. I figured that a Silver Rose would be a

good starting point for a road and trackday car.'

But hang on a moment. Silver Rose? What on earth's that? Well, it's the popular name for the 944 Turbo SE (or Turbo 'S' as it was known outside the UK) which was sold for a short period during 1988 at a 10 per cent price premium over the 'standard' car.

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This special-edition car was based loosely on the Porsche Turbo Cup racers of the day (lending weight to Wright's argument that the SE is a good basis for a trackday machine), and had several features which set it apart from the standard 944 Turbo.

A larger turbocharger, and changes to the engine management system, boosted power from 220bhp to 250bhp at 6000rpm, with 258lb/ft of torque at 4000rpm (compared with the standard car's 243lb/ft at 3500rpm). Not bad for a 2.5-litre four-cylinder motor. In order to cope with the extra grunt the transmission was modified, and a 25mm drive shaft employed inside the torque tube. A limited-slip differential was fitted as standard.

The seats were clad in a pink-checked fabric. Not what you expected to find in a 250bhp supercar

The race-car background led to some worthwhile chassis changes, too. These consisted of adjustable Koni dampers, lower – and stiffer – springs, larger-diameter anti-roll bars, and not least harder suspension bushes.

The brakes were upgraded with four-piston calipers (from the 928S4), and ABS was a standard fitment. Wheels were new seven-spoke items (similar, but not identical, to the later Design 90 rims), 7.0J x 16 inches at the front and 9.0J x 16 behind. These were shod with 225/50 and 245/45 Goodyear Eagle tyres. In 1988 this was a lot of rubber – 20mm wider than that fitted to the standard 944 Turbo.

So there's no doubt that the 944 Turbo SE was a pretty impressive piece of machinery in its day. Sadly, though, Porsche spoiled it with a colour scheme that really should have led to immediate prosecution by the style police.

To be fair, the Silver Rose paint (from which the model gets its nickname) is nothing more offensive than silver with just a subtle hint of pink. No, really, it's not at all bad. But the interior was ghastly. The seats were clad in a pink-checked fabric, with matching door panels. Not what you expected to find when you climbed into a 250bhp supercar which cost as much as a 911.

No less subtle was a large 'Turbo' decal along the top of the right-hand front wing. But with a claimed 0–62mph time of just 5.1 seconds, and a top speed of over 160mph, did it really matter what the thing looked like?

Around 1600 944 Turbo SEs were built during 1988 (officially just 72 came to the UK), so it obviously appealed to some enthusiasts who were perhaps more interested in performance than looks. No doubt to the annoyance of those buyers, however, the following year Porsche updated the standard 944 Turbo with the 250bhp engine, thus at a stroke reducing the exclusive appeal of the Silver

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First impressions

Philip Raby first drove this car – in its original state – back in 2001 for a *Tried & Tested* story (see page 98–99 of the July 2001 issue for his full report). Here are just some of his – now somewhat prophetic – comments.

'In terms of condition the car's a bit of an oddball. Most of the paint's good, although there's evidence of re-spraying, most noticeably around the front end.

'There are signs of rust in the lower rear corner of each wheelarch, and the right-hand sill is dented.

'The original-equipment seven-spoke alloy wheels are scuffed and corroded

(despite having been refinished at least once in their lives).

'It's a mixed bag inside. The Studio seat fabric is in fair condition, apart from a badly worn driver's seat. Lady Penelope would love the garish pink upholstery.

'The engine smokes when cold, but seems fine when warmed up.

'The car surges forward in a most exhilarating manner once the turbo has spooled up. But we can't help feeling that it doesn't quite have the grunt you'd expect of a 250bhp car, which suggests further that all is not well in the engine department.

'The driving experience is let down by a rather vague gear lever (which probably needs nothing more than new bushes).

'It's a tricky one, this car – and if only because of that smoking engine it's something of a gamble, too. At the moment the problem isn't too bad, but it could well get worse. And if the below-par performance is linked to the smoking then that, too, can only become worse.

'At best you'll need a top-end overhaul to replace worn valve guides. At worst, the piston rings and/or cylinder bores will be worn, which will mean a full rebuild. And – in the worst-case scenario – a new engine block. ■





Rose (and you didn't get that questionable décor).

Back in the 21st century, Nigel Wright could still see that the rather forlorn SE at Autofarm was something special, and thought it certainly deserved to be given a second chance.

'But I wasn't interested in simply restoring it,' he says. 'I wanted to create something unique that I could have fun with on the road and track. I usually do six or seven trackdays a year, and also make the occasional long trip to the continent, so I wanted the car to retain a degree of comfort.'

To that end he turned to Autofarm boss Josh

Sadler for advice. 'Josh and I spent many happy hours together, discussing the various options. But UK specialists have on the whole ignored the 944, so we approached American tuners for information.'

Sadler, who's better known for his work with classic air-cooled 911s, takes up the story. 'There's an incredible amount of information on the internet [*www.rennlist.com being one of the best - PRJ*], and most of it comes from the States, where 944s have been tuned and raced far more than they have over here.

'First of all, though, we had to make sure we had a good engine to start with, and the way it was burning oil suggested otherwise. We stripped it down and found that the Nikasil bores were worn. In fact, the block was damaged beyond repair, so we found a replacement and had it overbored by 0.5mm and then recoated, at a surprisingly reasonable cost of £50 a bore.' [See panel on opposite page for a list of companies that can undertake this work. - PRJ]

The reason for the overbore was to match the block to new, race-specification Mahle pistons. Josh says that the tolerances on 944 Turbo engines are very tight, and the pistons must be a very snug fit. Carillo connecting-rods link the pistons to a crankshaft from a 3.0-litre 944S2. This



Interior (left) is a mix of road and track. Luxuries such as carpets and hi-fi remain, but rear seats (above left) are removed, and a racing seat and harnesses added



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combination gave a capacity of 2.8 litres.

The cylinder head was fully reconditioned with new valves and guides, and fitted to the block with Raceware studs and a competition-grade head gasket, in order to cope better with the increased power.

Being a 911 expert, Sadler was surprised that there were no piston-cooling oil sprays inside the engine. 'Porsche has fitted these to the 911 since the days of the 2.2S,' he says.

'Basically, they squirt oil up onto the underside of the pistons to aid cooling. This seemed to me to be a good system for the 944 Turbo because the engine's known to suffer from overheating. I did some investigating and found that, in fact, such items were fitted to the later 968. So we drilled and tapped the base of each cylinder bore and installed the jets. This wasn't as easy as it sounds, though, so we practiced on the old block first!

In the course of his conversations with American experts Sadler discovered that Porsche had experienced problems with oil draining from 944 cylinder heads and back into the block.

'Apparently they built an engine with "windows" in so they could see how the oil behaved, and found that it was getting trapped in the cylinder head. For the 968 engine, then, holes were cut to link the bases of bores one and two, and three and four. As the pistons moved up and down this caused air to circulate, thus producing a pumping action and encouraging the oil to move.' Sadler thought this made a lot of sense, so incorporated a

similar modification in Wright's engine.

The list of new items fitted to the car shows that no expense was spared with this rebuild. There's a new radiator, oil-cooler, all new fuel lines and water pipes, race-specification hose clips and, of course, a new timing belt and balance-shaft belt. A bespoke Hayward & Scott stainless-steel exhaust system was fitted, although this was designed to be relatively quiet so that the car could be used for long journeys.

When it came to the turbocharger, Sadler turned to Geoff Everett at Automotive Developments in nearby Bicester. 'Geoff came up with a hybrid turbocharger that's larger than the original,' explains Josh. 'He also provided his own uprated wastegate.'

Josh also used Automotive Developments when it came to the final tuning and ECU mapping. 'This caused a problem,' explains Sadler. 'Putting a turbocharged car – especially an uprated one – on a rolling-road can be risky because of the high temperatures that tend to build up.

'When a car's in motion there's plenty of air flowing over it to aid cooling. But you don't get that on a rolling-road, so we had to work quickly to take readings before things overheated.

'What's more, because it's a very powerful and torquey engine, it was difficult to maintain traction on the rollers. The 911 is much easier in this respect, of course, because it has the whole weight of the engine over the rear wheels.'

The team persevered, though, and came up

with a power figure of 303bhp at 5367rpm, and 353lb/ft of torque at 3115rpm. Very healthy improvements in anyone's books, but Sadler feels there's still more potential to be had from the engine. 'I reckon that if we had the engine on a test-bed we could fine-tune the mapping and find still more torque and bhp.'

While the SE already had well-sorted suspension with the full M030 sport suspension pack, the parts on this example were showing their age. So almost all of the rubber bushes were replaced, and a full set of four new Koni adjustable dampers was fitted. Additionally a Cambermeister strut brace helps to stiffen up the front end.

Brakes, too, required some work, and Sadler fitted the ventilated and cross-drilled discs from the 968 Club Sport's so-called big-brake option, together with Pagid race-grade pads and braided stainless-steel hydraulic lines.

When it came to wheels, owner Nigel Wright

Boring company?

There are three organisations in the UK that are said to be able to refurbish Porsche Nikasil cylinder bores (and this is something you can expect to see a lot more about in a future edition of 911 & Porsche World). ■

Perfect Bore: tel: 01264 774300;
fax: 01264 772714;
website: www.perfectbore.com

SERDI UK: tel: 01895 232215;
fax: 01895 253667;
website: www.serdi.co.uk

JPD Trading: tel: 01525 716423





Bodywork has been treated to a back-to-metal respray in the original Silver Rose shade. Distinctive 'Turbo' decal on right-hand front wing (left) a unique SE feature

ected to replace the original and rather dull items with new 17-inch Krone split-rim alloys clad with Yokohama AVS Sport tyres.

These new rims transform the appearance of the car and complement the refurbished bodywork. 'The paint was rather tired, but appeared to be basically sound,' recalls Sadler. 'But Nigel was keen for the car to look as good as it drove, so he asked us to do a full bare-metal respray.'

As is often the case, once the paint had been removed it was discovered that all was not well with the bodywork. 'Being a galvanised body shell it was in reasonable condition,' says Josh. 'But we



What a waste!

Around 80 per cent of all 944 Turbos still on the road today suffer from weakened wastegate actuating springs.

That's the claim of Geoff Everett, formerly of Oxfordshire-based tuning specialist AmD, who (as we reported three years ago) developed a method of rebuilding the wastegates, which Porsche sells only as a complete, sealed unit for over £1000.

The problem is that when the engine is running the main spring inside the mechanism can become red-hot, and this intense heat will, over time, weaken it. Which means the turbo will no longer reach full boost.

The car's ECU will go some way to compensate for this, but it's by no means unusual for the system to reach no more than 0.5 bar, compared to the correct pressure of 0.7 bar.

The reconditioned units are fitted with higher-quality springs and, if required, the spring can even be changed for one which will give boost pressures as high as 1.5 bar. Prices start at £650 plus VAT (exchange).

AmD is on 01869 323205; fax: 01869 323206; website: www.auto-amd.com. ■

did find some corrosion in the front wings and sills, so these were replaced with new panels. We also had to cut out part of the left-hand rear wing, which had been damaged, and fabricate a new section.'

Nigel Wright was keen to retain the distinctive Silver Rose paintwork, and so the car was repainted in the original colour. When it came to the interior, though, he was, perhaps not surprisingly, less concerned about originality. 'We junked the pink interior and replaced it with a rather more tasteful Burgundy pinstripe from a standard 944,' he admits.

That's not to say that the interior has remained otherwise unchanged. Far from it. A full Safety Devices roll-cage has been fitted, and not only offers protection in the event of an accident, but also stiffens up the body shell. The small rear seats have been removed to save weight, while the driver's seat has been replaced with a Recaro bucket with a Willans four-point harness.

In deference to Wright's desire to be able to use the Porsche as a long-distance cruiser, the cockpit has kept its carpets and electric windows, while a new Alpine head unit with CD multichanger and Kenwood speakers has been installed. All very civilised.

But Nigel Wright has yet to drive the car in anger. He's been waiting patiently at his London home for Autofarm to complete his new toy. He's looking forward to trying it out, though. 'I hope it's good. I've probably spent three times as much as the car's worth on the rebuild. Still, I like to enjoy my life and my cars.'

A very good philosophy. Indeed, one that I think I'll take on board myself. So excuse me while I take Nigel's 944 Turbo SE for one last spin... ■

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Facts & figures

Modified 1988 944 Turbo SE 'Silver Rose'

Engine	Front-mounted, water-cooled, all-alloy, in-line four. Bored to 2.8 litres and fitted with Mahle race-specification pistons, Canillo connecting-rods and 3.0-litre 944S2 crankshaft. Competition-grade cylinder-head gasket and Raceware studs; 968-specification piston-cooling oil sprays, 968 cylinder-block windage modifications. Hybrid AmD turbocharger and wastegate, K&N air filter, Hayward & Scott exhaust system and remapped ECU. Competition-specification front-mounted oil-cooler
Capacity	2792cc
Maximum power	303bhp at 5367rpm
Maximum torque	353lb/ft at 3115rpm
Transmission	Standard 944 Turbo SE five-speed gearbox with Performance Products short-shift change; limited-slip differential. AP Racing Cosworth clutch plate. Upgraded 25mm torque-tube drive shaft (see text)
Brakes	944 Turbo SE system updated with 968 Club Sport ventilated and cross-drilled discs, Pagid race pads, Earl's braided stainless-steel hydraulic lines and ATE Race Blue brake fluid
Suspension	Koni adjustable dampers front and rear; anti-roll bars and rear suspension mounts rebushed
Wheels & tyres	Krone Sport Classic 8.0J x 17-inch and 9.5J x 17-inch split-rim light-alloy wheels, with 225/45/17 and 245/40/17 Yokohama AVS Sport tyres
Body & interior	Standard 944 Turbo body shell finished in Silver Rose metallic paint. Interior retrimmed in Burgundy pinstripe, and rear seats removed. Safety Devices roll-cage, Recaro Pole Position driver's seat with Willans four-point harness. Alpine head unit and CD multichanger with Kenwood speakers