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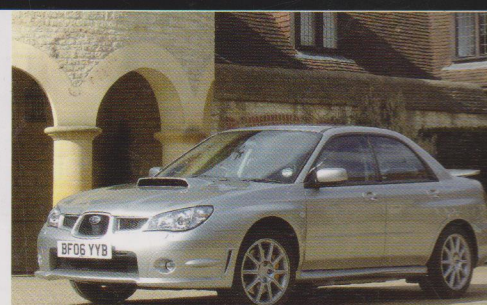
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Want to make a really fast classic Impreza on a tight budget? Check out this ingenious UK Turbo with its New Age STi8 organ transplant

No, don't turn the page. The car you see here may not look anything special – but believe us when we say it's one of the cleverest modified Scoobies we've ever seen. It may seem to be a fairly standard classic-shape Impreza Turbo, but it's got the heart and muscle of a New Age STi8.

It's a straight case of organ transplant. This car is something of a first – take one dead STi8, remove its healthy, more muscular bits and stick them in the body of the lighter, more focused classic Impreza. And, like heart transplants in the NHS, we reckon it could become commonplace in years to come.

What you're looking at here is a late-model UK-spec classic that has had a serious STi8 hardware transplant. The goodie list includes everything from the engine and transmission to the wheels, brakes and interior. Forget that wolf in sheep's clothing analogy – this is a grizzly bear.

The main benefit of transplanting a later STi engine from a GDB-model Impreza into a classic is that it's far more cost-effective than tuning up an older car. Even in standard spec, the STi8 engine has a stiffer semi-closed deck block, active valve control system and twin-scroll IHI 35 turbo. Total power is probably well over 300bhp – and to get that sort of power out of a classic takes a lot of effort and cash. Another benefit is solid factory reliability, as well as the potential for tuning in the future.

Strange thing is, it was never meant to be this way. 'The car was a completely standard UK Turbo,' says the hybrid's owner, Nadeem Nasir, 'but then I started modifying it. I put an exhaust system on it and a P1 spoiler. I wanted to go further and up the power, but a friend told me not to bother – just go straight for an STi engine. So I started looking around for engines.'

Ironically, Nadeem only found what he was looking for when he was searching for a replacement P1 spoiler after some grubby little urchin appropriated his. 'I found out about this company called Jap Performance Parts because I couldn't find a P1 spoiler anywhere. The only person who had one was Sajid at JPP. We got talking and he told me he had a crashed STi8 and I thought, "Let's go for it." He talked me into the whole thing – and all I wanted was a spoiler!'

Nadeem ended up buying a complete but written-off Japanese Domestic Market STi Version 8. Thanks to a nasty broadside accident, it looked more like a banana than an Impreza.

But life isn't as simple as just taking the bits off and putting them on a completely different car. This is where the father-and-son team of Dennis and Paul Randle enter the picture. They've both been involved with the motor trade for ages, with Paul being a mechanical engineer for 19 years. They set up a Subaru tuning firm, PR Developments, and at the time were working from their back garden.

'Nadeem called us and we were up for the challenge,' says Dennis. 'This is the first one we've built to this sort of specification.' Considering that this car was built entirely in the Randles' back garden, it's amazing that this pioneering transplant took only six months to complete.

In fact, it was more often the little things – the fiddly details, not the major components – that created the most grief and took the most time. After the pair had stripped down the stricken STi8, Dennis and Paul spent a lot of time tracking down parts and fathoming out how to fit all the hardware. Because no-one they knew had done this sort of work before, there was a lot of trial and error involved.

One example was fitting the STi8 clutch slave and master cylinder: it is offset in the



Words by Simon Charlesworth
Photography by Martin Vincent



Organ Donor



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STi8 to allow for the larger intercooler, whereas the classic's is perpendicularly mounted on the bulkhead. Then there was replacing the classic's engine-mounted power-steering reservoir with the STi8's remote unit and modifying the classic's radiator top hose. They also had to reroute the intercooler pipework so that it could run along the bulkhead.

Another job was fabricating a bracket for the throttle linkage. 'The original throttle linkage was too short, the original bracket angle was all wrong and it clips into the actual pedal unit, so you would have to drill a big hole in the bulkhead and fit an STi8 pedal,' says Dennis. 'That wouldn't have fitted properly, anyway, because the classic's pedal set-up is all one unit. So this was the only way to get a cable that would have the right fitting and length.'

But that was still not the worst job. 'The main mechanical obstacle was sourcing a prop. The original one was banana'd – it was bent so much that, even after we'd cut it up, we couldn't get it out. We had to hacksaw it off and my knuckles have only just recovered! Our first prop came from Scotland. It fitted into the back of the gearbox but the rear flange was too small – because the twin-scroll rear diff has a bigger flange – so we had to send it back. In the end, we had to use a prop from the limited edition Impreza WR1, which fitted perfectly. Again, it was just trial and error. Apart from that, all we had to do was to alter the steering rack because it's also running an STi8 quick system.'

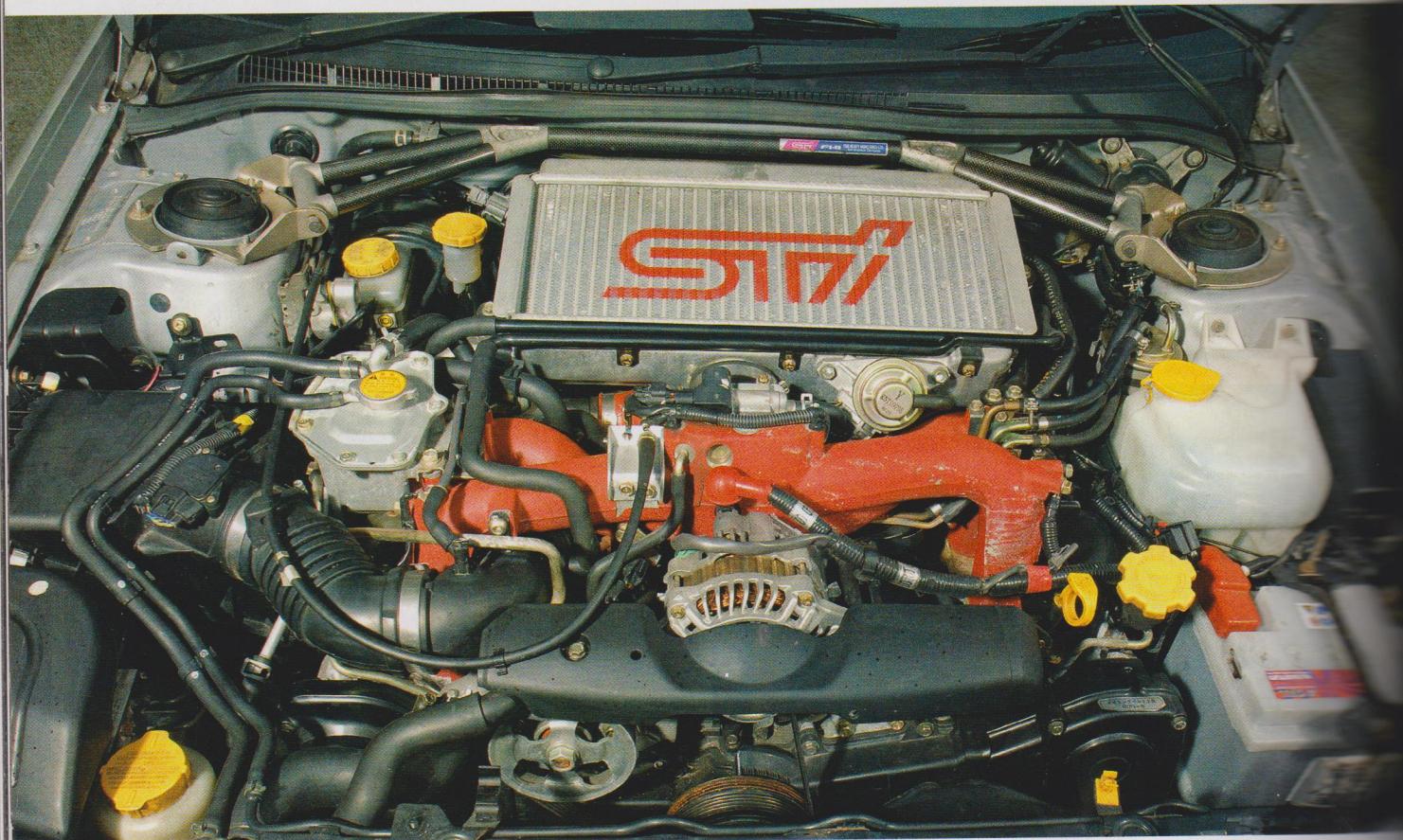
So, what was the most demanding challenge of all? Given its complexity, you'd think the answer would take some consideration – but it doesn't. Paul answers instantly: 'It was sorting out the wiring loom because I didn't have any wiring diagrams. We had to lengthen it in some places and shorten it in others, while rerouting it, too. Wiring up the engine bay and the boost solenoid (which changed from a two-port to three-port) was a particular problem.'

'Still, if you took the dash off now and looked at the actual loom, it has a factory appearance because I've made it fit all the way around the dash. I had to do the whole thing by checking resistances. At least I've actually got a wiring diagram for it now.'

Dennis adds: 'Due to the original donor car being a JDM model, it made things even harder. It had bits on it that the classic didn't and it didn't have things on it that the classic did. For example, it didn't have any provision for a sunroof, while the heater controls on the UK car are cable-operated, whereas a JDM car has climate control, which is controlled by the ECU. So we had to do away with all of that, because the other heater box wouldn't fit. It was a nightmare, but you sit down and work your way through it. You do one thing and you think that's it, but it often leads to something else. In the end, though, it all comes together.'

Further along the STi8 drivetrain, the classic's original five-speed gearbox got booted into touch: the STi8 JDM has a six-speed gearbox with Driver Controlled

It may look fairly standard, but this UK Turbo packs STi8 punch. Complete engine and transmission transplant ups power and brings six-speed gearbox to the lightweight classic. Even the interior is transferred over, including STi8 dials and STi9 seats



Centre Differential (DCCD). This great bit of kit can run in either fully automatic or manual mode, where you can alter the front/rear drive ratio. The only classic Impreza to be fitted with DCCD at the factory was the rare STi RA.

As for the suspension, it's a blend of old, new and improved. There's a set of STi6 V-Limited WRC struts complete with Whiteline 45mm lowering springs, classic bottom arms and rear tie arms, and solidly-mounted rear drop-links. The result? According to Paul: 'It handles a lot better and makes the stance more purposeful because standard UK suspension does tend to make the classic look like a tractor at the front.'

The brakes also come from the STi8 and feature fixed four-pot front callipers and two-pot rears. Hanging off a set of STi8 hubs, there's a moody set of powder-coated STi8 anthracite rims, wrapped in 215/45 ZR17 Continentals (which, unlike some tyres, don't catch the classic's arches).

'Basically, everything will fit,' says Dennis, 'it's just getting it to operate properly and look right. What we aim to do as well, though, is to make everything look the part. It's all about doing things properly.'

So Nadeem, is this where we declare that everyone lives happily ever after? Not yet. A centre exhaust silencer really is needed because, while this lairy Scooby is fine for cross-country thumping, it's too much on the motorway. And, despite only having 4000 miles on the clock, the wastegate actuator is thought to be playing up. Although it will pull 1.5bar on-boost, at 4500rpm it starts to fluctuate instead of holding the boost. This is why there's a Turbo Dynamics actuator already in the post and it's booked in for a remap.

'I'm going for more power,' says Nadeem, 'and I'll possibly fit a front-mounted intercooler, a cold air induction kit and an A'PEXi boost controller. Then that would be it for now. We're aiming for 380-390bhp, so that might mean hybridising the twin-scroll turbo because it is possible to get 380bhp out of a standard one, but it would really be wringing it. So I'm talking to Turbo Dynamics about that, too.'

Does this mean another trip down to Dr Randle and son, then? 'Definitely. These guys are brilliant. I always go back to them. I may have to go 40 miles out of my way to see them, but I'd rather do that than go 10 minutes down the road to the local garage.'

Small wonder. Doctors perform miracles every day, they say. This donor transplant certainly qualifies. ●

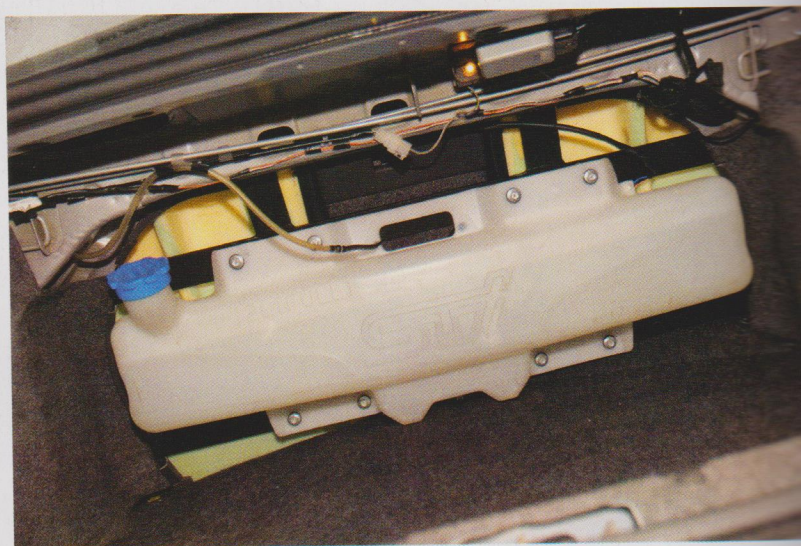
Contact

Jap Performance Parts, Crawley
impreza123@tiscali.co.uk
01293 520090

PR Developments, Hinckley
Paulrandle2003@yahoo.co.uk
07716 692555



Stance is much more purposeful with STi6 struts, Whiteline 45mm lowering springs and solid-mounted rear drop links. Water spray tank (below) cools STi8 intercooler



Specification

Nadeem Nasir's Subaru Impreza Turbo STi8 hybrid

Engine	Subaru JDM EJ20 STi8 1994cc boxer engine, semi-closed deck block, Active Valve Control, IHI 35 twin-scroll turbo with water spray to STi8 intercooler, Spec C 12-litre water tank located in boot, uprated fuel pump, EcuTek remapped STi8 ECU with modified STi8 wiring loom, STi8 three-port boost solenoid, classic radiator (with modified top hose), classic heater box, modified throttle linkage, Hayward & Scott custom fabricated exhaust, STi8 remote power steering reservoir
Transmission	STi8 manual six-speed gearbox, STi8 driver controlled centre differential, STi8 driveshaft, hubs and rear differential (with temperature sensor), Impreza WR1 propshaft, STi8 master and slave clutch cylinder
Suspension	STi6 V-Limited WRC struts, Whiteline 45mm lowering springs, STi6 quick rack, classic bottom arms and rear tie arms, solidly-mounted rear drop-links
Brakes	STi8 dual-circuit diagonally-split hydraulic system, STi8 fixed four-pot front callipers and two-pot rear callipers
Wheels & Tyres	STi8 17in alloys in anthracite, powder-coated and lacquered, Continental 215/45 ZR17 tyres
Exterior	Late-model UK Turbo with STi5 rear spoiler, clear indicator lenses, brake air-intake grilles refinished in satin black
Interior	STi8 instruments with sweep facility, STi9 seats and interior, Defi F boost and oil pressure gauges, Pioneer DVD head unit