

WHAT'S THAT COMING OVER KNOCKHILL

Built for the Scottish Saloon and Sports car championship, Peter Taddei's 650bhp Mk3 Fiesta is something of a monster.

Words: Luke Wood Pics: Steve McCann

It takes something a bit special to win in the Scottish Saloon and Sports car championship, although on the face of it there seems to be two basic ingredients to success. Firstly you need to know your way around Knockhill, the compact yet hugely challenging circuit that twists and turns through the picturesque Fife landscape like an oversized roller coaster, a track that can make a driver look like a hero when he gets it right but reduce him to zero when he gets it wrong. And secondly, you need to have a Ford. The current man to beat is a certain Andrew Gallacher and if that name doesn't ring a bell then the mere mention of his menacing blue Focus probably will, as we featured the 668bhp YB-powered monster on the cover of our June 2008 issue. Andrew cleaned up in the SSSC in 2008 and as he's back this year with more power, an even more developed car and the 2009 title firmly in his sights, you're probably wondering why anyone else would even bother to show up?

Well, while it's fair to say that he's the bookies' favourite there is one contender waiting in the wings who might just have the credentials to steal Gallacher's thunder – and he aims to do so in a rather unconventional way. Enter Peter Taddei, a Scottish Saloons regular who, on paper, is the ideal candidate to dethrone the seemingly invincible Focus driver. He is an SSSC regular for starters, and as such he knows what it takes to be quick around Knockhill. He is also armed with a monstrously potent Ford in the shape of this Mk3 Fiesta, a 650bhp four-wheel drive tarmac terror that's been built specifically for the task in hand. Nothing too controversial so far you might think. Well, if you're a die-hard Ford purist, and there's nothing wrong with that if you're reading this magazine, then you might want to take a deep breath before reading on because it's only when you peel back the layers of this angry looking Fiesta that you realise just how far Peter has been prepared to go in order to take the fight to the Gallacher camp.

Yes, that's a Mitsubishi Evo engine under there and yes, we realise that this is *Performance Ford* magazine, but before you throw the mag in the bin we'd ask you to take five minutes to think about what's been achieved here. It might not be pretty, and it might not have the 'right' engine but if there's an ounce of petrol flowing through your veins you have to admit that this Fiesta is one hell of a car.

Besides, Peter is very much a Ford man as the car he raced prior to this was another Mk3 Fiesta, this time powered by a 300bhp Zetec turbo, and if he had



FORD FACTS

ENGINE

Buschur Racing Evo short block, 2.3-litre stroker kit, Brian Crower con rods, custom JE coated HD pistons, ARP head studs, ARP2000 main studs, balance shaft delete kit, Fluidampr crank pulley, CNC Heads racing Evo cylinder head, Inconel 90 racing exhaust valves, racing stainless inlet valves, copper manganese valve guides, Beehive race valve springs, Cosworth 1.3mm head gasket, Evo400 Piper cams, Hypertune inlet manifold, Hypertune 3" throttle body, Hypertune billet fuel rail, FP HTA GT3586R turbo kit, Buschur Racing tubular exhaust manifold, Tial 44mm external wastegate, Tial BOV, Pro Alloy Motorsport custom header tank, Pro Alloy Motorsport custom power steering reservoir, Pro Alloy Motorsport custom inlet carrier pipe, Mocal oil cooler, Mocal power steering cooler, Radtec Racing custom radiator, Radtec Racing custom intercooler, Motec M800 ECU, Motec datalogger, Buschur racing coil on plug, 5bar map sensor, Motec electronic boost controller, RC Engineering 1000cc fuel injectors, Bosch 044 in-tank pump, braided Aeroquip fuel lines, Sard fuel pressure regulator

TRANSMISSION

DJM Motorsport Evo four-wheel drive system, Evo RS rear diff, Carbonetics twin-plate racing clutch, Tadstar Racing custom gear shifter

SUSPENSION

Proflex three-way adjustable coilovers, Proflex springs, DJM Motorsport custom suspension arms

BRAKES

Front: AP Racing 6-pot race calipers, 330mm AP Racing discs. Rear: AP Racing 4-pot race calipers, 300mm AP Racing discs, DJM Motorsport triple pedal box with balance adjuster

WHEELS & TYRES

17x8" Team dynamics Motorsport lightweight rims, Dunlop SP slick and wet tyres

INTERIOR

Cobra race seat, Sabell harnesses, OMP snap-off wheel, AIM Pista dash/datalogger, DJM Motorsport fuel tank carbon housing, ATL racing fuel cell, DJM Motorsport fully welded roll-cage

EXTERIOR

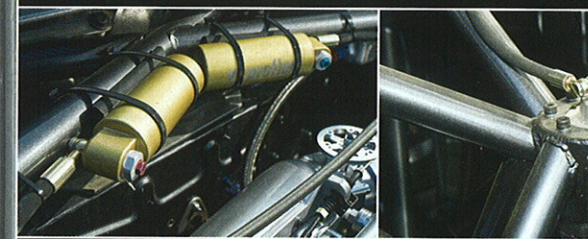
Tadstar Racing one-off body kit, Tadstar Racing custom canards, Tadstar Racing front splitter, DJM Motorsport carbon rear spoiler, SJS design graphics, painted Ferrari Grigio Silverstone by Tadstar Racing



Below: full data logging from Motec ECU while PI dash cuts down on unnecessary gauges



DJM designed and built the cage and fuel cell housing



Switches located above driver's seat are easy to reach



the main advantage of the Mitsubishi engine was that it was good for 350-400bhp straight out of the box



JAP-POWERED FIESTA

Tadstar's Fiesta is not the first example of Jap power in a small Ford. Torque of the Devil's Mk1 Fiesta features a modified EJ20 STi engine with a GT30 turbo, an Impreza gearbox and 427bhp – or 500bhp with NOS!

his way then he would have stuck with this route for the new car as well. "We did originally plan to have a big power Zetec turbo engine," he admitted. "but time constraints with the engine build, plus the fact that we eventually decided that we were going to need more power than a Zetec could reliably provide, meant that we were forced to rethink or we'd be left with no engine at all."

"We did briefly consider going down the Cosworth route, but as the Fiesta had been built around Mitsubishi running gear and an Evo gearbox that was specially converted to match the Zetec, it was going to be simpler to just build an Evo, rather than go to the trouble of matching up a YB."

As well as being a perfect fit for the existing gearbox, the main advantage of the Mitsubishi engine was that it was good for 350-400bhp straight out of the box, so getting the 600-700bhp that was needed in order to keep Mr Gallacher in check was going to be relatively easy, although with that in mind the first experimental outing at Knockhill towards the tail end of 2008 did not go exactly to plan!

"The first engine we fitted blew up," said Peter "So we bit the bullet and ordered a full race-spec version from Burschur Racing in the USA. We needed something that could produce big bhp but it had to be as lag-free as possible in order to be any good for Knockhill."

Within weeks Burschur had delivered a stroked 2.3-litre engine with the potential for 1000bhp, but set up for around 650bhp with a relatively punchy Forced Performance HTA GT3586R turbo kit, Evo400 Piper cams, full Motec management and much, much more besides. Take a look at the spec panel for the full facts, but to get an idea of the money we're talking in this engine you're looking at about £2500 in braided hoses and fittings alone!

The Burschur-built Evo lump is just one part of the story though. The chassis that it fits into was designed and built by DJM Automotive Engineering, a company that specialises in projects of this type. DJM is the brains behind the McRae R4, a lightweight and high performance space-framed prototype built in collaboration with the late WRC legend, and also a company that has previously built a 4WD conversion for the Ka. As it happens the DJM Ka was also something of a Mitsubishi/Ford hybrid, with an Evo 6 gearbox and transmission mated to a 300bhp Cosworth YB and as the Mk3 Fiesta shares the same floorpan as the Ka, it was a relatively simple task for DJM to replicate the conversion. Although that's perhaps oversimplifying things somewhat when you consider the work that was required!

It took DJM around three months to prepare the chassis, before it was shipped back to Tadstar Racing (comprising Peter's dad, brother and family friends), to have the Burschur engine fitted and the finishing touches put in place. Again, this is oversimplifying a tad as by 'finishing touches' we mean design and fit the unique body kit, decipher the Evo wiring loom (8kg was stripped from the original item), equip the interior with the remaining race car requirements such as dials, switches, seat and safety features and tie up any loose ends to ensure that the Fiesta behaved properly and that it suited Peter's driving style.

"I wanted the setup to resemble a front-wheel drive car as much as possible, as this is what I've always been used to," said Peter. "Proflex has offered to send an engineer for our first proper test, to advise on the suspension setup. We've booked an exclusive session at Knockhill and we have someone coming from Dunlop and Whiteline so hopefully it'll be spot-on for the start of the season."

Now that might sound excessive

for what is still club racing, but if anything it's just a reflection of what's required to be competitive in the Scottish saloons. Peter's Fiesta is prepared to an astonishingly high level. From the driver's seat there is a bank of switches mounted immediately overhead that operate fuel and electrics, a pit-to-car radio system and even a switch for wet and dry maps for the Motec ECU which when you consider the unpredictable weather at Knockhill, is a handy option to have. Even the body kit is functional, providing scoops and vents to cool vital components as well as considerable downforce from the rear wing.

"It's a case of trial and error with the aero package," said Peter. "The front splitter should probably be a bit lower and we might try out a flat under tray and rear diffuser at a later date, but the rear wing is very effective. In the one round that we managed to take part in last year, it actually snapped in half due to the forces at high speed, so we had to have another one built that was filled with foam and sandwiched by the two carbon elements."

The real test of course will be when the lights go out for the first SSSC race of 2009, because only then will Peter discover if all the hours of building and testing have been worth it. The end result of all the painstaking prep is a four-wheel-drive monster that weighs less than his original front-wheel drive Zetec Mk3 but with twice the power and many times the performance. It's cost a fortune to build with what some traditionalists might argue are the wrong ingredients, but if it all comes together then we reckon that Peter and his team have earned the right to get away with it. Just this once... ■



Forced Performance turbo can give 650bhp but is still punchy enough for Knockhill

