

FROM THIS...



A childhood idol, bought from its original creator – but with big issues.

TO THIS...



21ST CENTURY RESTO

# 1973 Morris Marina T16 TURBO

Ben Clayton fell for this **Morris Marina** as a kid, but only after rebuilding it did it live up to his dreams

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PHOTOS MATT HOWELL

**A**s classic car lovers, most of us had childhood dreams of a particular car. For most of us, these 'crushes' passed as teenage years brought a succession of 'fix 'em on Sunday, drive 'em to work on Monday' bangers. But not so for Ben Clayton, who brought his particular dream to life.

Back in the early Nineties, nine-year-old Ben avidly read his grandfather's car magazines. Flicking through the May '93 issue of *Fast Car* one day he spotted a gorgeous metallic green Marina, sitting low and mean on wide Revolution alloys, with a turbo-charged Montego O-series engine under the bonnet. It was love at first sight, and Ben has been a big fan of the characterful Seventies Morris saloon ever since.

Jumping forward to 2014, he and his father already owned several Marinas and Ben was running the Fast Marina Forum. It was here that he bumped into Paul Hedger, the creator of the very same turbocharged Marina he'd drooled over more than 20 years before. A two-year dialogue ensued, before Paul finally agreed Ben would make a suitably caring new owner. A deal was struck and Ben collected the car, but on getting it home to the Isle of Wight, there was a bit of a wobble. In his own words: 'The car clearly hadn't run for ages, and it had lots' ➔

Practical, and also a bit posh.





**LEFT** Electrickery required a serious re-think...

**RIGHT** ... but it was worth it. Lowered springs give a superb stance.



**BELOW LEFT** Impressively tidy and not-too-crammed engine bay, signed by the previous owner. Classy!



**TECH SPEC**

**Engine** 1994cc/4-cyl/DOHC  
**Power** 210bhp at 7psi boost – with scope for more  
**Torque** 250lb ft (est)  
**Gearbox** 5-spd LT77 manual  
**0-60 mph** <6.0sec  
**Top speed** 150mph  
**Fuel economy** 40-45mpg  
**Weight** 956kg

**RIGHT** Full complement of both dials and speakers.

of electrical add-ons roughly spliced together. I had a big “what have I done” moment.’

Initial disappointment was soon replaced by enthusiasm, but there was a long list of issues to attend to. First up, thorough recommissioning, including a rebuild of the eight-valve head and turbo, and also (to quote Ben) ‘removal of gaffer tape and cable ties.’ The electrics were problematic as there were plenty of upgrades – all of which, Ben says, ‘appeared to have been well thought out but then lashed into place rather than wired up reliably.’

**Transmission turnaround**

The Rover-derived, five-speed gearbox was mounted at a weird angle, with the tail almost scraping the ground and the propshaft running steeply upwards to meet the misaligned diff pinion. The difficulty was that the



**Here's how Ben did it...**



**1 AUG 2016 Recommissioning**

A thorough recommission made the car usable. Ben rebuilt the turbo and head, fitted new hoses, and removed zip ties and gaffer tape.



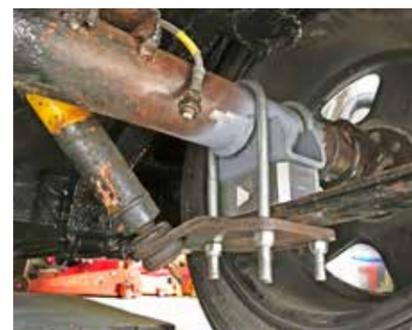
**2 JAN 2017 Rewiring**

Past electrical upgrades had been well planned but not very well executed. Ben went right through the car finding and fixing numerous lash-ups until it was all ship shape.



**3 JUL 2019 Gearbox alignment fix**

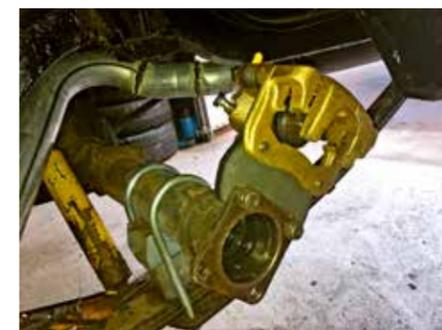
The gearbox had been fitted at an odd angle, tail down to clear the tunnel. Ben cut and raised the tunnel to level the ‘box.



**4 AUG 2019**

**Rear axle mounting**

The axle was slightly off-centre, and the pinion angle was wrong. Refitted on police-specification Marina springs, it now lines up perfectly.



**5 JUN 2020**

**Brakes**

Front brakes were upgraded from Austin Princess to Rover SD1 four-pot calipers and Audi discs. The rear disc conversion uses MGF discs and calipers.

**SOURCE MATERIAL**

From spare parts to spares cars, sundries and more...

The Marina's first turbo engine was an 8v unit from a Montego turbo, but Ben has upgraded to a 16v Rover T16, using a block from an early Rover 220 turbo with a cylinder head from a 620Ti and Garratt T28 lookalike turbocharger. It drives through a Rover SD1 LT77 gearbox to a TR7 live rear axle, so the whole powertrain comes from Leyland and Rover. Suspension and steering are from the Marina, though the front torsion bars and rear leaf springs are lowered. The brakes use a VW master cylinder fitted to a Marina servo via a home-made adaptor, with Rover SD1 calipers and Audi discs at the front, and MGF discs and calipers at the rear.



Rover T16 engine fitted surprisingly well.

**ESTIMATED COSTS**

Starter car (with Montego turbo 8V engine).....	£1500
Intercooler and pipework .....	£40
Radiator and hoses .....	£45
Engine incl. rebuild parts .....	£750
Engine ancillaries.....	£75
Turbo (copy of a Garrett T28) .....	£120
Exhaust .....	£40
Electrical incl. WOSP starter .....	£250
Brakes .....	£205
Suspension upgrades .....	£50
<b>TOTAL .....</b>	<b>£3075</b>

transmission tunnel wasn't large enough to clear the large gearbox. Ben cut away the top of the tunnel and welded in new metal to raise it by two inches, then adjusted the gearbox mount to raise it to the horizontal. A small notch was also needed in the top of the bellhousing to clear the bulkhead; now engine and 'box fit perfectly.

At the back, the nearside wheel was scuffing the arch, caused by the misaligned axle, and the lowered car was also frequently grounding. Ben realigned the axle, fitting new springs and U-bolts, while keeping the lowered look, but stiffening the car enough that it no longer scrapes the road. Ben admits that 'it is still so low it's really not possible to drive with more than two occupants!'

**Better brakes**

Now that the Marina was running and driving well, Ben turned to the braking system. At the front, there was a standard master cylinder and servo with the oft-used upgrade of Austin Princess four-pot calipers on Marina discs. He wanted even more stopping power and after trawling through parts books, came up with Audi 80 solid discs and Rover SD1 four-pot calipers. The discs were redrilled for the Marina's stud pattern then everything bolted together. The master cylinder has been swapped for a VW alternative, grafted to the servo with a homemade adaptor. Ben's efforts had turned the car into a reliable, road-going proposition, proved by



## WHAT'S IT LIKE TO DRIVE

Put aside any notion this will be like driving another Marina – the only similarity is the view down the bonnet. The Granada seats are comfy and supportive and turning the key instantly brings the engine to life. I snicked the 'box into first and immediately stalled as the clutch bites right on the floor, something Ben will correct next time the gearbox needs to come out. Try again, and we trickle off gently, with a muted burble from the exhaust.

Up to second and I push my right foot a bit harder. Instantly the car accelerates in a most un-Marina-like manner. There is

a real shove in the back, free from turbo lag. We're quickly through second then accelerating hard in third, making it easy to believe the impressive 0-60mph estimate. With a bend fast approaching, the all-round disc brakes do a fuss-free job of slowing this Marina missile. Despite radical lowering, the suspension is surprisingly compliant. Once Ben has tweaked the clutch, his Marina will be both blisteringly fast and totally civilised, some achievement for a home-brewed car with almost three times its original power output!

This is no ordinary Marina experience.



A sight that never hangs around for very long.

### BLIND ALLEY

When sorting out the fuel injection system, Ben really wanted to hide the high pressure pump inside the fuel tank (common practice with modern designs) as it would look neat and keep the original appearance. In the end, keen to get the car running properly, he couldn't put enough time into planning the new fuelling system, so today it runs with an external swirl pot and a high pressure pump mounted in the boot.

a 1000-mile round trip including attendance at the 2018 Marina Nationals in Devon. A period of forced inactivity followed, while he moved north to the Midlands, then built a garage beside his new home.

More recently, Ben fancied a disc conversion at the back, but struggled to find the right donor, until he struck upon the MGF set-up. He comments: 'The discs bolt straight onto the hubs, the calipers fit with homemade brackets and a standard MGF cable connects the handbrake'. It works well, efficiently stopping the car from most un-Marina-like speeds.

### So near, and yet so far

With the car running reliably, Ben had another turbocharged dream. It was early 2020, and he had a Rover 16-valve turbo engine to play with. As he says: 'For years I had wanted to strap this engine into a lightweight car and scare myself witless, going through the gears on some quiet back road.' This is the engine Rover fitted to the 800 series Vitesse in the early Nineties, with 180bhp powering the big saloon to 60mph in under eight seconds. Ben was proposing to drop the same engine into a Marina that was almost half a tonne lighter!

At that moment the pandemic hit and many of us, Ben included, had time on our hands. His T16 engine had already been rebuilt and it fitted in place of the Montego unit without major difficulties. The turbo was now on the left of the engine, but it cleared the inner wing, and a Rover 620 diesel radiator gave enough cooling capacity. Ben says: 'No chassis or bodywork modifications were needed, but I lifted the bonnet's rear edge to improve airflow and reduce engine bay temperature.' There were worries about the flywheel because the Rover version has a smaller diameter than the Montego's, but Ben was able to make an adaptor, bringing the WOSP starter motor closer to the flywheel's ring gear.

New motor installed, Ben went for the big start up and... nothing – no compression on any of the cylinders. Stoic as ever, he soon got over his disappointment and pressed on. The engine was hoisted back out and stripped, revealing the problem. Ben recalls: 'Though it had been rebuilt, the individual responsible had skimped on cleaning. The cylinder head was contaminated with swarf, half the hydraulic tappets were seized and the crankshaft's new bearing shells were scored.'

He built an electrolytic parts cleaner and triple-cleaned all the engine components before reassembling meticulously. During lockdown, finding parts was hard, especially the bearing shells that he eventually discovered in Lithuania. He also fitted a new, bigger turbo – a Chinese lookalike for the Garrett T28, rated for up to 400bhp at full boost!

Engine reinstalled, Ben fired it up and set about running in and shaking down. Using the engine's original ECU, he estimates the T16 is giving around 210bhp at the current boost pressure of 7psi. The Marina certainly feels mighty fast, with 60mph achievable in less than six seconds. Is this enough for Ben? Of course not! He explains: 'I want to raise the boost, as around 400bhp is possible at 14psi, but the Rover ECU can't cope with fuelling at higher pressures, so I plan to fit an Emerald or Omex aftermarket ECU.' A six-speed gearbox from a Mazda RX-8 is on the cards, to handle the power.

Having bought the car he first fell for aged nine, Ben has brought it back to health through sound re-engineering of original modifications, then taken it well beyond what its original creator envisaged. But he's not done yet. This dream will run and run! ■