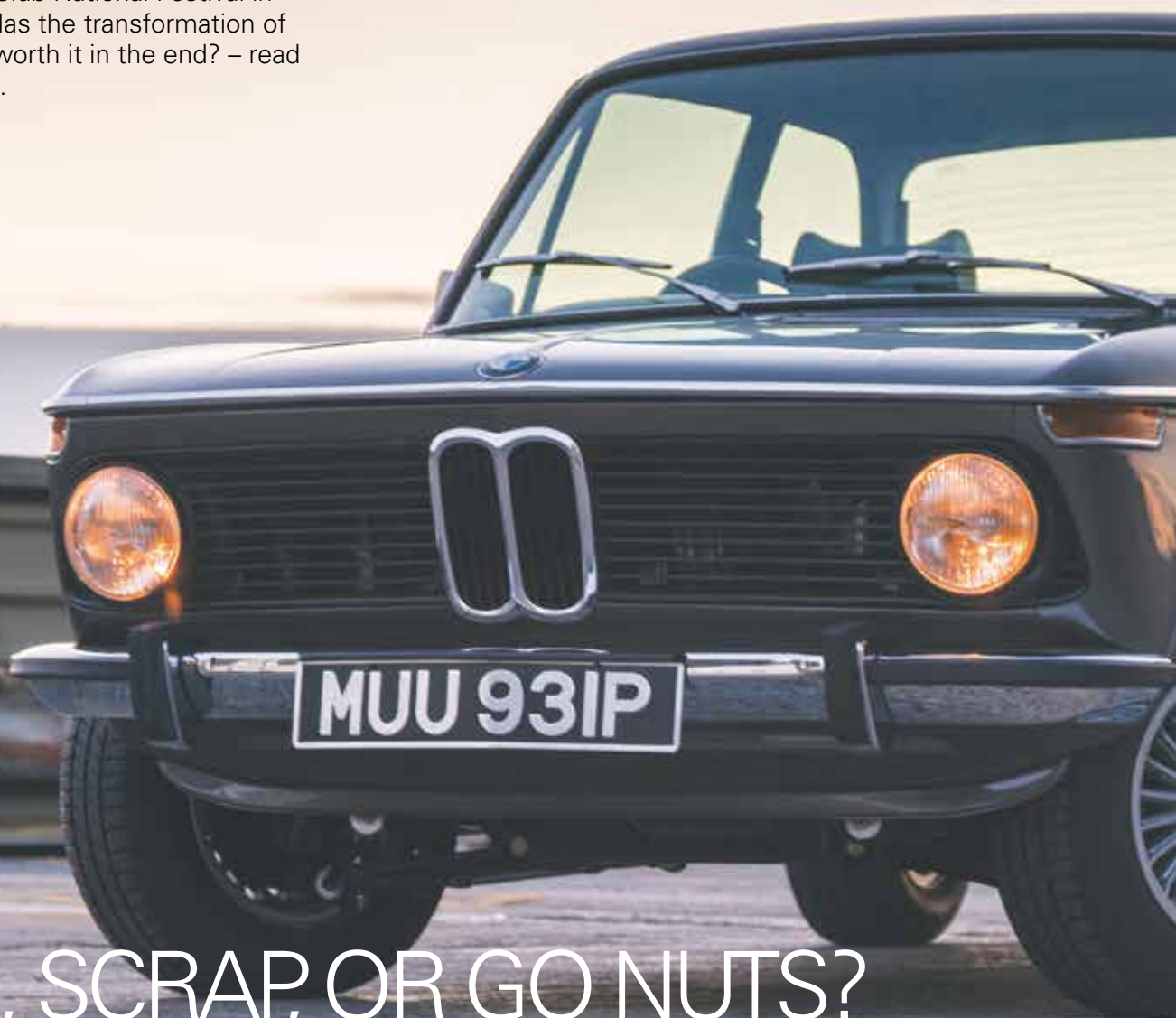


Club member Bal Mehmi shares with us the trials, tribulations and, of course, the financial implications involved in the total restoration of his BMW 2002tii Lux over an eight year period...which ended with his tii winning 'Best in Class' at the BMW Car Club National Festival in August 2018. Has the transformation of his tii all been worth it in the end? – read on to find out...



SELL, SCRAP, OR GO NUTS?  
**I CHOSE TO  
GO NUTS!**

Words - Bal Mehmi/Jeff Heywood ~~ Photos – Bal Mehmi/Ross Jukes Photography



Bal purchased his car back in 2004 and it looked a decent buy... but he soon noticed areas that would need future attention...



help of the AA was always able to make it back home; I did make it to Gaydon in 2009!

Married life and the responsibilities it brings then took over – baby No.1 (Suri) arrived in 2010 so the car sat for another two years. It managed to scrape through another MOT and I then decided to put it up for sale; I didn't get any decent offers so the car was laid up for a further 12 months. There was no way it would pass another MOT and Ron had retired, so with the support of my daughter I decided to do the job properly and rid the tii of all its rust; I wasn't interested in just getting the badly affected areas repaired, I was on a mission to eradicate all rust!

Baby No.2 (Lila) then arrived in 2013. I had by then totally stripped the car down to a bare shell; I tried as best I could to document everything, to ensure it could be put back together once finished. That was the plan anyway. I sent the car to be shot blasted and then the problem areas could be seen more clearly. Unfortunately, the shot blasting uncovered plenty of rot; I thought about doing the welding myself, but I quickly realised this was going to be a big job, no, not a big job, a huge job! So I decided to bite the bullet and outsource the work in late 2013 to a local company Jules Bodycraft ([www.julesbodycraft.co.uk](http://www.julesbodycraft.co.uk)), owned by David Gautier – 2002 prices were on the rise so it kind of made economic sense to spend money on the car; the old 'speculate to accumulate' adage comes to mind... David and his team were tasked to do the welding and repairs and then finally paint my '02...

I purchased my Anthracite Grey Metallic (055 Anthrazitgrau) 2002tii in 2004. It was in good working order and on first appearances it looked very smart. I enjoyed the whole ownership experience, and with the help of local BMW 2002 expert Ron Wormsley, I ran the car for a good few years; with Ron's help and advice I was able to keep the car in usable condition and drove it on a regular basis. The car is an original 2002tii Lux, and came with receipts dating back to 1976, with paper trails showing that lots of work had been carried out; the previous owners had done a good job in looking after

the car. However, it was clear on closer inspection there was a growing problem of rust in many of the usual places...

After scraping through an MoT with the help of Ron in 2007, I decided to use the car for my wedding to my (now) wife Neeta...*on the day the car failed to start*. Ron gave my tii a good going over and then gave me the news I didn't want to hear – he pointed out that it needed significant welding to the sills and in a lot of other areas. This left me with a sickening feeling in the pit of my stomach and was the start of a downward spiral. I used the car sparingly for about three more years and with the (*occasional*)

### The restoration begins

The refurb of my tii's shell turned out to be a mammoth task, carried out over two years; here in David's words is how my tii was stripped, repaired and restored: "Bal's 2002 looked OK from a distance, but on closer inspection one could see that it was going to be a lengthy process to bring this Bavarian beauty back to its former glory. We



After Ron Wormsley pointed out the many issues on my tii that needed attention, I decided to tackle the work myself – I parked the 2002 in a suitable garage and got to work...

totally stripped the car of its remaining anthracite paint and the sub-layers to a bare shell, and the bonnet, doors and boot lid were removed. We then manually scraped away all the old underseal and joint sealer to expose all of the rust; the underside of the floor pans, engine bay, bulkhead, interior and boot area of the vehicle were then sandblasted, removing any remaining underseal in the nooks and crannies and all surface rust – the nastier areas of corrosion were exposed and would be either replaced with new repair panels or cut out and repaired as necessary. We were on a mission and every last flake of rust had to be eradicated!

We found extensive corrosion to the boot floor, inner rear wheel arches, inner and outer sills, lower sections of the rear quarter panels, A-posts, front and rear floor pans and the bulkhead. The inner flitch panels and the front valance were badly corroded and were the first to be tackled. They were cut away and replaced. Unfortunately sandblasting isn't an option for stripping the outer panels;

the sandblasting process generates heat which causes panels to warp, so the bonnet, boot lid, doors, roof and rear quarter panels were stripped to bare metal and machine and hand sanded. Once we were happy that every last ounce of rust had been eradicated, all of our welded joints were lead loaded and finished flat before the body shell was etch primed with a 2K wash primer to keep the bare metal from developing surface rust.

Bal requested that the restoration was carried out correctly, which we were really happy about as we didn't want to cut any corners with the tii's restoration. Therefore the inventory of body panels and parts that were required for the rebuild was extensive and made for scary reading! I won't cover everything here as it will probably send you to sleep, but here's an abbreviated list of parts purchased and fitted to Bal's tii: both outer and inner sills were replaced, four new floor sheets, front and rear, left and right were welded in; mounting rails for both front wings were fitted, along with



both inner wings, inner wing sheets and new outer wings, which were lined up to factory panel gap standard; inner and outer wheel housings were fitted, along with replacement panels for both rear wheel arches. Repair panels for both A-pillars were welded in place, a full set of brake lines was fitted, new tie-rods, ball joints, steering rods, wishbones, all rubber bushings, brake caliper repair kit, two new brake cylinders, and a plethora of clips, bushes and clamps for the suspension parts, axle etc, along with all trim parts, chrome trim and rubber seals including window seals were also acquired, with some trial fitted. A new and full set of tinted glass was hunted down – eight pieces in total, all new brakes front and rear, shock absorbers, fuel lines and four new hubcaps – phew! And that's only part of the inventory, plus think of how much time and hard work went into repairing and fitting most of these parts!!"

"Once we, and of course Bal, were happy that all rust had been eradicated the 2002 was then wheeled into the bodyshop. The doors, bonnet, boot lid and (as previously mentioned) new front wings were refitted and aligned for perfect fit. The boot lid, bonnet and door rubbers and catches were also refitted to ensure a good fit; we always carry



I soon realised I had bitten off more than I could chew and decided my tii needed professional help, so I took it down to David Gautier at Jules Bodycraft, who gave my car the once over and pointed out the obvious problems, like the multi-patched suspension turrets in the boot and then uncovered more rot in the sills, A-pillars, inner and outer wings, engine bay etc...



The car was sandblasted to remove all paint, primer, rust and crud! Once all trace of rust had been removed, David and his team then set about cutting out and repairing bodywork where necessary, raking out all joints, removing rust, running lead and then resealing, using bodyfiller on certain panels where needed, 'stitching' in repair panels if a large area needed replacing and welding into place lots of new body panels like the sills, wings etc – a laborious task...

out this operation at this stage to avoid wind noise and leaks once the vehicle is rebuilt. Body mouldings, brightwork and lights are also refitted at this stage, and adjusted to ensure good alignment; they are all then removed once we are happy that everything fits and lines up correctly and looks spot on.

Metallic grade filler was then applied over any imperfections and repairs to the body; we then blocked any areas with filler into shape. Another skim of filler was then applied to the sides of the vehicle and blocked smooth; ensuring a perfect ripple free finish when viewed by my eagle eye! The same process is carried out on all outer panels including the roof, bonnet and boot lid to ensure the finish will be perfect once paint is applied.

After this stage, all bodyshell joints and seams had seam sealer applied, plus inner wheel arches and the floorpan and other areas vulnerable to gravel rash are treated with anti-stone chip coating for protection.

Moving on to the next stage, we then sprayed the entire vehicle with 2K primer. The engine bay, underside, interior and boot area were then sanded and on went a 2K base coat plus the first of many coats of clear (top) coat, were then applied. The external body panels were then wet flatted to ensure a mirror like finish.

The engine bay, boot area, inside and underside of the 2002 was masked up and the exterior of the vehicle was then sprayed with its top clear coat and baked. Once Bal's 2002 came out of the oven and had cooled down sufficiently, the external body panels of the tii were then flatted and mopped to ensure a perfect finish.

As a final precaution against the dreaded tin worm, we then injected all of the body cavities with a liberal dose of Waxoil for future protection."

#### Engine rebuild

While David and his team were busy repairing/restoring the tii's bodywork, the engine was removed and sent over to Toby at Classic & Modern Engine Services Ltd for a complete overhaul. Toby set about the 2002's M10 engine with relish.

"The M10 was stripped and the block, crank, conrods, cylinder head, sump and rocker cover were all dipped and thoroughly cleaned. The crank was then reground and the block rebored before being honed and finished and refaced. The worn small end-bushes were bored out and new fitted along with new gudgeon pins. The piston rings were then 'gapped' to the bores.

The cylinder head was then pressure tested and all old guides were removed

and replaced with new, and new guides were reamed to the new valves. The valve faces and seats were then recut and the cylinder head refaced. The rockers and followers were reinstalled and tappets adjusted to suit.

We then polished the camshaft, before stripping the oil pump, polishing the internals, cleaning and inspecting the pressure relief valve before reassembly.

The engine was then reassembled with new gaskets and seals, before the oil pressure, compression and oil distribution were all tested.

New parts in the engine rebuild consisted of a new set of pistons, main and big end bearings, small end bushes, 4 x exhaust valve guides, 4 x inlet valve guides and 4 x inlet valves. A new tensioner guide rail, timing chain guide rail, spigot bush, engine timing chain and oil pump timing chain were added to the list, plus a head gasket set, head bolt set, core plug set and a conversion set, and of course, a new oil filter!"

Bal's engine was now in rude health and was duly fitted back into his tii.

Bal continues: I was very happy with the meticulous work carried out by Toby on his engine and highly recommend Classic & Modern Engine Services Ltd.

Finally, my 2002 was now ready for re-assembly. I was over the moon with the work David and his team had



Getting there; my tii is nearly at the stage where it moves to the paint shop, it's already had a first coat of primer in places (the green-ish coating), just waiting for the bonnet to be fitted so the front end can be primered – then into the spray booth and the 2002 received its 2K Primer coat...



The whole painting process can be followed in the main body of the text, but after numerous coats of primer, base coat and lots of clear coat my tii finally emerged from the oven looking like a newly painted bodyshell, resplendent in its metallic 'Anthraxitgrau' paint; check out the attention to detail and paint quality finish even in areas like the engine bay and front subframe, where most of David's work will be covered up – see photo...

done with the 2002's bodywork. My car was with them for over two years, and was worked on as and when finances allowed; during this time we also moved house. This totally scuppered my re-assembly plans as we moved from a house with a double garage to a single garage when baby No.3 (Hari) arrived.

Therefore I decided to contact '02 experts Jaymic and ask if they would complete the final assembly on my tii; it was now full steam ahead as the finishing line came into view for the first

time in years. The car and boxes full of parts, trim etc were delivered to Jaymic's headquarters in Cromer, near Norwich in early summer 2017...

#### Re-assembly at Jaymic

"Once Bal's painted rolling shell arrived at our workshop, we undertook the job of reassembling the car from boxes, as Bal had not found the time to reassemble his tii himself. Quite a lot of the new/reconditioned parts were supplied by Bal.

We fully overhauled the braking system using new BMW calipers,

Jaymic did a marvellous job assembling my tii from boxes full of parts, trim etc; trimming the boot area is underway - the rebuilt M10 engine looks superb back in my tii's engine bay. The newly recovered seats and interior are fitted and the reassembly of my car is nearly complete...

reconditioned master cylinders and reconditioned servos (by our own local specialist).

The Kugelfischer fuel injection system was fully reconditioned by us, refitted and recalibrated to the customer's (reconditioned) engine. A new clutch, slave cylinder, propshaft coupling and centre bearing and a reconditioned differential were fitted. A new wiring loom was also fitted, supplied by Bal.

There was a lot of detailed work including shotblasting and refinishing many parts, small and large, to obtain the best possible finish.

The car was rebuilt using as many new or reconditioned items as were obtainable, including new front to rear fuel lines supplied by Bal, switches, sensors, mounts, bushings, hoses, pipes etc.

A new headlining was fitted inhouse, along with front and rear seats that were re-trimmed in Marine blue cord and velour.

New glass was fitted all round, supplied by Bal, along with new aperture seals (boot, bonnet, windows, doors etc).

All new brightwork all round (waist mouldings, bumpers, rubbing strips, B-post and quarter top mouldings) were next on the list to be fitted to the tii; finally, on went new boot and bonnet badges as the reassembly finally came to an end.

We thoroughly enjoyed building this late Lux model, and both ourselves and the owner were very happy with the end result. We are really pleased for Bal that his tii won the best in class at the BMW



was loaded onto a trailer and driven over to Jaymic's premises in Norfolk for final assembly...



Finished! The assembly work on my tii is finally complete by the Jaymic crew and looks amazing! All it needs now is to arrange a lift over to Norfolk and drive it home...

Car Club's National Festival 2018."

I have to be honest, when I received the call from Jaymic that my car was complete and ready for picking up I was gob-smacked. The fit, finish and quality of all the work carried out by everyone was mind-blowing; my tii now resembled and drove like a car that had just rolled off the production line at BMWs Munich factory! Was I happy? What do you think?

**Bal's final thoughts...**

Would I do it again? Maybe. There is one thing for sure, there was no way I would have completed this restoration on my own! Finding garages that can work to your timescales/budgets was key. Over the eight-year 'restoration' period I have lost count of how much I have spent, but it was



From whichever angle you view Bal's car, it looks as good as new. The restoration work is top drawer...



Restoration complete, Bal's tii looks amazing...

manageable. Getting it done in a shorter timeframe wouldn't have worked financially. The final product has been worth it. The car has zero rust or patchwork repairs. It now has a fully refurbished drivetrain, front and rear subframes, new suspension, interior, new wiring loom, fuel tank, brakes, servo, bumpers, glass, trim...etc. The list goes on and on. Total expenditure over the six years ~ £70K. Over half of this was on the body, the paint job set me back £6k, with £10k spent on body panels. To ensure longevity of this car the shell had to be done right.

From a distance, Bal's 2002 looks like any other immaculate, well looked after '02; close up, it is unbelievable! Some have said it's the best they have seen, which is a pretty amazing compliment indeed!

*"I can't finish this article without thanking the following for their help and advice during my tii's rebuild; David Gautier at Jules Bodycraft. <http://www.julesbodycraft.co.uk> - Toby at Classic & Modern Engine Services Ltd, <http://cmesuk.com> - The team at 'The Jaymic Workshop Ltd' plus AutoSparks <https://www.autosparks.co.uk> - for the wiring loom - Wallothnesch, Germany: [www.wallothnesch.com](http://www.wallothnesch.com) for a plethora of parts (for all BMW classics). And of course, to Ron Wormsley for all his help keeping my tii on the road all those years, and to the indefatigable Richard Stern, the go-to '02 guru!"*



Viewed side on and the 2002's simple but attractive, 3-box lines come to the fore...



Bal's decision to restore his 2002tii Lux was (partly) justified in August 2018 at the Club's National Festival when his amazing Anthrazitgrau tii picked up the 'Best in Class' award