

The second Dorset section virtual club night

Hello everyone, I trust you're keeping well and coping OK under the current circumstances. I've heard from several members who appreciated the virtual newsletter and received several contributions for the next edition, so please enjoy. I won't bore you with one of my columns this time, but fair warning- if you don't send me your efforts I'll have no choice but to inflict you with more of my ramblings!

Stay safe and well.

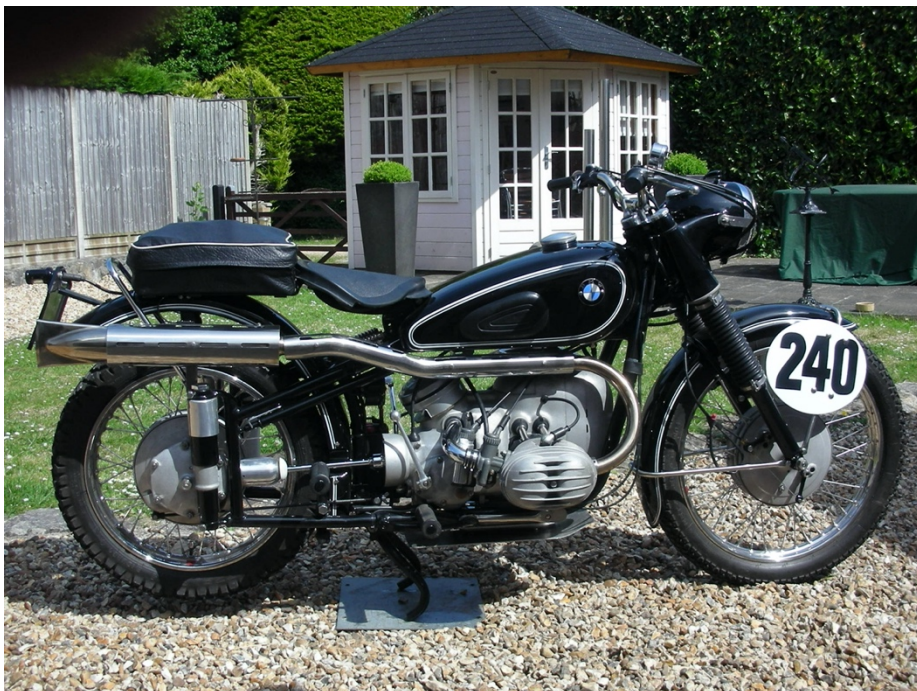
Paul Miles- chairperson

First up is an article about one of my favourite section machines, owned by Ian.

CREATING A 1953 ISDT REPLICA

By the Amateur Mechanic.

I like to try to run more than one project at a time, that way there's always something to be worked on and I can wait for parts that hold me up to come at 'the right price' thus not paying 'through the nose' for bits. The downside of course is that my projects



inevitably drag on for many years, still I'm currently not too short of bikes to ride which helps. One example of a very long-term project is the recently completed R51/3 ISDT Replica whose origins date back to about 1995. At that time, I was researching 'BMW's in Competition' an article I've still to

complete (well over 20 years years later!) but I was already aware that BMW had entered three works machines in the 1953 ISDT held in Czechoslovakia, so I investigated further.

The three machines were ridden by Georg Meier (1939 TT Winner), Walter Zeller (runner up to John Surtees in the 500cc world championship in 1956) and Hans Roth. Meier and Roth won Gold Medals whilst Zeller retired with 'drive shaft failure' which in fact turned out to be disintegration of the rubber drive doughnut. Enquiries I made at that time (with BMW) indicated that the three machines were R51/3 based, information borne out by several other sources, encouraging me to search for some period photos which soon convinced me that I could build a reasonably accurate replica of one of these works machines.

So, what had I got to start with? Well, I'd already restored two R51/3's and an R68 as a result of which I'd amassed a number of spare parts. What better way to use these than to build another complete machine? Amongst the 'spares' I had a complete R51/3 engine and frame from 1953, a set of R68 two way damped front forks, a pair of full width hubs (as fitted to the works machines), a suitable front mudguard blade and many other smaller parts. I began (as I always do with any project) to put together boxes of bits and started to list the parts I needed to find such as gearbox, tank, rear mudguard, rims, tyres, seats, handlebars, controls, air bottle etc. etc. My first break came when I had one of my restored R51/3's on display at the Bristol Classic Bike Show in the mid 90's. I was approached by someone who said he had a rebuilt gearbox left over from the days when he owned an R51/3. A few questions revealed it was a '52 on box, the one fitted with a cover over the driveshaft doughnut, and therefore exactly what I needed. We agreed to meet at the VMCC Somerset Section Autojumble a month later when he would bring the gearbox with him. Eighty pounds changed hands and I had a newly rebuilt gearbox. I soon found out why it wasn't in his R51/3 when he sold it -it simply didn't work as it was impossible to select the gears. Fortunately (?) I'd experienced a similar problem before. The cover on the offside, behind the hand change lever, is held on with 6 countersunk screws, 4 long and 2 short. If the two short screws are not in the 12 o'clock and 6 o'clock positions then you can't change gear. The short screws on this box were in the wrong positions as I suspected. Problem solved.....or so I thought at the time... I'm pretty sure whoever rebuilt the box (it was in mint condition inside) couldn't work out why it wouldn't work and acquired another one. I'd decided, having scaled the photos I'd got, that the factory machines were fitted



with a 19 inch rim on the rear (standard on plunger machines) and a 21 inch on the front. Due to the difficulty in obtaining suitable 19 inch rear Enduro type tyres I decided to fit an 18inch rim to the rear enabling the use of Metzeler Enduro 1 tyres in 3.00x21 and 4.10x18 sizes. Having picked a 4.10 to give a smaller section, nearer to the 3.50 tyre used on a standard R51/3, I subsequently found that a 4.00x18 would still go in without fouling the shaft so as and when the smaller tyre wears out it will be replaced with a wider tyre. The works bikes used chrome plated rims but, in the interest of longevity, stainless rims (complete with the 5 indentations normally found in BMW rims) were fitted, laced with stainless spokes and nickel plated brass nipples.

Whilst the wheels were away being trued there was time to look at the exhaust system. The photos I had clearly showed a high level system with a single fishtail silencer on the offside, having the siamesed pipes joined alongside the air filter, the nearside pipe passing behind the auxiliary air filter half-moon cover and the front of the air filter. Complete systems were/are available from dealers for around €1600 but all these cross over above the timing cover. OK I'm sure as an after-market fitment but not much good if you want a reasonably accurate replica of a 'works' machine. I assembled a spare crankcase fitted with barrels and heads in the frame along with a petrol tank and took it to Torque Technique (Mick Poulton) in Wilton for the front pipes to be made. As usual he produced good work at a fair price and the exhaust pipes were sorted. Now I needed a suitable silencer. I'd picked up a length of stainless tube for the barrel of the silencer, a tube of half inch bigger in diameter to make the heat shield and a length of smaller diameter stainless perforated tube for the internals whilst at Torque Technique, having decided to make my own 'absorption' silencer. A visit to the local Motocross dealer yielded a length of matting normally used to repack two stroke silencers. Having made the press tools and pressed two suitable 'top hat' pieces in stainless these were welded to either end of the perforated tube then the area between them packed tightly with the matting, secured in position using stainless steel lock wire.



This assembly was then pushed into the outer tube and tack welded into position before the ends were seam welded on. Finally, a bracket was fabricated to attach this silencer to the top clamping bolt on the plunger suspension then the whole assembly was polished. All that

remained was to sort the heat shields. When Torque Technique had bent the exhaust pipe I'd also had a second pipe made for the offside half an inch bigger in diameter than the first so that this pipe could be cut down its centre line to make the heat shield as could the tube half an inch in diameter bigger than the tube which I had bought for the silencer. The only difficulty was likely to be cutting the required slots in these shields. Having consulted my engineering 'guru' and started to make the press tools to form these slots, a chance conversation with an old friend revealed that his son-in-law worked at a firm with laser cutting equipment. The press tools were promptly disbanded, thirty pounds changed hands and a pair of highly polished stainless steel items into which a series of slots, from a drawing I'd supplied, had been laser cut and were back in the workshop.

The overall result was aesthetically pleasing even if the silencer was somewhat noisier than expected. The absorption silencer works well at tick-over as at low revs the matting effectively absorbs the noise, however once the revs rise and the gas speed increases the gases exit far too quickly to be absorbed and then the 'silencer' acts as a straight through system. Most un-BMW like! So an additional baffle was subsequently fabricated and fitted. Whilst work slowly progressed on several fronts there were still major problems including the lack of a tank, rear mudguard and rear seat pad, all of which were unique to the 'works' ISDT model. Several years before a friend of mine, John Greaves, had bought an R68 rear seat at Netley Marsh Autojumble and, at the time, had offered it to me. I declined it simply because I already had a seat on my R68 and thought it would be better going to someone who really needed it. I now needed a seat frame for this project and, whilst I could have made one, decided to see if John still had his seat. He had, and better still he was prepared to donate it, knowing it would be highly modified and eventually bear little resemblance to the original seat. The frame was stripped, powder coated and sent off to Glen Mojar (02380 906115) for re-covering. Glen made his usual stunning job in producing a 'dual function' seat. In one mode it could be used as a tool bag, fitted with a foam insert to neatly hold the tool kit whilst in the other mode it became a seat for a passenger.

At this point the project had been running for over ten years during which time I had finished a number of other BMW restorations as well as building a K1200 powered Grinnall Scorpion, but somehow the ISDT Replica always kept getting put on the 'back burner'.

The major stumbling blocks had proved to be the rear mudguard and the petrol tank. The mudguard wasn't simply an abbreviated or modified standard mudguard and, without detailed drawings, was virtually impossible to reproduce accurately. Then around 2007 came a breakthrough. In those days Herman Rabenbauer had a stand in the main hall at Veterama in Mannheim, and Bob Porecha spotted what he thought was an ISDT mudguard half hidden on the top of Herman's stall. It turned out that Rabenbauer had commissioned a batch of 10 of these mudguards made to a factory drawing supplied by Mark Huggett. Having parted with almost £550 I was the new owner of this mudguard and the special rear number plate that goes with it, both in

bare metal. The project moved on.... I'd spent some time looking at period photos trying to work out why, in all the pictures showing the carburettors, there appeared to be two cables going to, apparently, two slide bodies on the same side. Initially I thought Bing had perhaps produced special carburettor bodies for BMW before, eventually, the penny dropped. The auxiliary bodies were in fact simply a receptacle to store a spare needle, slide, carburettor top and cable in order that, in the event of a throttle cable breaking, the whole assembly could be transferred as one item. That meant the rider only had to fit the cable to the twist grip end obviating the potential time wasted by having to fit a new cable into both the slide and the twist grip. Once I knew the function and construction it was reasonably easy to buy a length of aluminium bar, machine and thread the two bodies then fabricate the retaining brackets needed to complete the replicas. Some time after this, in 2009, the Willi Neutkins collection came up for sale. Amongst his machines was the only known remaining 1953 Works ISDT machine, an R67/2, albeit with many post-event modifications. Useful to me were the photos, taken from many angles, in the Bonhams sale catalogue. The downside was that I was in the throes of building a 500 rather than the 600 that the 'works' used but at least the upside for me was that it would be more difficult for any future owner to pass off my replica as an ex-works machine.

Once the frame had been checked for straightness there were just two small brackets to be welded on for the air bottle and the frame was then ready for powder coating. I had bevel internals but no housing suitable for a full width hub machine. Once more Mannheim came to the rescue even if the second hand housing was over €250. With enough parts coming together it was now worth starting to assemble them for a 'dry build'. The front mudguard had been painted as I'd already tried it in the forks. This mudguard was subsequently transported, on one of our trips, to Mannheim for hand lining by linerien.de (Ekram Pala) and, having this lined by him meant the rear mudguard and tank also had to be taken to him if everything was going to look the same. So the following year I took the rear mudguard.....then a few years later, the tank.



The tank still posed problems. Try as I might with my contacts and despite searching Mannheim for years I still couldn't find a suitable tank. I had an R51/3 type tank of my own 'spare' as it came off my R68 when the Lugauer tank was fitted but I was loath to use this for several reasons, not least of which were that it would need the balance

pipe and petrol tap fittings re-positioned as well as the toolbox removing and that it was already nicely painted. I could have bought a new tank in primer from BMW and modified it but at around £1000 or so it seemed a very expensive option. The solution came when Bob Porecha suggested that the tank could be made in India. Bob ordered a 'standard' tank so we could see what they could produce and, whilst not perfect in every respect, it wasn't that bad so I specified the tank I needed and Bob ordered it. When it arrived the weight made us think it had been made out of the armour plate from an old Russian T45 tank! However it was as specified, no toolbox, no balance pipe, no petrol tap fittings, made for £240 including Import Duty and delivery to my door. I'd made the fittings for the balance pipe and the boss for the tap so with the tank fitted on the frame these could be located to miss any obstacles then welded in. Once painted this tank also went on a trip to Mannheim for lining. Handlebars were bent up in stainless whilst levers and twist grip were sourced at

the Bristol Classic Bike Show. Things were really moving on now and in next to no time of the bike was assembled. I knew the engine ran as I'd run it in my R51/3 whilst I rebuilt its original engine. All that remained was to fit the heat shields to the silencer and exhaust pipe, a job that, unbelievably, waited two years to be done...So, some 20 years from the start of the project it was (at last!) finished and on the road.

Next up, Andy Grew has been spinning the spanners:

A beautiful weekend, but without a club event to focus the mind I didn't get out on a bike at all! Still maybe Spring has now sprung.

A friend brought round his bike, rejoicing in the name of a Honda 'Big 1', as he couldn't get it to run. I got it running but only on 2 of 4 cylinders.

First thought was to change the spark plugs, but how as none of my spanners would fit! I was not aware that spark plugs come in three sizes 10mm, 12mm and 14mm. This Honda uses 12mm plugs. Eventually a box spanner was found to fit, although the correct size socket, 18mm, would not. Same result - only running on 2 cylinders.

Next was the carbs. For those of you used to dealing with single or twin Amals you would not believe the complexity of a bank of 4 Keihins. Space is extremely limited as the bike appears to have been built around the air box so it can not be removed first. Secondly the mounting rubbers were extremely hard as they were presumably 24 years old and had never been disturbed. Softening with a hair dryer helped.

Stripping down revealed that the pilot jets were blocked in 2 carbs, one of which was solid and took 30 minutes in the ultra sonic cleaner to soften enough to clear it.

Surprisingly the bank of carbs went back on fairly easily only needed a few taps with a block of wood and hammer!

But it was worth it, the bike started and ran on all 4 cylinders, although they will need to be balanced as I noted that 2 carbs were slightly open when the other 2 were closed.

Just got to change the fork seals to replace next then I can send it back to its owner, so I can back to maintaining my reliable and easy to work on Italian masterpieces!

I love the 'three sizes of plug spanner comment! He's clearly got a lot to learn once he starts working on properly old bikes...

SHOCK NEWS JUST IN

In case you've been living on another planet, our secretary, the tea & bun-loving Paul W is, as you know, a diehard Ariel man; seemingly unaware that motorcycle manufacture continued after Churchill got the sack. Until now. I give you Mr Wirdnam on...a Suzuki. Not just any old Suzuki, either, a proper, bone-fide stinkwheel, the GT250. I just took my eye off him for a second at the Shepton show and he returned with this under his arm. Wonders will never cease. Pictured here with your chairperson, making sure he didn't get up to antics likely to bring the section into disrepute.



Your committee really hope that you are enjoying this little reminder of Dorset section and your riding friends. The intention is to send something out every week or so, just to help us all stay in touch. Please do send us something to be included in future editions!

Until next time.