TREGISTER

Totally T-Type

ISSUE 42 **NOVEMBER 2010**

Ray Bird's concours winning TA

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THE FUTURE OF TTT

Subscribers to this publication will be aware that subscriptions are normally due for next year after this November issue. The 'T 'Register committee is actively considering the future of TTT, not least because of the confusion and potential dilution of content caused by the recent launch of a similarly named on-line magazine.

We will therefore be introducing a new 'T' Register publication in January, probably under a different name, and possibly in a different format. For that reason we are asking current subscribers not to send us any money at this stage. You will receive the January edition of the re-vamped publication in the normal way: if you like the new version and wish to continue to receive news and T-Type related articles from the 'T' Register then we will ask you to send us your subscription.

A magazine of this nature is written by enthusiasts for enthusiasts. It can only exist as long as the Editor continues to receive material from T-Type owners. That means YOU ! I cannot believe that anyone who has owned a T-Type for any time does not have an article, anecdote, technical tip, or cautionary tale to impart to the rest of us. Please think about it.

David Butler, Chairman 'T' Register

November 2010

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THE EDITORIAL

An interesting few weeks since the September edition of TTT.

A most enjoyable Autumn Tour, great scenery, driving and lots of tales and stories of cars and reminiscences of lost youth, is it because most of us are now in the autumn of our years that makes this event so popular?

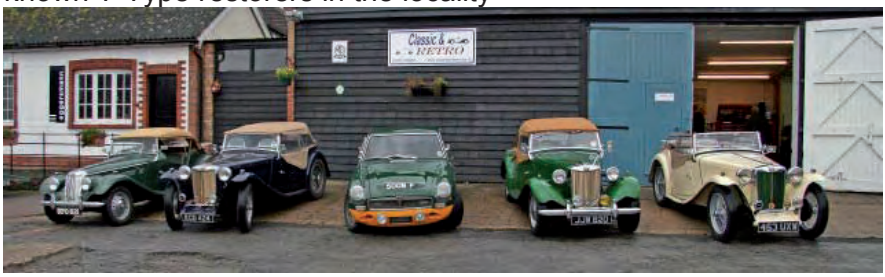
I was very privileged to be on the MG80 run from The Roebuck Inn to Abingdon on October 17th, can you imagine that the pioneers of the MG Car Club in 1930 would ever have imagined the spectacle of an amazing sight of more than 50 MG's leaving the same spot 80 years on and being inclusive of MG cars from their day to present moderns.

You will have read the opening message from the Chairman about the future of TTT. There was much debate at the committee meeting in October with many differing views as to

the best way forward. I for one will only be too pleased to press on and continue to scribe away on your behalf and attempt to maintain the premise of a worthwhile read.
It has been most rewarding to receive kind words and correspondence from many of you saying that you like the way we have picked up the traces and have continued to carry on and produce our own 'T' Register Magazine.

On a most nostalgic note, such a great loss was felt on hearing of the death of our President, Bill Wallis, the greatest ambassador the MG Car Club would wish to have. Anyone who met him could not fail to be charmed by his warmth and good humour, his unquestionable knowledge of all matters MG and above all his passion for the marque.

On a more pleasant note, joined up with a few other T-Types, for a Sunday run around the lanes and byways of Essex a few weeks ago and we called in to a newly established classic car servicing and restoration garage run by Chris Martin.
Chris served his time (that is what they used to call it in the construction business) and gained his knowledge with well known T-Type restorers in the locality



John Ward
MGCC TTT Editor

FRONT COVER

This story starts in December last year and later when Ray and Lynn Bird bought a TA, registration number MG 5476…….. but it really begins much earlier than that……..

In December 1975 this car was purchased by the well known MG restorer and concours winner Derek Hopper, with it were all the original log books and names of owners going back to 1958.

Derek stored it until 1997 when he commenced 4 years of restoration, finally completing the car in 2001. In that year it won the “Best T-Type” at the 51st MG Silverstone Event, and “Best MG” in 2002 at the MG & Triumph Show, and the following year “Best Sports Car 2003”

The car was then sold to Warren and Pat James in 2004 who were next door neighbours of Ray and Lynn. Now Warren also had a passion for vintage motor bikes and it seems the TA stood in the garage unbeknown to Ray and Lynn for over 5 years in spite of regular social contact.

Sadly in December 2009, Warren had a massive heart attack and died. His wife had to arrange to dispose of all the motor bikes and parts and Ray’s son helped her in this huge task. In so doing she happened to mention the MG which was in a separate shed down the garden. She said it had not done many miles since they had bought it, only to the MOT place each year, the MOT Certificates proved this, just 38 miles in 5 years!

Suffice to say Ray and his son fell in love with it at first sight and, with some reservations expressed by Lynn, the car was purchased in March this year. Never having been an MG enthusiast before, Ray was now smitten. They started to attend various MG events, but not without a series of breakdowns and

a period of frustration with all the usual classic car problems often sorted out on the roadside by willing MG 'old hands'.

Nonetheless all of this has come to light because Ray and Lynn turned up at the 2010 Autumn Tour in the Welsh mountains. This proved quite a test for the TA and its tantrums, not to mention the traumas and tribulations of Lynn the intrepid navigator……but that is another story for another time!

We know the car is now sorted after its long sojourn and hope to see them both at many or all of the 'T' Events next year.

'T' REGISTER NEWS AND EVENTS

AUTUMN TOUR 2010

Wales and the Cambrian Mountains

As the summer waned and the nights grew longer, men of the 'T' Register could be seen working late into the night on their cars, checking that the magic of Lucas worked, that the Brothers Skinner devices were not leaking and were in balance and that the products of Lockheed were stopping the car without deviation or undue hesitation. The time of the annual 'T' Register autumn gathering was drawing close.

In the days prior to September 10th men and ladies of the Register set off from the far corners of the UK and even Europe, all heading to Llandrindod Wells in Central Wales. While most allowed a day for getting there, Rolf Schmidt and Sylvia Koberger allowed well over a

week to get from Stuttgart via Kent to Wales. Not only were they the furthest flung but also the youngest participants.

From about midday on Friday 10th members of the 'T' Register arrived at the Metropole Hotel in Llandrindod Wells in ones and twos. That evening we were all issued with name cards and the route books, it was rumoured in some quarters that the name cards were essential for some participants who had problems, not just the names of others, but their own. No-one owned up to this.

Over dinner our able and eminent organiser Graham Brown briefed the throng and issued warnings about certain sections on Saturday which he urged should not be tackled singly.

The morning run on Saturday began before 9.30 and the first stop was Rhayader, then North West through the Elan Valley to admire the network work of reservoirs over a vast mountainous landscape built to provide water for the West Midlands. The weather was grey and drizzly to start but improved as the day progressed to end in glorious sunshine.

From there the road became narrower and crossed the high hills before descending to Devils Bridge. Rumour has it that long ago a fair lady of those parts made a pact with the devil who, in return for building a bridge across the deep gorge would keep the first living thing that crossed the bridge. Some say that the devil coveted the fair lady. By the next morning the bridge was built and, sadly for the devil the first living thing across the bridge was the fair lady's dog which chased away the devil. Never again has he, the devil been seen in this part of Wales.

At the Devils Bridge Hotel we were joined by numerous tractors that had come from Oswestry on a charity run. After refreshment there were four options. One was to the silver-lead mines a few miles to the north where our intrepid leader, Graham was to be seen serving in the shop! Or there was trip to Nant y Arian to see red kites being fed and another option was to explore the waterfall and surrounding valley on foot. There was the opportunity to drive to or take the narrow gauge Vale of Rheidol train to Aberystwyth. Those who took the train were not only rewarded by superb scenery but also displays by several red kites. A rare sight indeed!

From Devils Bridge the next stop was at Pontrhydfendigaid for tea. From here the return route was hard across the hills and through forests – a route used by many rallies. It was this section that we were advised to drive together in case of breakdowns if not worse. The road reached a height of nearly 1500 feet before the Abergwesyn Pass, followed by the descent down the Devils Staircase which has been known to catch out even the very experienced and is regularly used by rallies. This part of the route was of concern to the organiser particularly if cars were late (in the day) crossing it or driving alone and experienced difficulties – it was certainly testing to a few and certainly a very lonely place to have mechanical problems. However, no one came adrift and the last few miles to Llandrindod Wells was on a fast road where it was rumoured that not only did some race but reached speeds not mentionable in a law abiding magazine. It was good chance to let the cars have their heads and blow out any cobwebs which might have accumulated over the hills.

Early that evening many baths were run and enjoyed followed by liquid refreshment. After a splendid dinner there were presentations

and speeches and we were entertained to an ode – was it the late lamented Cyril Fletcher? – no, our President who was in good form, even claiming that he was looking for a certain type of lady to navigate , but in her absence he would be accompanied by a well known an old friend, Paddy Wilmer who has taken up residence in these parts.

Sunday dawned dry but grey, but this quickly improved and much of Sunday was spent in sunshine. We headed north through wondrous countryside populated by sheep (where in Wales are there not sheep?) and fine cattle to the Clywedog Reservoir with splendid scenery and another dam this time serving the people of the Midlands. From here we climbed across the mountains to about 1400 feet before descending to Machynlleth passing the memorial to Wynford Vaughan Thomas with an expansive view northwards. Then down, down, down to Machynlleth crossing the River Dovey and to the north passing the Centre for Alternative Technology to the coffee stop at Corris Craft Centre. By now Mike had picked up Paddy and other MG enthusiasts had also arrived.

Here, like the day before, Graham in his planning gave us options. One was to continue north to the great rift, Bala Lake for lunch with views of the local narrow gauge railway before climbing to the highest pass in North Wales at Bwlch y Groes –another famous car testing route. Alternatively one could go north for a few miles and turn south west towards Tywyn passing Lake Tallylyn and run parallel for several miles with the Tallylyn Railway. Just before Tywyn one could either go south through Aberdovey and drive along the north shore of the Dovey estuary or go north and join the Mawddach estuary to Dolgellau with all routes finally leading to Meirion Mill for

tea before the last lap. Then south for another 50 miles to the hotel through yet more beautiful country and wild places but like the previous day the last few miles allowed for engines to be revved and good speeds attained.

That evening over dinner there was much laughter and ambience, all were very pleased with the two days of exciting routes and variable driving conditions. It was an excellent two days and we were all united in praise for Graham and Sue who produced an excellent weekend programme and for Brian Rainbow's help in driving the routes.

Robert Marshall September 2010

FORTHCOMING EVENTS

STONELEIGH 2011

Peter Cole is organising the 'T' Register stand for us at the **MG International Trades and Spares Show** at the **Stoneleigh Showground** in Warwickshire on **Sunday 20th February 2011.** The show will be open from 10am to 4pm, tickets are available at £10 in advance or £12 on the gate with free car parking, ring 0871 6207067 or visit the website at www.mg-show.co.uk.

REBUILD 2011

The venue is as last year at the Oxford & Cherwell Valley College, Bicester, OX26 4LA on **Saturday 5th March 2011.** There will be the usual "bring and buy" and regalia stalls manned by members between the sessions. The fully detailed

programme and timetable will be published in January “Safety Fast” but likely topics will cover electrics, a TD total rebuild, modern fuels, race engineering plus others and again ‘hands on’ welding techniques by the College Staff.

The cost to attend will be the same as last year, £25 for MGCC members, and £32.50 for non members and as before a concessionary price of £12.50 for “next generation” relatives/friends who wish to accompany a full member, to cover their catering. The prices include refreshments and a buffet lunch service.

Alan Wakefield is the Rebuild Organiser this year to whom all enquiries and offers of assistance should be made, contact him on email wakefieldalan@aol.com or mobile telephone 07831618520 or 01932 873170.

However Peter Cole is the person to whom you should make your application, send your name, MGCC membership number, how many attendees, contact details of address, email or telephone number and a cheque (**made out to Peter Cole not the MGCC**) to; 8 Aldbourne Drive, Bognor Regis, W Sussex, PO21 4NE telephone 01243 267234, email pcoleuk@googlemail.com

The all important **‘T’ Register AGM** will take place immediately after the main conference room has been cleared and set up for the meeting.

EUROPEAN EVENT OF THE YEAR 2011

As you may be aware it is proposed to hold a 'T' Register event immediately prior to and en route to the European Event of the Year in Spa in Belgium. If there is sufficient support from the register members it will be based at the Hostellerie Saint-Louis (www.hostelleriesaintlouis.com) in Bollezeele, a small village about 14 miles outside Dunkerque. The location is convenient for most of the channel ports and for people travelling from the North via Holland.

The hotel has 26 rooms and the proposal is to arrive on Tuesday 31st May in time for dinner and leave on Friday morning 3rd June to move on to Spa.

The cost is likely to be about 70 Euros per person per night for dinner, bed and breakfast, depending on occupancy and a deposit will be required by the end of January. It is about 185 miles to Spa from the hotel, however, if people just wish to come out to France for the 2 days that is okay.

The 2 days based in Bollezeele will be entirely free for you to do your own thing. There will be no route cards but we will highlight some places you may wish to visit.

Initially please email or send an expression of interest to Peter and Gillian: peter.cole11@btopenworld.com or to; 10 Princess Drive, Alton, Hants, GU34 1QS

The European Event of the Year is at Spa-Francorchamps from the 3rd to the 7th June 2011. The application form will be

available on line from 1st December 2010 on: www.mgcarclub.be : anyone going on to Spa will need to book individually with the Belgium EEoTY organisers due to the varied options that will be available for accommodation etc.

Editors Note The list of interested members who previously made contact has been passed to Peter and Gillian to whom any further enquiry should be made.

SILVERSTONE *Live* 2011

Just a note for your diary and only provisionally, upon your return from the EEotY in Belgium, Silverstone ***live*** will be held on 24th, 25th, 26th June 2011.

THE AUTUMN TOUR 2011

The organisers Grant and Barbara Humphreys have confirmed that the 50 available rooms at the Coniston Hotel, Skipton, have now been fully booked. However if you have not been able to secure a room at the hotel, Grant reminds us that 15 rooms have been reserved by the Hotel on a 'room only' basis at the nearby Premier Inn which is only 2 miles away. For those who stay there, all meals including breakfast will be taken at the Coniston Hotel, T-Types will be parked there and free transport will be provided to ferry guests to and from as required. 6 of these rooms have already been booked and naturally any cancellations at the Coniston Hotel will be re-allocated to parties in the Premier Inn

Further enquiries and bookings to Grant and Barbara on 01969 622108 or email grant.chumphreys@btinternet.com

Following his article on the TA water pump, Bob Butson gives us another superbly detailed narrative

MG TA Carburettors.

TA 0844, first registered September 1936, was purchased as a wreck but with the original MPJG engine. The original carburettors had been replaced with aluminium alloy bodies, aluminium piston chambers and obviously non-standard furniture. One body was missing the ear for the choke spring, the other the lug for the suction chamber retaining screw. Over the years I have managed to acquire a pair of bronze bodies and many small parts. The details below relate to my attempt to sort out carburettors which match the year the car was first registered. The carburettors are of the HV3 type, specification AUC 327 for the year 1936. The photos A and B show the layout.

Photo A

Photo B

Specification AUC 374 was from 1937 to 1939. Bronze or alloy bodies 1945 are available as authentic reproductions as are the right handed twenty degree float chambers AUC 3495 and float chamber lids, casting no.1161 (AUE 997).

Suction chambers ABF 399 with matching pistons AUC 3175 made from alloy are available but are expensive. Bronze chambers and pistons are no longer made.

The exploded view of a typical HV carburettor is shown in drawing 1.

Drawing 1

For a TA the choke lever shown is incorrect. The choke lever connecting bar and the float chamber hold up bolt are a much later variant. A more modern weighted piston is shown. A twin carburettor layout is illustrated on page 14 of The Parts Manual for The MG Midget Series TA and TB showing the correct choke lever connecting bar. The connection between the carburettor spindles was a flexible spindle, AUC 1236, with brass split sleeve links no. AUC 1924 Type 3. These have nut and bolt clamps.

This was changed at TA1876 to a solid brass connecting bar with the same links.

For the TC specification AUC 429 the solid connecting bar was used but 'concertina' style links AUE 75 were used.

The choke lever connector was as shown in photos B and D, which is a steel rod with spring loaded brass end joints screwed on. Locknuts fix the position. Those shown are adjustable for length and tightness of ball joint, they are no longer available. A variant of these is similar, made of brass, but with non-adjustable joints. Photo D shows three types of choke lever connector and the non-adjustable joints.

Photo D

A very early connector is shown made of steel with fixed lever bolts. The TA style connector is shown in the centre. This style was changed at TA 1877 to the forked end type with a tapered boss and locknut, ABF 295.

This latter type was also used for the AUC 429 carburettors on the TC. There is a much later variant of the forked type, which has just a fork and nut without a tapered boss and is numbered AUC 2256.

The accelerator pedal shaft to throttle spindle connector is shown in photos A and E. The top connector in photo A is a type used on cars from the 1930's to the 1950's.

Photo E

It has spring loaded non-adjustable ball joints and is made from steel. The lower connector has similar brass ends to the choke lever connector shown in the middle of photo D.

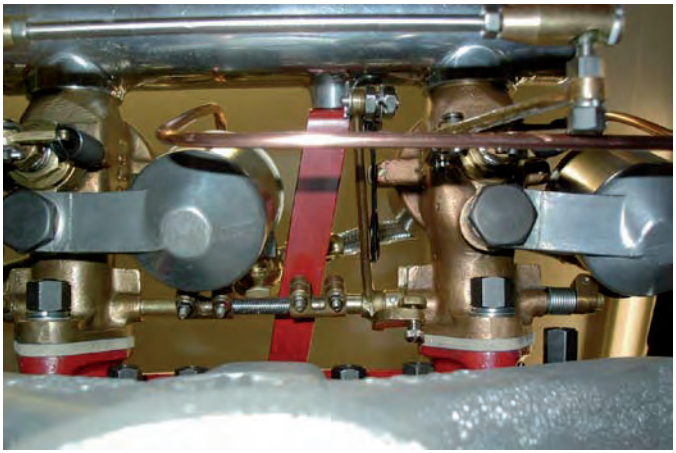
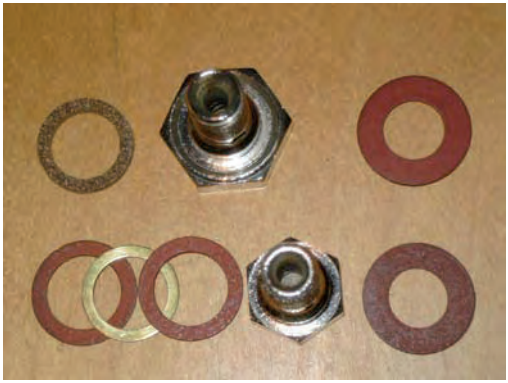


Photo C

Photo F



An early float chamber to body bolt no. AUC 1541 is shown in photo C and again in more detail in F top. This early bolt has a groove into which fits a cork seal number AUC 1542. The later bolt, which has the same number, AUC 1541, shown in photo F bottom and in the exploded view, uses a plain fibre washer AUC5207, brass washer AUC 5026, fibre washer AUC 5207 sandwich between the bolt and the float chamber. Both use the same sized fibre washer between the float chamber and the body AUC 2130. The groove on the early bolt can be machined flat to accommodate the later sandwich of washers if AUC 1542 is unobtainable.

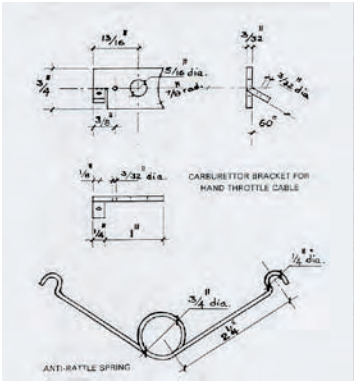
The bull nosed float chamber lids, casting no.1161, originally had airvent grooves in the fixing nut boss. On 18/02/1936 the works specification was changed, the air vent grooves were machined out. A slightly different banjo airvent assembly was fitted, comprising lid fixing nut AUC 1867, aluminium washer no. AUC 1557, the overflow pipe banjo and then serrated fibre washer no. AUC1928. The later lid, casting 4261, will also fit. The gasket between float chamber and lid is AUC 1147.

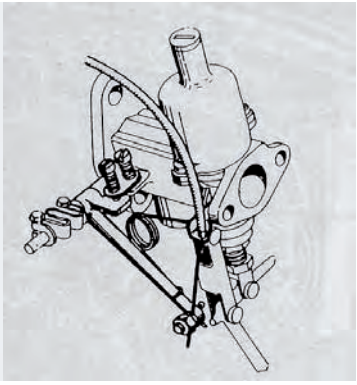
The overflow banjos with pipes are AUC 3202B (front, polished) and AUC3203B (rear, polished). Pipes are 19inch and 25inch, plated versions are available as are short pipe versions. Continued…….

TA carbs continued……. The cap on the piston chamber was made from brass, with a circular top and a knurled edge no.AUC 2144SBO. A coin slot is machined across the middle and the words 'Use Bicycle Oil' is engraved on it. A fibre washer was used no. AUC 4900. There are at least six variants of this cap made from brass and a few others from black plastic.

Wear in the bearing surface of the butterfly spindles can be rectified in two ways: the spindle holes can be line bored to take steel sleeves with an internal Teflon coating. Standard 5/16inch diameter spindles can then be used. Alternatively spindles which are oversized can be used with suitable boring, they are 8mm diameter. As most wear occurs on the spindle a replacement standard spindle may be sufficient.

The piston for specification AUC 327 was made from brass. This was changed for specification AUC 374 to aluminium. Burlen Fuel Systems quote this piston no 3175 as not requiring a spring. The piston shaft was solid i.e. no damper. Drawings 2 & 3





The slow running spring as for a TC is shown in the drawings no. 2 and 3, the TA spring is the same, as shown in Photos B and C. The method of attachment for the upper part is with a small bracket for the TC which is fixed to the carburettor flange. For the TA, I have copied an odd part which has a hole for the cable outer partly through it and a hole for the inner completely through. A split pin and washer was used to secure it to something. I made this with a ¼ inch BSF thread and secured it to a small plate using the inlet manifold mounting bracket bolt, see photos A and B. For the lower attachment of the spring I have bent the end of the spring at right angles to fix across the slow running lever as shown in drawing no.3. In the photos a piece of welding wire serves as a dummy slow running cable inner.

SU CARBURETTOR SPECIFCATION. No. 327. MG TA 1936.

Size.183mm.
Body 1945, Bronze or Gunmetal.
Stud dia.13/32 in.
Stud centres. 65mm.
Float chamber 1891 Gunmetal.
Float WZX 1303
Float chamber size. T2, 2.3125 ins diameter.
Float chamber lid, casting no.1161.
Float chamber to lid gasket AUC1147
Fuel Inlet Banjo bolt. AUC 2698. Fibre washers AUC 2141.
Float chamber lid fixing nut. AUC1867.
Overflow banjo top washer AUC1557.
Overflow banjo serrated washer AUC 1928.
Tickler pin kit WZX 993.
Tickler pin 1249.
Overflow banjo and pipe front. AUC 3202B. (19ins. Long).

Overflow banjo and pipe rear. AUC 3203B. (25ins long).
Hand throttle lever. 3033. Adjusting screw and spring kit WZX 982
Throttle lever LH side of rear carb. AUC 2374.
Throttle stop LH side of front carb. AUC 2199.
Jet lever front. 3006. with 17/64in hole. This dimension depends on the size of the lever connector joints used and can be smaller as AUC 3007.
Jet lever rear. 3089. with 17/64 hole. This dimension depends on the size of the lever connector joints used and can be smaller as AUC 3097.
Jet link front. AUC 2382.
Jet link rear. AUC 3096. (Now AUE 64)
Jet AUC 8182. Size 0.090inch.
Throttle spindle front, long end LH side. AUC 1398.
Throttle spindle rear, long end RH side. AUC 3009.
Flexible spindle. AUC1050 (shorten if return spring on rear carb).
Return spring RH side front carb. AUC 3351.
Collar RH side front carb. AUC 1380.
Sleeve RH side front carb. AUC 3350
Piston to 15/1/37, 983.
Piston. after 15/1/37, 3175.
Piston chamber top AUC 2144SBO
Slow run gap 0.01in to 0.04in.
Needle (weak) S, AUD 1316
Needle (standard) AC, AUD 1034
Needle (rich) M1, AUD 1267

Modifications.

Suction chambers changed from bronze to aluminium at TA 1925

Float chamber overflow seals were changed on 18/02/1936.

Connecting rod 1851 deleted 17/4/36 Used only for the first few pairs of carburettors.

Jet needle. From L to S. Factory 22/7/36

Overflow pipes changed to 3202 Factory 23/7/36

Jet needle From S to AC. Factory 19/9/36

Piston from 983 to 3175. 01/02/1937. (Piston 3175 made from aluminium weighs 7.5ozs with needle and needle fixing screw).

The brass piston for export cars changed to 3188. Weight 7 ½ ozs.

At chassis no. 1876, Throttle linkage changed to TC type.

Cork seals number AUC 1542, suction chambers ABF399 and matching pistons AUC 3175, spindles (to be cut to the correct length) and other parts can be obtained from Burlen Fuel Systems, www.burlen.co.uk . Tel: 01722412500.

Oversized spindles and other parts can be obtained from Southern Carburettors & Injection, www.southerncarbs.co.uk .

Tel 02085402723.

Jet levers AUC 3007 and AUC3097 are listed in the Burlen catalogue.

My thanks to the MGOCC for the drawing of the slow running lever spring.

XPAG OVERHAUL
David Taylor from Hobart Tasmania sent us some prophetic words of his experience in fettling his TF

I have 1954 MGTF 6382/XPAG/TF/36155 and recently overhauled the engine. Head reconditioned, valves and rockers, new sleeves, pistons and rings, crankshaft reground, bearings etc. When re-started, the engine ran beautifully for a few minutes and then blew dense clouds of white smoke (vapourised oil). Nothing untoward was found, breathers clear. All ring gaps were correct. The inlet and exhaust ports were saturated with oil. After cleaning it all, the same thing happened again after a few minutes.
On disassembly, in bright daylight, a friend noticed that an oil ring placed square in the bore showed daylight at points around the periphery. The same with another one and so it was assumed that they were all "out of round?'". Another set of rings was supplied free of charge, however I also suspect that the new crankcase gasket warped and draped itself over the breather hole. The breather pipe does have the lip to prevent this but I still think that the very soft and flexible gasket still managed to close or nearly close the breather hole.

Whether the cause of the smoke was the oil rings alone or the gasket closing the crankcase breather, or a combination of both is a source of considerable comment in our club. My thanks to Barrie Jones and George Edney for their input when I thought it might have been the absence of relieving holes below the oil ring grooves on the pistons (like my old pistons had!). Fortunately, with new rings and a doubled and modified crankcase gasket, the engine now runs as it should.

David Taylor Hobart, Tasmania September 2010

And following on from this……..

The XPAG Cooling System

This is a photo essay to give you a starting point when discussing (or trying to figure out) the cooling system on XPAG engines. The XPAG improved the cooling of earlier MG engines by adding a water pump to the thermo-siphon principle of cooling.

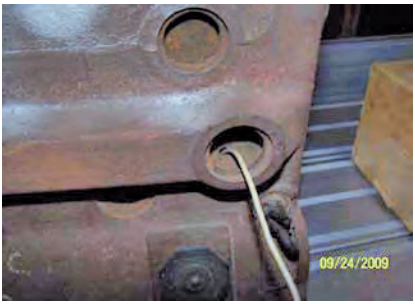
We'll start at the front of the engine where the water pump bolts. As you can see by the wire threaded through the mounting holes you'll need to put a sealant on your studs/bolts to ensure that no water leaks occur in this area since they go through to the water cavity.

Inside the block around the water pump there are three passages. These first two that I've put the wire in are part of the thermo-siphon system. There would be little circulation action felt in this area because these passages are behind the impeller. I imagine these are there to help the block fill with water when the engine is cold and to let some hot water mix with the cooler water when the engine is running.

This photo shows the larger passage at the bottom of the water pump area. This passage connects to the square protrusion on the side of the block that is normally hidden under the intake and exhaust manifolds. This passage carries the water from the water pump to the back of the block.

This next photo illustrates that the front passage is connected to the side passage.

In this passage there should be two small holes leading into the block…one hole behind each core plug. The rear small hole will be on every block, the front one may or may not be. If the front hole is not there it's easy to drill through the block to make it. I have read differing accounts as to their purpose (a release for the casting sand or simply to help the block fill with water) and to their need, but from personal experience I do know that by opening them up (mine were plugged) I dropped my operating temperature 10 degrees F. Other than these two small holes there are no other openings from this passage until it reaches the back of the block.

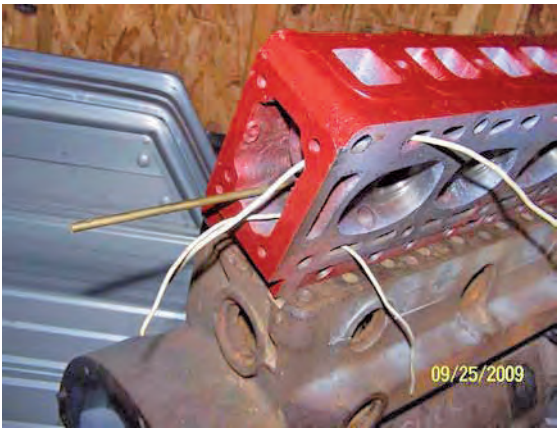


When the water reaches the rear of this passage it turns and goes up to the back of the head. There is no path into the block in this area except through the small hole behind the core plug. Remember that the water is relatively cool here so when it starts its journey through the head it will be extracting heat from this point forward. I could find no connection from this passage to the core plug opening on the back of the block.

When the water exits the top of the block it goes into the head. As you can see the water comes in through the large opening at the rear of the head and into this chamber which connects to a passage that runs all the way through the head.

NOTE : Although many people take their heater supply from the plate that covers this opening it's obvious that the back of the head is cool… the heater supply should be taken from the front.

This passage is connected to the small openings (round or banana) that come up from the block…this is the thermo-siphon portion of the cooling system. The hot water/air rising from the internals of the block are mixed with the cooler water coming from the radiator and circulated around the head as it moves forward to the thermostat.



In this next photo I've inserted a brass rod all the way through the head to illustrate that there's an unbroken water passage from front to rear. Again, as the heat and hot water rises from the block it's picked up by the cooler water passing through the head on its way to the radiator.

Now some photos to show how the rest of the cooling system is connected. With the exception of the square front to back passage the rest of the block is basically a water tank. As it heats the hotter water rises to the top of the block. This first photo shows how one of the small passages behind the water pump is connected to the front core plug and to the rest of the block.

These next photos were taken to show that the block, with the exception of the piston cylinders is basically hollow and is free to circulate (or stand) freely within it.

Words and photographs by Gene Gillam

Some of you will be aware that the above article is included on the TABC list on the website www.mg-tabc.org but it is such an in-depth study of the water cooling function in the XPAG I thought it was worth broadening the knowledge.

Editor

ON THE MATTER OF SUSPENSION

Letters to the Editor; Totally 'T' Type

I was interested in the "Blast from the Past" feature that appeared in TTT issue number 37 (Jan 2010), which reproduces part of an article that John Thornley wrote in June 1936. In this article he criticises the soft suspension of American cars, and states that for good road holding the springs must be stiffer, giving harder suspension. I have to admit that was the thinking at the time, but it is intriguing to note that suspension thinking since then appears to have gone in the opposite direction.

As, hopefully, we now know, other than possibly on billiard table smooth surfaces, the first requirement for an effective suspension system has to be independent suspension at all four corners. Thornley does not mention this, despite the existence of the MG R type since 1935. Even independent suspension only at the front is a poor half way step. However, another critical feature is that such suspension must be relatively soft, and allow a wheel to lift or fall easily without causing the chassis or rest of the car, both of which must be rigid, to be jerked up or down. This appears to be in direct contradiction to Thornley's comments, but can easily be proven by the relative ease with which modern cars can be pushed up and down at each corner. Such suspension must also have reasonable travel, although again, Thornley implies that travel should be limited.

Thornley does mention that soft suspensions allow roll, and in this he is quite correct. However, this was solved in 1938, at least for Morris, by the introduction of the anti-roll bar. The Morris 10/4 series M had one fitted at the front, and so apparently did the Morris 8 series E of the same year. MG had to wait until 1951, when an anti-roll bar was fitted at the front of the YB. Since then most cars have an anti-roll bar at the front, and many have another at the rear, or at least the rear suspension is designed to give similar characteristics. The handling

of my own TD was greatly improved when I fitted an anti-roll bar at the front, and I think it would be even better with another at the rear, but it would not be easy to fit.

Thornley also mentions the use of shock absorbers, but at that time Hartford friction shock absorbers were in general use, and they are really only effective on very heavy cars. This is because with each movement, static friction must be overcome before the lower dynamic friction becomes the operating resistance. Thus at each reversal the initial resistance to movement is high, and then eases off, whereas shock absorbers work better if the reverse is true. This is approximately the case with lever-arm hydraulic shock absorbers, which MG began to use in September 1936, and telescopic shock absorbers are even more efficient.

Finally we come to that slight red herring, “unsprung weight”, which again, Thornley does not mention. Whilst it is useful to keep the wheel, axle and brake weight low in each corner, low unsprung weight is not the be-all and end-all of good suspension and road holding. An MG TC does not have a particularly high weight in each corner, yet a few bumps in the road will soon cause a TC to jump sideways. Modern cars are not exceptionally light in each corner, with wide rim wheels (particularly when made of steel), wide tyres and disc brake systems, but they still have excellent road holding and comfort, especially when compared to the P type that Thornley had in mind. Even the American cars that Thornley criticises probably did not have high unsprung weights at the corners!

Roger Wilson 15-10-2010

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All enquiries to;-

Dennis Fish; MGCC no. 75447; telephone 01254 383129 (Lancs)

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