



De Dion Bouton Club UK

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Books & Magazines

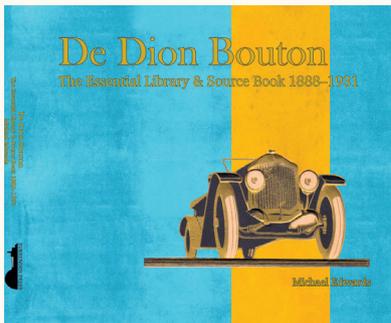
Now might be the time to fill some gaps in your library or catch up with some reading. A few suggestions for you:

Motorvations

Back issues of all copies of Motorvations are available Individual copies are priced at £4.50 each (inc UK P&P). A complete volume 1 (includes 15 issues) is priced at £55 (inc UK P&P), and Volumes 2 and 3 are priced at £79 (includes 18 issues).

De Dion Bouton

The Essential Library Source Book 1888-1931



This book has something for all De Dion Bouton enthusiasts – those wanting to research a particular passenger or commercial vehicle Type or year of production or, perhaps gain an understanding of the history of the company. More than 2,000 known publications and articles from English, French and German sources are included, and presented in chronological order. Each reference has a short commentary on the relevance of the content. See more on surrendenpress.com.

£45 +£8 UK and Euros 12 postage. Rest of the World enquire. Order from Michael Edwards (mre01@live.co.uk/+44(0)7500003926).

Welcome Letter from the Chairman

There were the usual dazzling New Year's fireworks in many capital cities of the world but for most people, and certainly those living in Europe, celebrations were rather muted, and it is likely that any mass renditions of 'Auld Lang Syne' came through the ether to the family's Zoom screen, as lockdown constraints have now resumed, and could be with us for some months. It is in these challenging times that the DDBUK Club is most appreciative of the support and continuing loyalty of members around the world.

I mentioned in the last Newsletter that the committee had made the decision to organise a 'Virtual AGM' on March 6th, so we will soon be finalising plans for that. We had also agreed that our organised events would only be for a day, requiring no hotel arrangements; this will mean that we can have maximum flexibility of when and where we schedule our future gatherings.

You may recall that in the previous issue, I referred to the need of the Club to attract the services of a webmaster who could inject life and lustre to our website. Laurens Klein, who has owned and managed PreWarCar.com and PostWarClassic.com for the last four years, offered his support, and it will come as no surprise to Club members that it was rapidly accepted. I am personally delighted that someone with Laurens's expertise and interest in De Dion Bouton has joined the team. Work has already started on upgrading content.

For those of you who do not know Laurens, here is a brief introduction to him (in his own words):

"Since I was small, the car make De Dion Bouton has been a large part of my life. My parents organized the De Dion Bouton rally from Rotterdam to Antwerp in 1990, when I was not even 2 years old, and also in 1998. My father owned a 1903 Bolide de Paris with a 6hp De Dion engine from 1960 and that was the car I grew up with. When I was 18, I purchased a 1909 UK-built Jackson (also with an 8hp De Dion engine) in bits, which I restored myself. Both cars are now in my garage.

I live close to Rotterdam (The Netherlands) with my wife Morris and our daughters Marie-Louise De Dion and Olivia Riley." Laurens can be contacted at klein@prewarcar.com or by phone/whatsapp +31 6 21276908.

2021 Subscriptions are now due

The next Newsletter will be published in February, and Motorvations will appear in March.

Do not hesitate to offer any feedback, content or suggestions to dedionboutonclub@gmail.com.

Michael



"'ERE YOU ARE SQUIRE, ONE FIVE GALLON DRUM OF PATINA, SIGN 'ERE!"

By 1913, De Dion Bouton omnibus, equipped with 18hp, 25hp or 35hp engines, were present on the streets of many of the capital cities of Europe. This particular vehicle, now housed in the Danish Tramway Museum in Skjoldenaesholm, was one of the first batch to arrive in Copenhagen.



Staying cool... with Peter Fryer

I read with interest Shaun Crofton's note on the cooling operation of the 6 and 8 hp single cylinder engines installed in cars of the 1902-1905 period and beyond. In the 2019 London to Brighton Veteran Car Run, I "steamed up" Clayton Hill with the heaviest 'four-up' passenger load ever in my 1904 Type. It was clear that the time had arrived for some investigation of the water pump and cooling system. I ran the engine up to check that there were no obvious signs of the exhaust blowing with excessive bubbles at the header tank.



The complete installation of the cooling system. Header tank cooling pipes, radiator. The water pump has already been taken off.

Having removed the water pump, it was dismantled – something that I had never previously done in 8 years of ownership, although I had adjusted and re-greased the gland twice before. All the components are made of bronze, attractively designed and substantially made and beautifully cast.



The bronze water pump; showing the robust vane and housing, and despite being 116 years old, there is no sign of any significant wear.

Before re-assembling I decided that it would make sense to thoroughly flush the radiator. I also removed the hexagonal brass cover on the left hand side and the inlet brass connector on the right hand side of the cylinder block, in order to check that there was no debris at the bottom of the block.

The water inlet at the right hand side of the cylinder block.

I took the opportunity of replacing the copper connector at the bottom of the header tank with a brass connection piece. The end of a surplus ball cock (below) was the donor brass connector for the new pipe end, which I bored out and shortened on my Myford lathe and then silver soldered into the copper pipe.



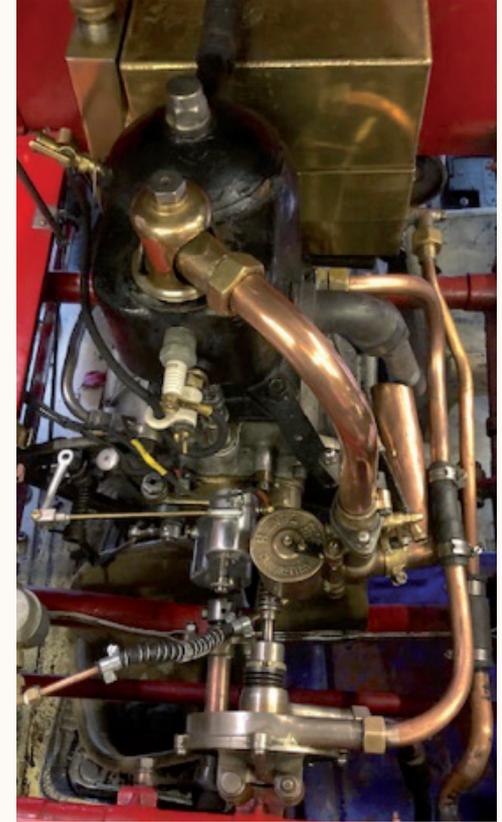
One final adjustment I made was to give my contact breaker box a bit more advance so, I made a new longer adjustable link across the engine to the top of the breaker box so I have another 12mm or so more swing. It is now swings right over to the Zenith Carburettor, so plenty of advance from now on.

More adjustment may help on very steep long hills when the engine slogs and I could do with a few more revs and therefore get into the peak of the Torque curve, before the engine struggles.

My next challenge to get on the road and find a few steep hills to see how Madelaine performs.

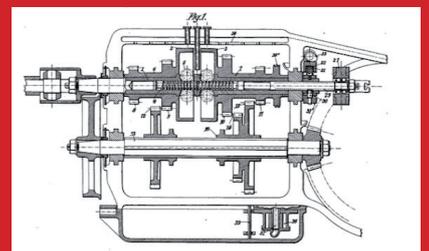


The final re-assembly. Note the new brass connector at bottom of the header tank and new adjustable contact breaker box cross rod with full advance swing. The new contact breaker assembly came from Austin Parkinson.



In the library...

Knowing quite when the De Dion Bouton company introduced changes and improvements to the technical specifications of specific components and features is always a subject of potential contention. One factor that we can be certain of, however, is that any innovation would not have appeared on a vehicle until some time *after* a patent had been registered. In this respect, the 'Espacenet' database (espacenet.com) is of great importance, in that it provides both a date and an illustration of any patent application.



Next issue: Peter Fryer on fuel systems improvements



Tuning in again ... with Mick Penney

This article continues the review of using modern diagnostics and tuning for De Dion Bouton vehicles using a laptop-driven automotive lab scope. As I have mentioned before, several parameters can be viewed, recorded, analysed and printed out with this tool, including:

- Primary and secondary ignition coil waveforms.
- Crank angle.
- In-cylinder pressure and vacuum waveforms which include detailed analysis of the automatic inlet valve operation.
- Engine knock.
- Crankcase windage.



For this issue, I will cover some of the vital and valuable information that can be gained from using an in-cylinder vacuum transducer to record waveforms of the automatic atmospheric inlet valve.

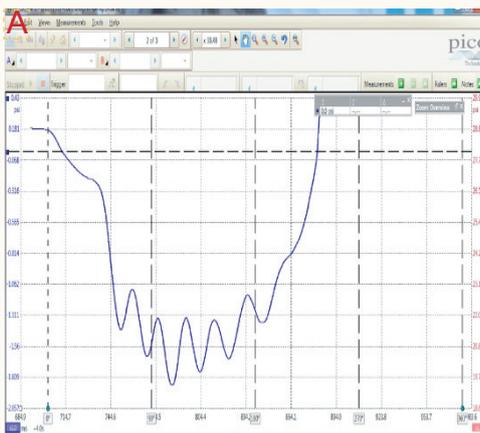
For many years the setting up and adjustment of the AIV has been very much a hit and miss affair. Arriving at the best setup has always been pure luck, when there are so many parameters to take into account including the weight of the valve, the diameter of the valve seat throat, and whether a modern or original carburettor is in use.

Some of the original valves were very light compared to newer ones. Although the diameter of the valve seat and body can be the same when comparing several side by side, the throat and also the 6 vent holes can vary in diameter.

Using a laptop-driven automotive lab scope takes the guesswork out of getting the best setup. I have built up a library of good, bad and indifferent waveforms that make getting the best setup of the AIV a lot simpler as you can actually see what it is doing in real time.

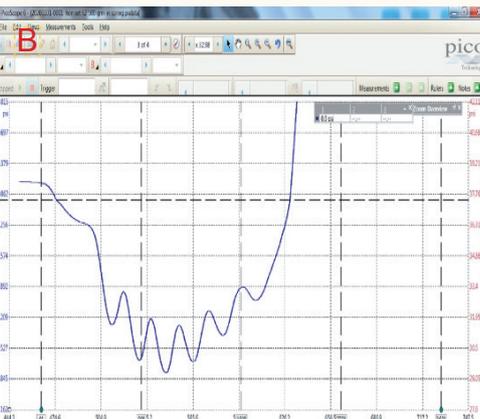
Below is a waveform captured using the PicoScope zoomed in on the inlet and compression stroke focused on the inlet stroke area. Left to right is time, top to bottom is pressure. The whole screen left to right is 360 degrees of engine rotation.

When cranking an engine fitted with AIV valves you will hear a snorting sound from the carburettor's air inlet pipe. This sound is caused by the valve oscillating with its spring. Viewing this information is very useful when trying to get the best setup. The valve stops oscillating when the engine's speed exceeds around 750rpm. Above this speed the valves opening becomes a single event as if operated by a conventional camshaft.



The horizontal dotted line in A is atmospheric pressure. As the piston accelerates down the bore from TDC it starts to pull a negative pressure in the cylinder. At a speed below 750 RPM the valve snaps open and begins to oscillate for a period of time depending on the previously-mentioned variables, including valves spring rating, valve weight etc.

In the waveform A, the valves oscillating opening duration lasts for a period of 119 degrees.



In the next waveform, B, is the same engine except with a change in the valve spring, with a rating of 100gms lower than the one removed. Atmospheric pressure and engine speeds are the same in both tests.

In this waveform the valves oscillating opening duration is increased to a period of 131 degrees. You can see that by just changing the spring rating slightly an opening duration of 12 degrees is gained. If you consider the impact of all the possible variables when setting up an inlet valve, it is self-evident that the actual results can vary wildly and without using a Scope, there is no way of knowing what is actually happening, other than guesswork.

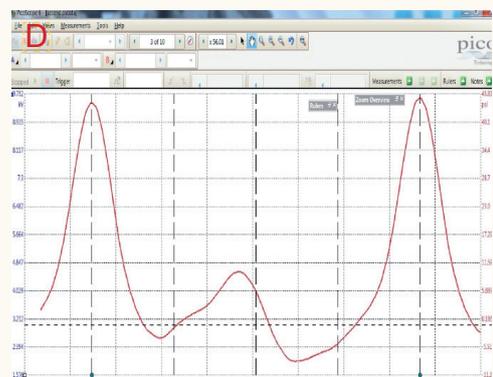


Staying on the theme of automatic inlet valve data, there was a modification first tested over 120 years ago whereby the 6 vent holes were machined out to become 3 large slots in the valve seat body. The logic is that reduced restriction to the inlet charge entering the cylinder increases performance to some degree.

In C. are illustrations of standard and modified valve seat bodies.

I have yet to test one of these in anger as the De Dion Bouton motors are very restrictive on the exhaust side of things and allowing more gas to enter the cylinder would only make matters worse. Modifications can be made to help the engine breathe better on the exhaust stroke and I will be testing these out along with the modified inlet valve in the future so watch this space. Without doing these modifications the uprated inlet valve's increased flow would certainly be compromised and excessive heat would build up.

An example of a De Dion Bouton engine with restrictive exhaust flow can be seen in D.



D. is a waveform of a De Dion Bouton 2.75 HP motor running at 1500rpm. This motor will go to 2600rpm quite happily so the speed captured on this waveform is not excessive. The horizontal dotted line is atmospheric pressure. The 2 tall peaks are maximum compression over the 720 degrees of the 4 stroke cycle. The peak in the centre of the picture above atmospheric pressure is the exhaust restriction caused by the side valve design of the engine and also the silencer set up.

This peak should be as flat as possible and as close to atmospheric pressure as possible. As you can see in this case it is taking around 25% of the engine's pumping force to expel the exhaust gas. This percentage increases as the engine's speed increases. If this was a modern vehicle's engine being diagnosed it would be considered to have a badly blocked silencer or catalytic converter.

If you require a modern diagnostic investigation on your veteran vehicle, questions etc, contact details are below. Complete diagnosis can normally be carried out within a day. Mick Penney.

Tel or text UK mobile 07808 060303
Email penneymick@gmail.com



At the auctions ...

Bryan Goodman spent decades assembling a photographic collection that spanned more than half a century of motoring, including the earliest years. The collection was well-known not only because Bryan used it to document the many articles and books that he helped to prepare, but the photographs were regularly (and generously) made available to researchers of myriad subjects from many different countries. I visited Bryan on several occasions at

his home in Surrey, when I would be led to a room where the files were neatly labelled and filed. Usually, the files I had arrived to see (generally those of De Dion

THE BRYAN GOODMAN COLLECTION OF MOTORING PHOTOGRAPHS & REFERENCE LIBRARY



Bouton) would be already laid out for my perusal, but sometimes there was a ritual to be followed when I would be shown an image and asked to comment on what the significant features were, and what my conclusion was on make and model. It could be an unnerving experience for Bryan was not a model of patience, but he certainly knew what he was talking about.

Following Bryan's death last year, his library came up for sale

just ten days before Christmas at Peter Card's auction in Crewkerne. The items had no reserve and nor did the prices have any difficulty sprinting past the published estimates. The three folios of De Dion Bouton photographs were knocked down to an internet bidder at £3200 – perhaps they have found a home with one of our Club members?

Take a look at the website, where in the History section, the entries on model development have been updated

www.dedionboutonclub.co.uk

Subscriptions



Our subscriptions are due on the 1st of February each year.

Our annual subscription rates are:

UK: £35 Euro Zone: €35

Rest of the World: £30

The Club's bank details are:

Lloyds Bank:
Sort code: 30-91-91 Account
no: 34965060

Overseas members can also pay by PayPal via the Club's website

Membership renewal can easily be done by clicking on the sub renewal button on the front page of the website.

New Members

The Club is pleased to welcome the following new members, who have joined since the last issue:

- Barney McCallum
- Lloyd Galloway
- Jorgen Danielsson
- Larry Feece

For Sale

1907, Type AL Two-seater

hpaula73@hotmail.com
 +44(0)770327507



1925 Type AV1 98cc motor cycle

thomasjamescook@gmail.com
 +44(0)7831-116810



1911, Type CS2 four cylinder tourer

thomasjamescook@gmail.com
 +44(0)7831-116810



1919, Type IE Paris Town Car

toffeeappleman@icloud.co.uk
 +44(0)7753663020



Under the workbench...



A pair of engine mounting brackets made for a 8hp Type V. Joe Jarick (jjarick@bigpond.com) for details.



Genuine engine model (25,000 production version). W168@live.dk for details.



For all staunch pro-EU die-hards, the EU 4 registration number is available for purchase. Michael Edwards (+44(0)7500003926/ mre01@live.co.uk).



London to Brighton Veteran Car Run finisher's medals available (from the 1930s). Michael Edwards (+44(0)7500003926/mre01@live.co.uk).