

Issue 85
Spring 2015

R Newsletter R

The journal of the Russell Newbery Engine Owners & Enthusiasts Club

Cool It!
Rally Preview
Name Check?
Away Day Report
Autumn Gathering News



www.rnregister.org.uk

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The Inland
Waterways
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Stop Press Rally arrival

As the final approach to the rally site is the six closely spaced Oldbury Locks (The Crow) we will have some lock helpers on hand on Wednesday and Thursday. Please contact Neil Mason (Harbourmaster) on mobile 07854 040015 or PMR Channel 3 with an expected arrival at the bottom lock. Suggestion is to call when passing Brades Hall Junction if coming from the north, or Spon Lane Junction if coming from the south.

Next edition

All contributions for the Summer edition will be gratefully received. Do not worry about format — in true RN fashion the editorial team can cope with [almost] anything!

Please supply photographs as separate JPEG or GIF files.

Copy deadline is 1st August 2015

RNR Newsletter : Spring 2015

Chairman's Chat

Hello All, I hope you got through April 1st without getting caught by some joker or other, or got your own back! April Fool's Day passed without me even realising it had gone. It was no joke taking Pauline to the hospital clinic with her injured leg but the good news from the consultant more than made up for the wait, her badly bruised leg is slowly healing. (Picture gallery at the Rally for the non-squeamish).

Still, down to RNR business. The April Away Day is fast approaching and I am looking forward to attending with her ladyship, in fact we are making a weekend of it. Boating should have started by the time this is published – once I get the heads back on as I've been curing an oil leak! First trip is down to Stoke Bruerne for the Friends of the Canal Museum Family Festival, I'm not sure if they invited me for my RN DM3 or they need help with a microphone? We are, rumours aside, moving off to the Braunston Historic next where Pauline will dump me for the weekend, she's fed up with me going on about historic boats!

I'm seriously looking forward to the Rally; I cannot remember a time when the venue has a built-in red diesel supplier and mains electric on some of the moorings. Titford is an interesting place, if yow spake the lingo. Talking of yam-yam, I had the pleasure of viewing Brian Jarrett's 'new' boat *Autarky* at Hillmorton. She looks splendid and should be ready for the rally. There is apparently no truth in the rumour that the rally date has moved into July to let him attend!! At present he has a Ghost of a chance of being with us; I have heard that, in the meantime, Brian has been playing with the big ships on the south coast.



After the Rally we should have one of Doc Thompson's BCN wanderings which have always been interesting and then I'm off to Alvecote for more historic craft at the end of August. I don't know if you have noticed, but the system seems to be improving a bit; the offside vegetation has been cleared in many places and I understand the bottom of the cut has been moved lower, probably not where I want to navigate but that is all part of the fun! It has been rumoured they aim to keep some water in the River Severn as well! We must give Richard Parry and his hard working CRT team all credit for getting to grips with the problems, albeit it does take a little time and rather a lot of resources; keep up the good work.

Time to sign off now, so hope to see you in Titford at the Rally and the AGM.

Norman

From The Editor

A warm welcome to the Spring Newsletter. Two more RNs are featured for sale; we hope Easter may have arrived in the cool but, as I pen this, the weather is looking more promising and preparations for the coming boating season are well in hand. [It seems our Chairman has the season well pegged out!]

In this edition, we have up-to-date news on this year's Rally and Autumn Gathering; the low down on an old boaters' trick; Monty Vann continues his National rebuild and we republish the first in a series of Allister Denyer's articles on cooling - a frequent subject of debate and discussion among members along with an explanation of mis-spelling in the RN name.

We still need stories and technical articles for future editions so don't be shy! Keep them coming in ; and I have just heard that Jim Comerford has completed scanning all the past newsletters, to be available soon on DVD [and the web]. Another job well done! Thanks Jim.

Maybe our paths will cross on the cut this year? In the meantime, enjoy your boating.

Kevin

Membership Matters

I am pleased to report that we have signed up 3 new members since the last Issue so currently we have 238 members. 'New' RN owners still seem reluctant to become part of the RN family.

A very warm RN welcome to:

Martyn & Beverley Hall, Stroud. NB *Steadfast*
tel: ■■■■■■■■■■ mob: ■■■■■■■■■■
email: ■■■■■■■■■■

Robin Putman, Guildford. NB *James Brindley*
mob: ■■■■■■■■■■
email: ■■■■■■■■■■

Bob & Ellen Tidy, Drifffield. NB *Battersea* (National Engine)
tel: ■■■■■■■■■■
email: ■■■■■■■■■■

Rob

Tribute

Michael Callwood (1938 – 2015)

With great regret we report the sudden passing of Michael Callwood on the 29 March 2015.

Helen & I were able to attend the funeral which was held in the Church where Michael and Audrey were married, St Peter's, Bradfield Green, near Crewe. Thereafter, Michael and Audrey worshipped there and contributed greatly to the life of the Church.

It was very evident by a capacity attendance that Michael was respected and held in high esteem by the local community and he will be sadly missed by many people, apart from his family. The Vicar summed him up by saying how we were all better people for knowing him.

He and Audrey were regular attendees at our Rallies and Gatherings, aboard NB *Red Admiral*. He was a gentleman and a gentle man with a retiring demeanour. Never one to garner attention he quietly occupied the background but was always ready for a chat, especially about RNs!

We extend our condolences to Audrey, his Children, Grandchildren and Great Grandchildren.

Rob



Audrey and Michael last summer.

Formal AGM notices

Notice is hereby given that the
Annual General Meeting
of
Russell Newbery Register Property Ltd
will be held at
Titford Pumphouse,
Titford (BCN)
on
Sunday 19 July 2015 at 11.00am

AGENDA

1. Apologies
2. Minutes previous AGM
3. Chairman's Report
4. Director's Report
5. Presentation of Accounts y/e 31/12/14
6. Election of Directors
7. Appointment of 'Auditor'
8. Any Other Business

Rob Davies
Secretary

Notice is hereby given that the
Annual General Meeting
of
Russell Newbery Register Ltd
will be held at
Titford Pumphouse,
Titford (BCN)
on
Sunday 19 July 2015 at 3.30pm

AGENDA

1. Apologies
2. Minutes previous AGM
3. Chairman's Report
4. Director's Report
5. Presentation of Accounts y/e 31/11/14
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7. Appointment of 'Auditor'
8. Any Other Business

Kevin McNiff
Secretary

Thumblining

With limited crew and in need of “getting ‘em ahead”, working boaters devised and practised many time and energy saving routines, most of which are now considered taboo, like leaving gates and paddles open as they left. Even today some locks have strapping posts on the top gates, used to pull the gate shut and stop the boat before hitting the bottom gate. Unfortunately this also has the effect of slamming the gate shut against the cill if going too fast into the lock and for that reason many of the posts have been cut off. There is another, more gentle rope trick to assist when going downhill, and it's called thumblining.

For those who stayed for the Stoke Bruerne Gala Weekend in 2013, this was demonstrated to good effect by a pair of historical boats. Entering the lock breasted up



myself onto *Tench* and *Australia* to see it done from the boat and I could not see what the fuss is about.

As a result of my little trip I also got the opportunity to steer *butty Australia*, with Lawrence Williams on *Tench*, down to Braunston the next day. This was my first ever trip handling a *butty*; no pressure then as we went straight into the depths of Blisworth tunnel! You don't get a second chance to get it wrong around bends as, especially when close coupled (cross-strapped), the *butty* can push or pull the motor right off line – not good! I was put in charge of the pair as we ascended Buckby Flight so I guess my boating efforts were not too off beam!

Naturally with just the two of us, we thumblined down



Taken years apart, but clearly both at Stoke Bruerne Top Lock, these pictures show the position of the lines

[*The Narrowboat Trust*] (l) and [*Narrowboat Magazine*] (r)

and while the top gates were being shut, lines on each boat's mast were attached to the bottom gate handrails with a hitch. With the lock empty, the motor is put into reverse and the gates are drawn open and on the way out, both lines drop neatly onto the boats, ready for the next lock.

At least one of the previous waterway regional managers wanted boaters to stop this practice as it “causes harm to the assets” [they used to be called locks!]. I “invited”

Braunston flight, saving me a lot of time and effort working the locks for Lawrence in the process. It gets my vote!

Lawrence rightly points out that we should not attempt this with our narrowboats; without a mast and loobey, the angle of pull is wrong. Also, the strings must be no thicker than 8mm so if anything goes awry, it breaks before any damage is done to boat, lock gate or personnel. Better to watch the historic boats do it instead!

Kevin

RN powered boats for sale



NB Revilo

Members Ian and Mary Oliver have reluctantly placed their DM2 powered boat for sale with ABNB for an asking price of £85,000. Full details available

on the ABNB web site and the boat has recently moved to Crick.

Colecraft 62' traditional hull with 1986 DM2

Pine lined, fitted to give a cottage-like feel. Boatmans cabin with stove, drop down bed etc. Engine room. Heads with shower over bath. Portapotty. Calor gas boiler and central heating. Double berth cabin. Galley with calor gas cooker & fridge. L shaped saloon seating converting to an additional double berth, two freestanding chairs,

multifuel stove etc. Bottom blackened October 2014.

Currently on cruiser mooring in easy reach of Little Venice / Paddington. Incapacity forcing sale after 8 years of enjoyable cruising. Opportunity to add value by repainting exterior.

Fully equipped as a cruising second home. Sale may include a collection of lace plates, brass and copperware including a superb brass tunnel light.

£39,990 Contact: John & Anita. Telephone 01548 550447 or 07902039994 / 07565513136. E-mail: johnanita@hintons.eclipse.co.uk

A brief history of the Titford Branch Canal

Today we regard the Titford Branch as part of the Old Main Line of the BCN. After all you need to navigate the Old Main Line to reach it. However, it dates from 1836, which makes it newer than most of the New Main Line. This is evident from the arrangement of the locks, with the chambers in line with the towpath. Tipton Factory locks on the New Main Line built at the same time also use this arrangement. This design does not help with passing boats, so was not perpetuated. Lock flights built in the 1840s such as Walsall and Rushall reverted to the traditional offset arrangement.

Titford does feature in the original Birmingham Canal Act of 1768 as water supply. The pools were created in 1773 and a non navigable feeder channel connected to Brindley's original 491ft Smethwick summit. The exact route of this is hard to determine today, most probably it followed the line of the Tat Bank branch as far as Oldbury Road, before heading north east to near where the M5 crosses the old summit. This whole area underwent three major upheavals, first the construction of Telford's 453ft New Main Line, then the Stour Valley Railway and finally the M5.

The Tat Bank branch was one of the very last parts of the BCN to be made navigable, in the 1860s. Once again this was an enlargement of the water supply channel. Traffic never materialised to a great extent - a railway interchange basin was never used and the branch did not have a towing path throughout. The feeder continues in culverts to Edgbaston (or Rotton Park) Reservoir. This dates from the Telford improvements to water supply for the BCN in the late 1820s. Navigation on the Tat Bank Branch ceased around 1900.

From the pools, the Titford canal continued as two branches. The northern one was really the main line of the Titford, as it was built in 1836. It ran west for 1¼ miles to serve several collieries, including three connected by inclined plane tramway. Latterly it was known as the Portway Branch. The second branch, the Causeway Green Branch (or Arm), was added in 1858. This was shorter, running for about ½ mile to terminate just south and east of the railway line.

Commercial traffic on the Titford declined in the 1950s, both the branches were abandoned by 1960. Gradually the locks became impassable until restored (mainly by volunteers) in the 1970s. This enabled the IWA National Boat rally to take place on the pools in 1978 and again in 1982.

Andrew

Yow cam spake Black Country

This is the third and final part of our very basic introduction to the language of the Black Country. 2015 Rally attendees will probably find some words useful at the rally or on the cruise to and from.

Quarten - quarter of a pint

Rake - to make up the fire

Raker - a large lump of coal

Rantan - violent mood, so if you are in a very bad mood, you are 'on the rantan'

Rawm - to strain or overreach, **Rawling** (verb)

Reesty - rancid or overripe food

Riddle - sifting or sieving, 'riddlin the gleeds' is sifting the embers of a fire

Rile or **Roile** - Scramble or boisterous play, or any children's activities which annoys adults

Sad - a sad loaf or cake is one that has not risen sufficiently

Scratchings - remains left after rendering lard

Scuft - to box the ears

Shommock - to walk with a shuffle

Shraze - graze or scratch

Siden - out of vertical

Skrobble - in a tangle or mess

Sleck - slack or small coal

Snap - food snack, or more specifically a packed lunch

Sord - rind of bacon

Splod - flat footed or to walk awkwardly

Spottle - splash

Spockle - to cover with drops of moisture

Squob - old style settle

Soople - to soften or make supple

Steen - stew jar or earthenware pot

Suck - sweets

Sup - to sip or drink

Susstifikut - certificate

Swilker - to spill or splash

Tack up - improvement in the weather

Tacky-bonk - a pit mound

Tae or tai or tay - tea (as in kipper tae)

T'ay - negative (it isn't)

Tek - take

Tetnul dick - variety of pear associated with Tettenhall near Wolverhampton

Twethree - two or three or a few, used as a definitive noun

Throble - thrush (bird)

Tittle - tickle

Tizzicky - irritating dry cough

Tranklements - small possessions or paraphernalia

Trapesin - walking about aimlessly

Treepot - flower pot

Unkyoothe - uncouth

Volve - valve

Waiter or **Wairter** - water

Wench - girl or young woman, often affectionately used for daughter

Werrit - worry

Wurse or **Wuss** - worse

Wum or **whum** - home

Yawle-Yurp - loud bawl, shout or cry

Yed - head

Yow - you

Zowk - yelp, cry out

Andrew

Boat Safety examinations at the rally

If your boat is due a Boat Safety Certificate examination, Ian Ian Crompton is able to undertake this at the rally. Don't forget you can have the examination up to two months before expiry of the current certificate.

Rally Preview ~ Titford Pumphouse 16th to 19th July

Bob and I are currently putting the final touches to the programme for this years rally at Titford. Actually the task in hand is to fit everything in to the time available!

As of the end of April, we have 45 boat entries. There is still time for you to enter, use the entry form contained in the last *Newsletter*, or download one from the Register web site. Please note that if you are not coming by boat, you still need to submit an entry form with the day rate payment.

The last date for receipt of all entries is 20th June.

As previously noted the rally will have a strong Black Country theme, with most of the activities having some connection with the area, or the Birmingham Canal Navigations (BCN). We commence on Thursday evening with "A brush with Black Country Canals". Dave Moore, well known boat sign writer and old friend of the Register, will entertain us with reminiscences from the last days of commercial carrying and a quick painting or two. The entertainment for Saturday night is the famous Black Country comedy duo Dandy. On Friday evening the entertainment is a musical extravaganza from Phil Clayton and his band. This includes Birmingham Lads, a lively musical with accompanying visual presentation on the rise, success, decline and revival of the BCN. The show comprises a selection of original songs as well as traditional boaters' ditties. It is illustrated by photographs from the collection of Bob May.

The familiar workshops will be running on Friday and Saturday morning. In the technical stream we have a demonstration by Bruce Hewitt from Tankbusters of their system for elimination and long-term control of diesel bug contamination, water and heavy contaminants. Bruce is offering a free fuel test and a 10% discount for the fuel polishing service. If you like the idea of silent cruising, then Dr Charley Johnston will enlighten you on current research into hybrid propulsion. You can take a look at the diesel-electric system he has on his boat *Felonious Mongoose* (and get an explanation of the name). Our own an Crompton will be dealing with the subject of cooling systems for RNs. So if you wondered how much anti freeze to add, how to drain it and how often, or where to fit a calorifier, then this is for you.

We have two craft workshops. In the first, Lucy Mason will lead you through the creation of a Spider Web Dreamcatcher. The other is lead by Pat Walker, a master in the Waterways Craft Guild. Pat will introduce you to the techniques of traditional cabin decoration, including crochet, cross stitching and rag rugging.

Well known author and publisher of canal guides, Michael Pearson will be sharing his passion for the Black Country and it's canals. He will also give us an insight into researching, writing and publishing his famous guide books.

A practical session that we expect to be popular is a first for the RNR rally, photography. This will be led by Kevin Maslin, who runs a freelance waterways photographic service. Kevin ran a photographic workshop for the BCN Society at the Pumphouse in 2014; unfortunately on the wettest day of the year. Hopefully for our rally the weather will be better, giving plenty of opportunity for taking stunning pictures. As part of the rally wrap up we will review some of the results.



The Titford Pumphouse - on a cold January afternoon. Will be busier and warmer in July!
[Andrew Laycock]

No visit to the Black Country is complete without tasting pork scratchings or faggots. If you wondered how these are made, or exactly which part of a pig produces bacon, ham and chops, then you are in for a treat. Bowketts Butchers of Oldbury will demonstrate how every part of a pig, except the squeal, can be made edible. You will have the opportunity to order some of their prize winning sausages and pies. On Saturday evening, Bowketts assisted by Chamberlains Fish & Chips will be providing a Bostin Black Country Supper. Naturally one option is faggots, chips and mushy peas!

You can also avoid cooking breakfasts. A selection of cooked rolls will be available on site on Friday, Saturday and Sunday morning. On Thursday evening the BCN Society will man their burger van, so this will be an ideal opportunity to satisfy your appetite after working up the six Oldbury locks.

On Saturday afternoon there will be no scheduled workshops - and the rally bar will be open! One activity which can be undertaken on the Saturday afternoon is a treasure hunt, with clues to be found on the rally site and along the Titford Canal. Also on Saturday afternoon will be an opportunity to cruise in pairs to Titford Pools; the terminus of the Titford Canal. The BCN Society archive collection of photographs and other artefacts will be available for inspection. Bob May will be on hand to provide some background to these. For the industrial archaeologists amongst you, we have arranged with Sandwell museum service for a visit to to the New Smethwick Pumping Station and the original site of James Watt & Matthew Boulton's Smethwick pumping engine.

The rally bar will feature some of the classic Black Country beers. This will include the famous Ma Pardoe's Original from the Olde Swan, Netherton. We have also sourced an English wine with a Black Country connection. This is Black Country Gold, the grapes are grown at Halfpenny Green vineyard, just to the west of Stourbridge.

On Sunday we have the formalities of the Register and Property Company AGMs, see the formal notices on page 4.

So all in all it is going to be a varied and enjoyable packed few days. I'm looking forward to welcoming you all.

Andrew
7

Spring Awayday — Cromford Ca



The assembled RN Register party and a few notable guests before boarding *Birdswood*

[Other photographs by Andre]

Another successful RNR day trip took place on Thursday 30th April, when 34 members and guests assembled at the headquarters of the Friends of Cromford Canal Society.

After climbing aboard the old LMS built [at Crewe] butty *Birdswood*, we enjoyed a very pleasant trip along the restored section of the canal to Leawood Steam pump house. Despite its size compared with Crofton, the pump is capable of delivering 3 tons of water per stroke compared with the 1 ton of the latter, providing a challenge for the crew when mooring or winding when the pump is operating. The bank holiday weekend would see the pump in action and some of the party booked nearby accommodation to return and savour the event.



The 'oss was not our motive power, this being from a battery powered hydraulic drive which was as unobtrusive, with no need for gathering 'compost' for the roses. The site of the old Cromford Garden Centre was pointed out, along with a Stegosaurus! The society hope to restore part of the site in time.



nal and Crich Tramway Museum



ood at Cromford Wharf.

[Harry Arnold, © Waterway Images]

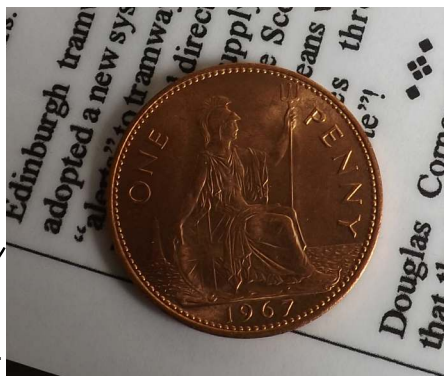
W Laycock and Kevin McNiff]

After a short journey by car, we then arrived at the Tramway Museum at Crich where the group spread out; some heading for the Red Lion for a pie and pint, others to Rita's Team Rooms. Thereafter we explored the museum site in full, enjoying at least one trip on a restored London Transport or Blackpool Tram. The site is well laid out and the weather was kind to us throughout.

Special thanks must go to Ian McKim Thompson and Betty Dobbs. Once again, meticulous planning, particularly with regard to train times and group discounts made for a very enjoyable day out! Ian tells me he's already got ideas for next year so watch this space.

Kevin

The pre-decimal penny is the Crich all day tram fare.



Cooling systems their problems and what to do. The gospel according to Allister

Scanned from previous offline editions, this is the first of a series on this subject

First of all, some simple explanations. Why do we have cooling? The reason we have to cool our engines is because they are not 100% efficient and most of the excess energy comes out as heat. If this was not taken away and dumped the engine would climb in temperature until it was red hot or seized up. It is possible to cool engines with air cooling alone but this has other drawbacks, which are irrelevant to us, because all our engines are water-cooled. Having established that we have to cool our engine and are going to do it by water-cooling. The next thing we need to know is how much heat is given off? Well, this is very easy to work out in an oil engine, it is roughly equivalent to the shaft output so 10Kw up the shaft means 10Kw is going into the water. So now we have an idea of the magnitude of the problem. The most common RN around on the canal system is the DM2, this is an 18Hp unit which comes out at about 13.5Kw so we have got to design our system to remove a minimum of 13.5Kw. Our system will never be perfect so lets add 50% for good measure 20.25Kw or 20Kw approximately.

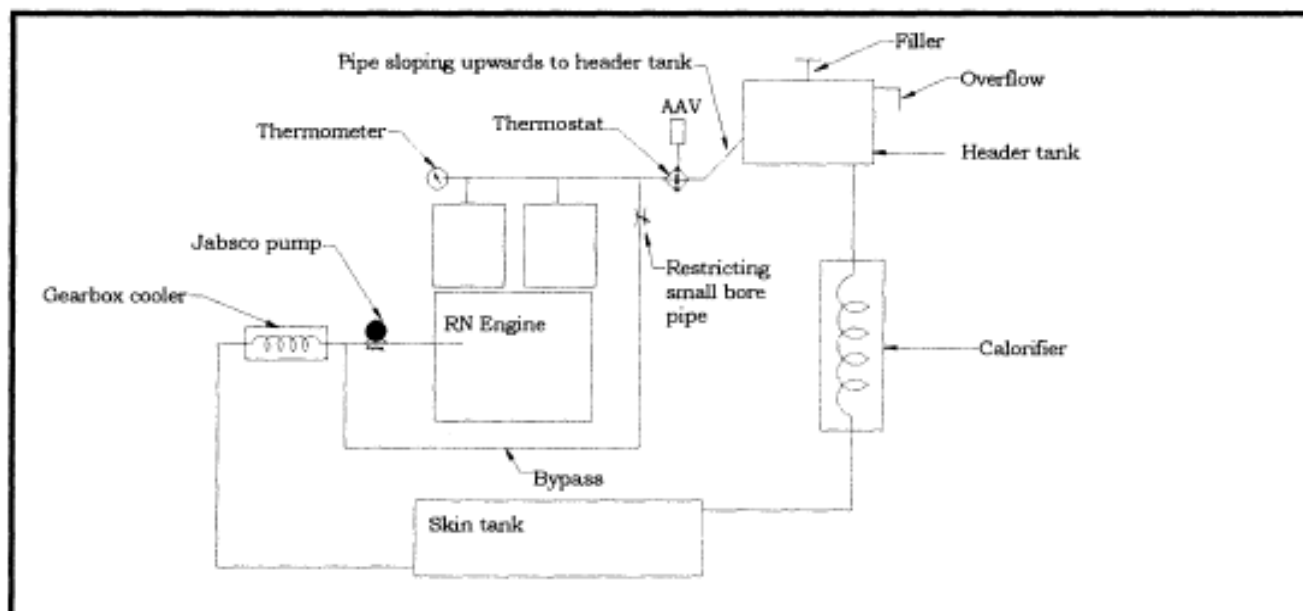
Considering the pump first:

Looking at the Jabsco Graph we get 25L/min at 1000RPM or 5 Gallons and the specific heat of water is 4.18KJ/Kg.K This all equates to 4.18Kw per Kg °C second. 1Kg of water equals 1 Litre therefore 18.81Kw/Gallon °C second and as we are pumping about 5 gallons per minute which is roughly 0.08G/sec therefore 1.57Kw/ °C second but we have a 30 °C (30°C-60°C) rise so we have roughly a 47Kw capability over 2.35 times what is required, even more if the cooling water temperature is less.

1-2 gallons per minute would be enough. I am assuming an input temperature of 30°C, which is reasonable but if our system cannot achieve this the cooling system is not good enough. The flow rate will considerably affect the input temperature but if the flow rate was slowed to 1 gallon per minute then the system must achieve an input temperature of 30°C So the pumping capacity of the Jabsco pump is massively more than necessary. So why is there an over heating problem occasionally? Well it sure ain't the pump. There could be a thermal mixing problem but because the volume to surface area ratio in an engine is quite low and there will also be quite high turbulence this is unlikely. Is the skin tank inadequate !! These have both practical and theoretical problems.

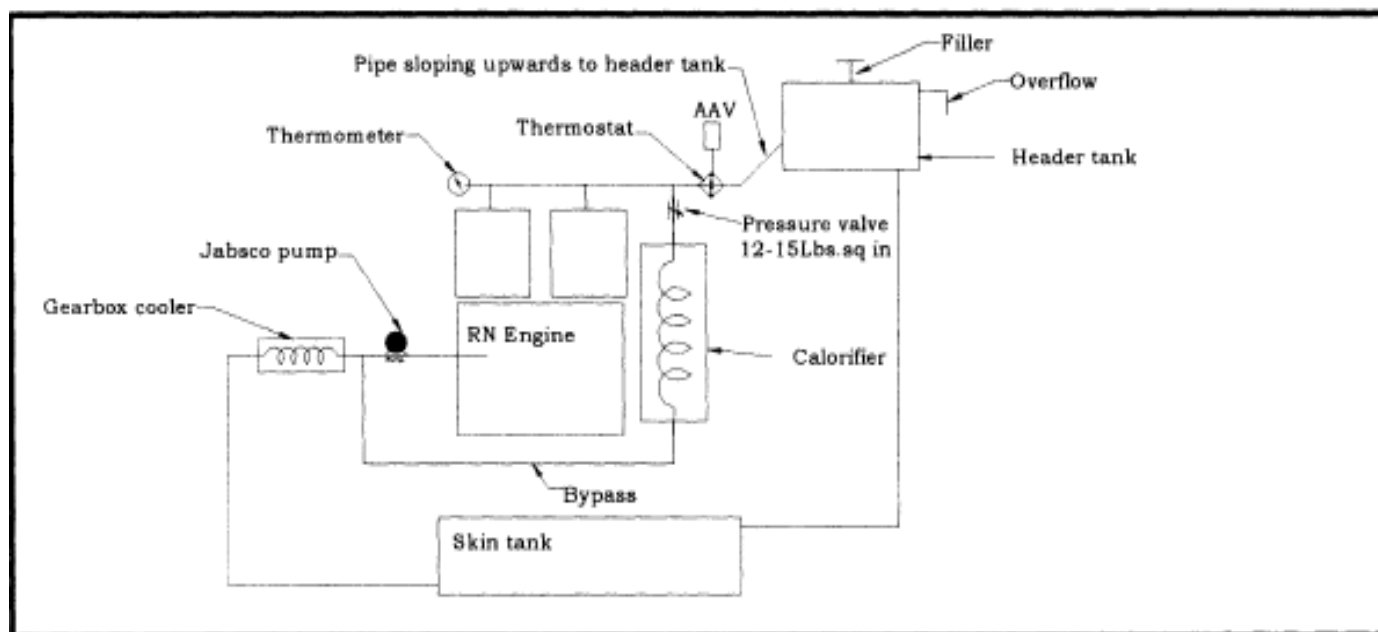
Here are some cooling systems and explanations.

Coolant system number 1



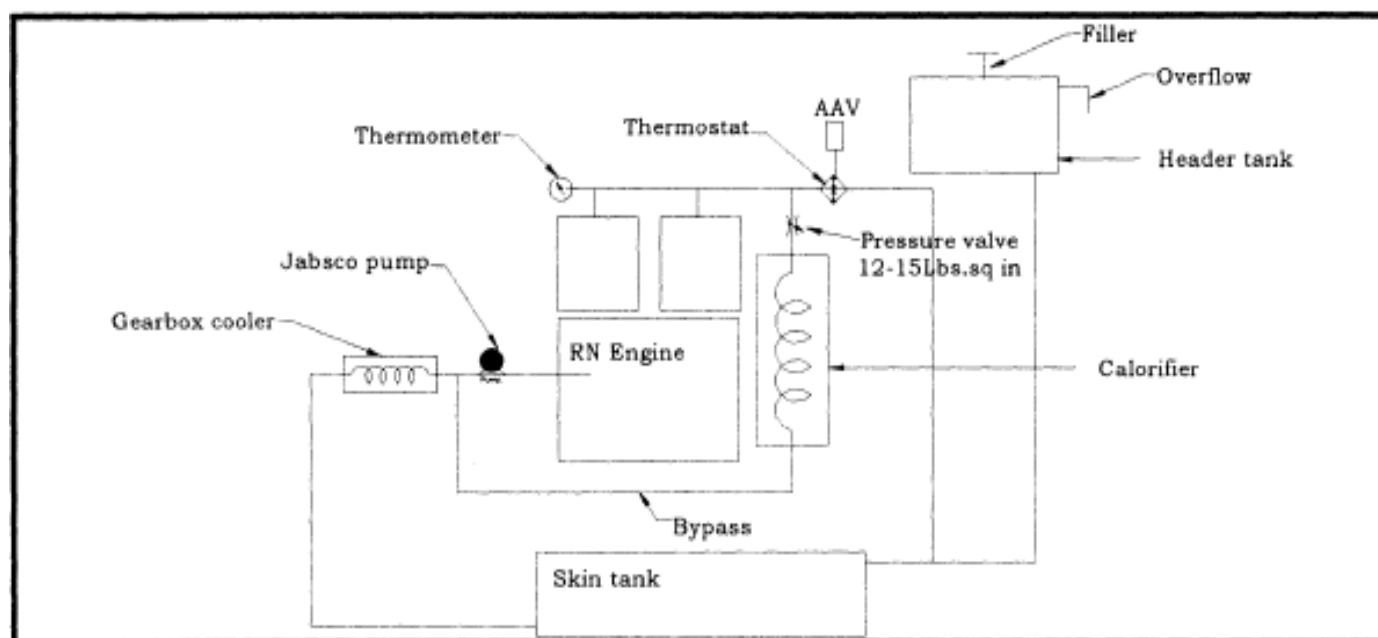
Our current most preferred method. It has the calorifier in the main circuit and a sloping pipe to the header swirl tank which automatically removes any gas and also takes the full flow of the coolant. This method is simple to understand, does not require the boat yard to interfere with any engine pipe work and gives full heat to the calorifier. It has the disadvantage of making the system hard to fill but you do not have to do this often and proper operation is better than easy filling. Easier filling can be achieved by putting some bleed valves on the system.

Coolant system number 2



This system is not as good as No. 1 because the calorifier is in the bypass this means that when the thermostat opens, only a small amount of water goes through the bypass and because the system tends to stabilise with the thermostat slightly open the calorifier ends up with a lower through put than desirable. Although engine cooling would not be affected. This situation does depend on the set up on individual boats and so some work and some don't. From a design point of view this is no good, all have to work. Easier filling could be experienced but the same solutions as No. 1 could be applied if not.

Coolant system number 3



This system is quite common and can give lots of trouble. The header tank is not on the output and hence cannot release any gas. The only escape for gas or air is out of the AAV but because the flow rate is quite high it does not manage to catch all of it and hence gassing up can occur. Gassing up is when gas builds up in the cooling system in the engine to such an extent that the water in the header tank continues to rise until it is coming out of the overflow. The big advantage of this system is it is easy to fill; in at the bottom and air comes out the top. You still need a bleed on the skin tank though.

[To be continued in future editions]

O Woe 3!

Monty Vann continues his epic restoration!

Since my last update in the Autumn 2014 newsletter, all manner of things not involving boats and engines have taken too much of my time; also some of the work I have done I've had to do again.

Painting

Painting - a job I dislike - has not gone well on several parts with existing coats crinkling up under the new paint. It appears to be that the new paint, specifically for machinery and resistant to oil and grease, is not compatible with whatever had been applied previously. When I phoned the manufacturers explaining the situation they suggested that the environment was too cold and/or damp. It was in an unheated garage but water hadn't frozen. They then asked if I had applied primer or undercoat prior to the top coat, I had primed the bare metal areas and overlapped onto sound paint. It was suggested that this was likely to be the problem as their primer has a higher concentration of volatile organic compounds (VOCs) than average and is softening the existing coats. Their suggestion was to use top coat only as it is formulated so it may be used on bare metal if necessary. I've tried this and it does appear have worked. But it's all taken time.

Engine

The sump, bedplate and reground crankshaft with new white metal bearings are now bolted into position on new wooden bearers and the flywheel in place with three bolts only as the shaft extension cannot be fitted until the gantry is removed.

When dismantling the engine I found the forward clutch cone loose on its taper and excessive crankshaft end float, feeler gauges indicated 0.028" and the face of the centre bearing scored. This has now been rectified and is the recommended 0.005". But why was the clutch cone loose on its taper? Studying the assembly drawing and parts list it was found that a shim washer is fitted between the back face of the clutch and a thrust bearing. If this shim washer is too thin the cone clutch will tighten up on its taper but the crankshaft will be pushed forward when the forward clutch is engaged so binding on the rear face of the centre main bearing. Should the shim washer be too thick then tightening the nut holding the clutch cone will pull the crankshaft back until the forward face of the centre bearing and the crankshaft web are against each other before the clutch cone is tight on its taper. But how to find the correct shim thickness?

The timing chain case and starting gear case ('banjo') were assembled, with gaskets as there is only 0.005" to play with, onto the bedplate. The thrust bearing abuts the 'banjo'.



Feeler gauges 0.002" and 0.003" were held either side of the centre main bearing and crankshaft. When offering up the clutch it was found the measurement couldn't be made as the bearing face of the clutch is recessed. A 'bracelet' of four 3/4" long pieces of copper pipe, wired together and annealed, was placed over the hub of the clutch which was then tightened onto its crankshaft taper. This squeezed the 'bracelet' to the width the thrust bearing plus shim should be. Measuring the squeezed 'bracelet' showed shim to be too thick by 0.019". Fortunately Dave B[ixter]. has a surface grinder and could grind the shim to size, 0.038" thick. On re-assembling to check, found that with the clutch tight on its taper, thrust bearing plus shim in contact on both faces, there was clearance either side of the crankshaft main bearing - as intended.

Reversing Box

The Brunson reversing box fitted to my engine is lubricated by the engine lubrication pump via a metering jet in the end of the crankshaft which is fed from the timing case end main bearing. A level of oil is retained in the bottom of the reversing box to lubricate the differential gears. Any excess flows back to the engine sump. If a reduction box is incorporated it uses gearbox oil, i.e. EP90. Since owning the boat I've found the reduction box oil level too high whenever checked. This is obviously engine oil finding its way into the reduction box and diluting the thick EP90 so it had to be changed frequently. I decided to take the end cover off to have a look.

After taking off the reduction box cover - and unscrewing the nut on the end of the sliding clutch shaft with my fingers!! I decided to look further and it's just as well I did. When removing the clutch shaft a tapered roller fell out from one of the bearings in the selector, then the rest fell out - they ain't supposed to do that - they should be retained in a cage. The selector has two tapered roller bearings fitted

with a spacer between the bearings. This spacer not only positions the inner races in relation to their outer races but also has two felt seals to restrict oil passing from the reversing box to the reduction box. On measuring the overall length of spacer and two inner races then, having reassembled the rollers back into their cage and the inner race, did the same measurement with the inner races in the selector. The difference was 0.026" the spacer was too short by this amount. This means that if the nut at the end of the shaft had been tight there would be excessive pre-load on the bearings and if the shaft went round at all it would be with difficulty and would cause premature wear, which is what I found. The spacer being too short by 26 thou. also meant that oil could pass through the bearings into the reduction box.



Gearbox

New taper bearings ordered. New spacer roughed out ready for new bearings. A modification, new seal carrier in hand to replace felt seals with lip seals.

Miscellaneous

Painting!!

In view of the things I've found in the engine and gearbox I'm surprised, but pleased, it continued to run until I arrived back at base.

Monty

The Present Position – Engine

The cylinder block is on site with modified cylinder liners fitted ready for installation onto the bedplate. I need to borrow the engine crane again. Cylinder heads are assembled but I'm not happy with lub.system. Intend speaking to Dave B.

Autumn Gathering ~ Long Itchington 25 to 27 September

This years Autumn Gathering will take place at Long Itchington, on the Warwick & Napton section of the Grand Union Canal. The dates are Friday 25th to Sunday 27th September.

The only formal activity is an evening buffet on the Saturday, 7pm for 8pm. The location is the event room of The Cuttle Inn, it is the building between the canal and the pub. The cost of this will be £7.50.

For other meals, attendees are welcome to sample one or more of the other five pubs in the village. All serve food and good beer. For those not arriving by boat, The Green Man on Church Road (01926 812208) can accommodate camping, caravans and motorhomes.

The moorings for boats are on the pound between Itchington bottom lock and Bascote Staircase locks. We may not have any reserved spaces, so it is a first arrival first choice. Note that the nearest full length winding holes are Kayes Arm (above Itchington Shop lock) and below Radford bottom lock. Shorter boats are able to turn at

Bascote. If arriving from and departing to the east (Napton), you might consider descending the two Itchington locks in reverse.

Please book for the Saturday evening buffet by Friday 4th August; email to rally@rnregister.org.uk or call me 07870 294580.

Andrew



Misspelt Instructions to Captains ~ a longstanding mystery resolved

A Further Chat from our President

Many people forget or never knew that when the socialist government of post war Britain was established under Clement Attlee that large swathes of industry were nationalised. Most know about medicine and the NHS, and railways and British Rail. But of course the whole of transport was involved including water, rail, roads, buses, coaches, shipping, ferries, docks and road transport. Do you remember Pickfords, Royal Blue, British Road Services and the Vale of Rheidol railway? Very little escaped. The world of canals was taken over and the great carrying companies of yesteryear absorbed, the largest of which was Fellows, Morton & Clayton although by that stage in voluntary liquidation. It was the Transport Act of 1947 that set out the structure which was controversial although the nationalisation of the waterways received hardly a mention, although interestingly it was not the canal carrying trade itself unlike the despised British Road Services. And yet illogically there were powers to licence carriers and to acquire them and all this was under the auspices of big brother the British Transport Commission established by decree on 1st January 1948. The Commission with its love of bureaucracy set up the Docks and Inland Waterways Executive (DIWE) with chairman (not a chair!) and three full time and three part time members appointed by overlord Minister of Transport. And between these luminaries they managed to officially promote the ignorant information. The Commission divided the canal world into five grouped areas, later reduced to four which they called Divisions. Interestingly the former railway owned canals were operated at first under the Railway executive.

Under the 1953 Transport Act the Executive was turned into a Management Board, evolving into a new Division in 1955 renamed British Waterways. And there were other facets to this bureaucratic history but this is not the place to bore you with them.

So what has all this to do with instructing canal boat captains. One of the former geographical divisions of the DIWE was the South Eastern Division covering London, the Regents Canal, Limehouse, the Grand Union and canals right up to the Midlands in the SE segment of England. The powers that be issued instructions to Captains on the care of "National" and "Russell Newbury" (sic) engines and stern gear. The SE Division operated out of Bulls Bridge where boat engines were overhauled, changed and serviced. The instructions of foolscap size were printed on quality card and had eyes at the top so that the instructions could be hung up in the engine rooms of the carrying boats. It may interest you to know that at the time of nationalisation there were about 6000 working boats and barges on British Waterways and the industry employed about 11,000 persons.

A good number of years ago, I think it was some time in the 1980's I managed to get hold of a copy of these instructions through the sales of the Narrow Boat Owners Club now renamed the Historic Boat Owners Club. When they had a clear out of old redundant stock,

I bought the remaining stock, which I still have carefully stored away and in mint condition. The SE Division serviced these old DM2s and 2DMs which were by this stage mainly 20 years old having been installed in the early 1930s in the large Grand Union Canal Carrying Company fleet. These engines had seen service all through the war with their original RN and Bruntons gearboxes and deserved looking after, particularly by boatmen recently used to cruder air cooled robust engines of various makes. I enclose a copy of the instructions which the readers can see for themselves, but the key areas were:

- Avoiding overpriming so that oil was washed off the liners.
- Making sure there was some oil pressure, at least 12lbs. per square inch(!) and making sure that there was some oil.
- The old Autokleen oil filter needed proper regular attention in the days before disposable paper filters.
- By tying down the governor and lifting the cold starting device, the boatmen achieved extra power and speed with shorter journeys.
- Rocker boxes were lubricated by wicks which had cups which had to be filled daily.
- Greasing was important with Stauffer cups which need screwing down and filling as necessary.
- The engine water pumps and bilge pumps which were plunger type with leather washers needed regular greasing.
- Particular emphasis on clean mud boxes with these raw water cooled engines and special precautions in seriously frosty weather to avoid serious damage and the need to drain engine water jackets not forgetting the cast plunger pumps and mud boxes. I know all about these needs having run such systems myself.
- There were mobile vans, I think they were small Fords which serviced breakdowns up and down the canal.

The instructions must not be removed from the engine rooms and captains could be sacked if they abused engines.

I had my supply of instructions for a while before I spotted the "Newbury" mistake, which puzzled me. After a deal of thought I came to the following possibilities.

I. Civil servants had not heard of William Aubrey Newbery and assumed that he spelt his name like the famous Berkshire town - basically ignorance. Indeed they may not have had any canal experience as the docks was the major influence in the London area and that was their employment experience.

II. Staff were familiar with shipping and coastal traffic and assumed that they were talking about products from the Newbury Diesel Co. Ltd., manufacturers of marine

propulsion and auxiliary two stroke engines. They built engines very similar to Nationals and Russell Newbery units with a normal rating of 10 bhp per cylinder of heavy duty, robustly constructed and not built down to a weight limit using cast iron, with separate cylinder heads and cold hand starting. But the company with its Newbury, Berkshire factory built ships and auxiliary engines up to 1600 hp at 240 rpm and were supplied to ship owners and engineers all over the world and British Empire.

III. The Newbury Co. has a very interesting long history going back to the 18th century and has traded under the name of Plenty and SIRON. They had a long association with Kromhout hot bulb engines, armament manufacturing and Plenty - Still engines.

However they had a long history and a fine reputation for supplying engines for small coasters and Thames tugs and I have come to the firm conclusion that it was that reputation which caused the confused heading in the Instructions to Captains. The DIWE mistakenly thought they were dealing with the Newbury Diesel Company, rather than the Russell Newbery and Co. Ltd. which was still based in Altrincham in 1947.

But it at least shows the copies are genuine!

They look fine hung up on display in engine rooms or mounted in frames elsewhere and you will have something to talk about.

Ian McKim Thompson

DOCKS AND INLAND WATERWAYS EXECUTIVE SOUTH EASTERN DIVISION

INSTRUCTIONS TO CAPTAINS.

CARE OF "NATIONAL" AND "RUSSELL NEWBURY" ENGINES AND STERN GEAR

1. When starting engine, not more than three injections with priming tool lever must be given (this is important) and when engine has started see that oil gauge shows at least 12 lbs. per sq. in. pressure.
2. Clean out mud box once a week and after the engine has been started see that circulating water is passing through.
3. Test oil level in sump every morning before starting, and approximately after every 3 hours running. The engine must have been stopped at least 5 minutes before the dip level is taken.
4. Fill fresh oil into sump through the dip pipe or direct into lubricating oil tank if oil is on or below "low" point on dip stick.
5. Give "Autokleen" Oil Filter 3 or 4 turns every 2 or 3 hours' running.
6. Watch Oil Pressure Gauge when travelling; if Pressure Gauge fluctuates suddenly and drops to "O" give the Autokleen filter one or two turns, if this does not bring the pressure back to normal stop the engine. Never race the engine. Operate the throttle lever gently, and remember that in shallow water, best results are obtained with moderate engine speed. Governor lever must on no account be tied down. The engine can be badly damaged if this is done with consequent delay to the boats.
STRONG ACTION WILL BE TAKEN IF THIS ORDER IS DISOBEYED.
7. Oil all oil-cups on cylinder-head every day. Grease stern tube "Stauffer" Lubricating Cup, by giving one turn of cap every morning, and fill up with fresh grease, when cap is screwed right down.
8. Grease "Stauffer" Lubricating Cups on bilge and circulating pumps by giving each one one turn of the cap every day, filling up with fresh grease when cup is empty.
9. Keep your engine and engine room clear.
10. **FROST PRECAUTIONS.** Open water pump cock to drain water jacket after shutting top and bottom sea cocks. Remove water pump valves. Empty mud boxes. When starting engine, be certain that outlet pipe is not frozen.
11. Once a week top up batteries with distilled water as instructed. Keep terminals clean and covered with thin film of vaseline.
12. On no account must engines be kept "idling" for long periods. Long periods of idling causes pistons and fuel injectors to carbon up, wastes fuel and lubricating oil and causes excessive wear to liners.
13. **DO NOT TAMPER WITH ATOMIZERS, FUEL PUMP, GOVERNOR GEAR AND ELECTRICAL EQUIPMENT. IF ANY TROUBLE IS APPARENT WITH THE MACHINERY OR STERN GEAR, REPORT THE MATTER TO THE DEPOT IMMEDIATELY.**

THESE INSTRUCTIONS MUST NOT BE REMOVED FROM THE ENGINE ROOM.

CPO 958

