

Untitled

Roger Hulett

Joined: 31 May 2004

Posts: 140

Location: South West France

Posted: Fri Aug 10, 2007 2:32 pm Post subject: Cylinder head water pipes

Advice please. How does one remove the brass water pipes from an aluminium head. They are not corroded having been assembled less than 1 yr ago, they were new (the pipes) and are screwed in very tightly.

Answer 1. Freeze the head and afterwards heat the brass pipes...or

Answer 2 Freeze the head and afterwards heat the head.

I don't know the coefficients of expansion of these two metals!!!!!!

Roger Hulett

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efr215

Joined: 06 Nov 2004

Posts: 215

Location: Leigh-on-sea, Essex

Posted: Fri Aug 10, 2007 8:03 pm Post subject:

Aluminium 0.000022"/degC

Brass 0.000018"/degC.

Might I suggest first make a close fitting plug to go inside the tubes. Then take two pieces of 1in. square bar stock, one about 18in. long the other 3in. Tack weld or bolt, (two inches apart), the shorter length at one end of the longer and bore between the bolts to the outside diameter of the tube, (plus nothing, minus a thou.) with the plug inside to prevent collapse and the bar clamped on the outside it should shift. Heating the whole assembly will help as the aluminium will expand marginally more with a rise in temperature.

When it comes down to it the tube is replaceable bit so if it is very stubborn . . . !

Finally as this is a job I'm going to have to do in the near future too can anybody say what the threads were please?

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Jon Hodges

Joined: 31 May 2004

Posts: 18

Posted: Sun Aug 19, 2007 9:52 am Post subject: Cylinder head waterpipes

Dear Roger

The thread size of these inlet tubes is 1" x 24tpi. There has been some correspondence on this subject previously on the Message Board, see Headache on

page 12, Jan 29 2005.

I was wondering if it would be possible to pull these more useful technical items out to a separate archive similar to the way the Scott Technicalities was initiated. Of course it would depend on there being anyone willing to take the task on. It is not something that should be added to our webmaster's workload and at the moment I don't feel able to commit to it myself. Any ideas?

Jon Hodges

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efr215

Joined: 06 Nov 2004

Posts: 215

Location: Leigh-on-sea, Essex

Posted: Sun Aug 19, 2007 10:32 am Post subject:

Thank you for the thread information, 'tis always nice to have some fore knowledge!

I too thought it'd be a really good idea to gather all the Scott information, past and present, into one place and then Steven Endicott came along with his tour de force. The only difference was that I was thinking along the lines of a searchable PDF format, that was until I found out just how much a decent software package for doing the job was going to cost!

The state pension just don't stretch that far!

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Roger Hulett

Joined: 31 May 2004

Posts: 140

Location: South West France

Posted: Sun Aug 19, 2007 10:55 am Post subject:

I had suggested this action some time ago. Not being an expert of computer technology, I had thought that setting up different files for specific topics would be a relatively simple task like setting up different files in Outlook Express. I had thought that the program for the SOC forum would have catered for this, but I am obviously wrong. If it were simply a matter of examining the letters and dragging to different files, I would be only too happy to help, however anything more than that would be beyond me ! like removing the water pipes from my cylinder head. A task now satisfactorily completed, thanks to David.

Roger Hulett

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Roger Moss

Joined: 31 May 2004

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Posts: 369

Location: Leicester UK

Posted: Mon Aug 20, 2007 11:45 am Post subject: water pipes

I ask why you wanted to remove the pipes. I reface heads with the pipe in situ by putting the pipe on the centre of a rotary table and fly cutting up to the edge of the pipe while the table is rotating. Scott heads are not top quality heat treated aluminium so do distort.

Latest gaskets seem to compress up more than the former copper asbestos type. I think I should revise my advice on head tightening to suggest that the end 3 nuts be a little less tight than the middle ones.

There is much less tightening capacity in the middle that at the outer ends so if we throw in a compressible gasket acting like a soft mattress then it is no surprise that it is possible to bend the head so the outer ends become deformed lower than the middle.

Just a few thoughts

Roger

Rebuilding and upgrading of Scott and silk power and transmission units. New enhanced replica Scott engines. special manufacture Scott technical info at our website www.mossengineering.co.uk

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efr215

Joined: 06 Nov 2004

Posts: 215

Location: Leigh-on-sea, Essex

Posted: Mon Aug 20, 2007 1:29 pm Post subject:

Tut! Tut! Roger, stop showing off!

I've seen some of the pictures of your machinery; I think you've getting spoiled with all that big stuff!

So you must take pity on the rest of us mortals who creep about in little wooded garden sheds at least half the size they oughta be trying to do jobs twice as big as the available machinery can handle!

And what is more I have a head, (No! Not mine, a Scott one!), with a steel pipe in it that looks like it was just salvaged off the Titanic! Try clocking around that! Ha! Ha!

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Roger Moss

Joined: 31 May 2004

Posts: 369

Location: Leicester UK

Posted: Mon Aug 20, 2007 3:06 pm Post subject: Sorry

I accept your comment and will be a little less forthcoming with comments that involve facilities.

If anyone is in difficulties, I was just mentioning that I can help out if

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requested. I have tried to make quite a lot of workholding fixtures to do these jobs at as reasonable price as possible. I have no wish to crow, nor to tout for work. Nuf said Shut up Roger! If folks want your input, they will ask, they know where you are!-----

Rebuilding and upgrading of Scott and Silk power and transmission units. New enhanced replica Scott engines. Special manufacture Scott technical info at our website www.mossengineering.co.uk

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malcwebb

Joined: 31 May 2004

Posts: 16

Posted: Mon Aug 20, 2007 10:03 pm Post subject:

Roger

Stop being modest, you have no need to apologise for your facilities or your input to Scott engineering lore.

A great many of us look to you to set the benchmark for what an experienced engineer can achieve with the Scott. I can think of a certain other make, which shall remain nameless, with a huge owners club, that has still not come up with a solution for the crank snapping that their twins have suffered since they were made. Yet in this small club we have a solution for our, thanks to Roger.

EFR125

You may have a modest workshop facility, but your solutions, read with interest, do betray a fair amount of engineering experience, and a willingness to do things that some members may not feel competent to do.

I believe that we should welcome and value all contributions and suggestions. Scott ownership, even more than other makes, is always a learning process!

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Roger Moss

Joined: 31 May 2004

Posts: 369

Location: Leicester UK

Posted: Tue Aug 21, 2007 9:45 am Post subject: Some explanation

EFR sent me a private email to express regret if his sense of humour had hit a raw nerve. He is a genuine, decent and knowledgeable man and I accept absolutely that there was nothing personal in his comments.

To put things into perspective, I will copy my email reply to him. From this you will learn a little of my character and that I accept that I should not have responded as I did. No harm done. We are all friends doing as well as we can with what facilities we have and mutual respect is the order of the day

Email copy

Hi David

Perhaps I am too sensitive as I have agonised at my personal inadequacy all my life.

There is an old saying "Nobody likes a "Smart Ass"

I sincerely like people and nothing pleases me more than to help someone or leave someone happier than when I met them.

If I think that something I have done, has caused offence, or left a bitter taste, then I have failed badly.

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Failure is very painful.

Richard and I have just returned from a three day racing stint at Cadwell. A plating company etched out excessive aluminium from my old block in stripping the chrome.

With little time to rebuild my old engine and fulfil a lifetime ambition of father and son both riding Scotts together at a meeting, I had to use castings from 1975 and make a pair of 77mm pistons to suit the bores that would no longer take Silk pistons.

The Beezumph was Friday and Saturday.

Friday I had some rides on my Scott, then I had a massive water leak into the bores from the head gasket.

I finished the day riding my MM and then tried to reseal the head in the evening, but with no success. It had bowed 0.006" and as I could not use a conventional gasket due to the size of the pistons, I used 0.008" thick brass ring of about 6mm radial depth cut from shim stock with silicone to seal the water.

With no compliance and 0.006" bow high in the middle, the centre bolts would not pull it down.

I drove back and midnight saw me setting up the mill to reface the head. It is lucky that I keep the equipment for each regular job in separate packets and so was able to mount it all up in about 15 minutes. Set speeds and feeds and leave it to traverse round in about 15 minutes, so, you see, it was fresh in my mind. I drove back to Cadwell and rebuilt the engine and father and son had a great, if tiring, weekend.

Scott heads are not good quality but this head was from my patterns made in early 70's and loaned to George Silk.

Unfortunately, he had them cast in a commercial grade and not heat treated. I had this one in payment for supplying patterns on long term loan.

As a matter of interest, I use stainless tube for water tubes fitted with loctite in plain holes with great success.

Quality is not really difficult, but it just costs money that comes from an owners pocket rather than company coffers.

I send my kindest Regards and we part firm friends

Roger