

Untitled

Erik

Joined: 10 May 2005

Posts: 410

Location: Moerdijk, The Netherlands

Posted: Mon Jun 02, 2008 1:35 pm Post subject: Decompression valves, how do they work???

Recently there was some discussion on the board concerning the decompression valves. Below a drawing and a small piece of text from the BOS:

When I look at the drawing and the picture of the Scott cylinderblock I do not see how this valves would work. As the valves only seem to end in the actual exhaustport (see yellow circle) they would in my opinion just act as a way for the exhaustgasses to escape when opened. The compression would not be altered in any way. Or am I horribly wrong???

The text says that the valves open an additional port above the exhaust port. But what does this mean? Or should my cylinder actually have an extra port in the wall? If so, I would understand the working of the valves.

Who can enlighten my troubled mind?

Cheers,
Erik

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dave bushell

Joined: 09 Jun 2004

Posts: 231

Location: Caterham, Surrey

Posted: Mon Jun 02, 2008 2:04 pm Post subject:

Hi Erik

Yes you are horribly wrong!

The half compression valve covers a 5/16" diameter hole that is centered in the cylinder wall 3/4" above the top of the exhaust port. When the valve is opened, it allows the compressed mixture to vent via a similar sized hole in the top of the exhaust port (circled in your picture) thus lowering the compression.

Hope that helps.

Dave

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Erik

Joined: 10 May 2005

Posts: 410

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Location: Moerdijk, The Netherlands

Posted: Mon Jun 02, 2008 2:10 pm

Post subject:

Thanks Dave!

Thing is that both the cylinder blocks I have (Flyer) do not have any holes in cylinderwalls at the place you mention... That must be the reason for me being so puzzled!

At least one of the blocks was sleeved so that could be a reason...

Cheers,
Erik

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Erik

Joined: 10 May 2005

Posts: 410

Location: Moerdijk, The Netherlands

Posted: Mon Jun 02, 2008 6:09 pm

Post subject:

Hi Dave,

I checked both my blocks this evening and none has any holes in the cylinder wall! I appears both are resleeved... Maybe by discovering this I am one step closer to the cause of my engine blowup of last year...

Cheers,
Erik

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piscistev

Joined: 24 Dec 2005

Posts: 19

Location: Trawden, Lancashire

Posted: wed May 28, 2008 7:25 pm

Post subject: Sealing off Half Compression Valves

Even after a full rebuild, the half compression valves leak, spewing oil all over the place and I am sure that I will be losing power.

I have seen them blanked off on many occasions, do we really need them? because I am thinking of blanking off mine.

I do not want to remove the existing valves and just blank off with a plug or bolt. Is there any way that I can blank them off and leave the valve insitu or seal the valves airtight shut?

If I have to use a plug, what thread and size is it? I thought it was 14mm, but I am wrong.

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Regards Stephen

Last edited by piscistevve on Thu May 29, 2008 11:57 am; edited 2 times in total

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Erik

Joined: 10 May 2005

Posts: 410

Location: Moerdijk, The Netherlands

Posted: Thu May 29, 2008 6:52 am Post subject:

Hi Steve,

So far I see no need to use them with Scotts being relatively low compression anyway. On my Flyer the valves are sealed with a large bolt. See pic. This works fine.

On my two speeder the valves are in place but there is no lever attached.

Sealing them with the valves in place seems rather difficult. I have not had a look at such a valve yet but could not you grind them in to get them tight again?

Cheers,
Erik

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piscistevve

Joined: 24 Dec 2005

Posts: 19

Location: Trawden, Lancashire

Posted: Thu May 29, 2008 10:22 pm Post subject:

Thanks Erik for your kind reply.

The valves are 3/4" outside diameter. The castle boss that holds them in looks cycle thread 26tpi. What size and thread are the bolts you have used?

If I turn down a thin copper blank about 20 thou thick and place it between the valve, up against the cylinder wall, tighten down as tight as I can, as far as I can see I will make the valve inoperative and should have an gastight seal. Am I right or have I overlooked something?

My professional background is nursing and I am afraid that my engineering skills are in there infancy.

Cheers lads

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Erik

Joined: 10 May 2005

Posts: 410

Location: Moerdijk, The Netherlands

Posted: Fri May 30, 2008 5:59 am Post subject:

Hi Steve,

To be honest, I would not know the thread/bolt size. My Scott came with this bolts. I will measure one for you this weekend.

Your solution with the copper blank should work I think.

And I am no engineer too, my work is in Business Intelligence/Information management...

Cheers,
Erik

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Erik

Joined: 10 May 2005

Posts: 410

Location: Moerdijk, The Netherlands

Posted: Fri May 30, 2008 6:09 pm Post subject:

Hi Steve,

I just checked the bolts. The tread is exactly the same as on the valves, some fine 26tpi thread type. The bolts are 23,27 accross the flats, my 1/2 w spanner was a bit on the large side.
To be honest, looking at the bolts (also being hollowed out at the ends for some reason) I think someone made them from scrap.

Cheers,
Erik

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piscistev

Joined: 24 Dec 2005

Posts: 19

Location: Trawden, Lancashire

Posted: Mon Jun 02, 2008 10:07 pm Post subject:

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Hi Erik

The thread inside the exhaust ports is 24tpi!!!, I have never come across this before. Out of pure interest, does anyone know of this thread?

Please do not tell H.R.H. but I have taken out the valves and rubbed 2 pre 1985 pennies (copper) on wet and dry until smooth. I then inserted them into the ports to cover up the hole in the cylinder wall. Hopefully this will seal the ports and cure my oily valve leak.

I will let you know following a run this weekend.

Regards Stephen

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piscisteve

Joined: 24 Dec 2005

Posts: 19

Location: Trawden, Lancashire

Posted: Sun Jun 08, 2008 10:21 pm Post subject:

Success.....we completed 30 miles today. No misfiring, no boiling, valves sealed and hardly an oil leak.....wippee

My thanks to everyone for all help

Regards

Stephen

dave bushell

Joined: 09 Jun 2004

Posts: 231

Location: Caterham, Surrey

Posted: Thu Jun 05, 2008 2:14 pm Post subject:

Erik

A thought has crossed my mind and actually stopped briefly! You may have slightly later blind head barrels (Flying Squirrel) that, although they used the same castings as the earlier ones, did not use the half compression feature and therefore the barrels were not drilled above the exhausts. I think that the h/c valve position holes were blanked off by suitable sized purpose made bolts.

Dave