

GTA

All Springer/NP/PCP Air Gun Discussion General => PCP/CO2/HPA Air Gun Gates "The Darkside" => Topic started by: Bwalton on January 21, 2014, 01:00:03 PM

Title: **Umarex Fusion Mods?**

Post by: **Bwalton** on **January 21, 2014, 01:00:03 PM**

Has anyone done any mods to them? So far I have changed all the O-rings that I can find. Played with the power adjust screw, cleaned and lube her good. I polished and bored out the 3 Barrel gas ports. Have not played with the hammer spring or the Co2 cylinder tube, I dont know how that comes off? I can only get 701 fps with the JSB 7.87gr pellets. Which is above what the advertise using the 7gr lead pellets@700fps. I would like to see 750fps. I also tried the 10.5gr Gamo Whisper pellets which shot 634fps - 650fps.

I well know what this gun is and im not trying to make a PCP out of it, just for backyard rodents and other small kills. Just want it at its max potential.

Any thoughts? I did bulk fill, but no change in fps.

Title: **Re: Umarex Fusion Mods?**

Post by: **Geoff** on **January 21, 2014, 01:18:50 PM**

Just doing the hammer adjustment and shooting 13.43 grain pellets i am getting just over 10FPE

might take a look at them to try and get the extra ~1.5 FPE

I would think that with a bulk fill cap and an air pump it would get a tad more, however stop at about 1500PSI would be my suggetion.

Title: **Re: Umarex Fusion Mods?**

Post by: **Bwalton** on **January 21, 2014, 01:34:59 PM**

Quote from: Geoffrey K on January 21, 2014, 01:18:50 PM

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I would think that with a bulk fill cap and an air pump it would get a tad more, however stop at about 1500PSI would be my suggetion.

Thats the problem I do not know when it is full so I under fill, I have to get some type of gauge or try to figure out how much Co2 the Fusion holds. Your shooting 13.43 but at what fps?

Title: **Re: Umarex Fusion Mods?**

Post by: **Geoff** on **January 21, 2014, 02:10:27 PM**

when you fill from your 20oz, when it stops hissing it is as full as it will get.

if you get a HPA pump, there you can watch the PSI and would stop at 1500 max.

As I recall I am getting 590 FPS +/- a bit which gives me near 10.5 FPE

chairgun says you are getting 8.58 FPE from the pellet you listed.

Title: **Re: Umarex Fusion Mods?**

Post by: **Bentong** on **January 21, 2014, 03:03:21 PM**

On my 1st gen XS60C, cloned by fusion... I elongated the slit on the valve going pass the washer. I kept the strike pin in case I want to use carts vice bulking it. Last time I crony, yielded 725.9fps with 7.9 cpl.

Title: **Re: Umarex Fusion Mods?**

Post by: **Geoff** on **January 21, 2014, 03:06:28 PM**

Bentong that is 9.22 FPE according to chairgun ... just an fyi my friend

Title: **Re: Umarex Fusion Mods?**

Post by: **Bwalton** on **January 21, 2014, 03:09:42 PM**

Quote from: Bentong on January 21, 2014, 03:03:21 PM

On my 1st gen XS60C, cloned by fusion... I elongated the slit on the valve going pass the washer. I kept the strike pin in case I want to use carts vice bulking it. Last time I crony, yielded 725.9fps with 7.9 cpl.

You have a picture some where? I don't know if they share the same guts.

Title: **Re: Umarex Fusion Mods?**

Post by: **Bentong** on **January 21, 2014, 05:05:34 PM**

The 2nd gen and fusion suppose to give more shots from same fill and 1st is opened up. My QB79 valve I shave bothways up to the bottom thread of the valve all opened up gives me 12.1fpe on a hot day in .177, .22 to 15.18fpe. Mike can max out this shooters but gets low count. I only get 24 power shots then 12-13 all over shots then MT. I should get more if running on carts.

Valve below is similar to XS60C's valve

Title: **Re: Umarex Fusion Mods?**

Post by: **Bwalton** on **January 21, 2014, 05:09:27 PM**

How do you get to that valve? I tore my whole gun apart, but could not remove the Co2 tube inside, I did not want to break it, so trying to find more info.

Title: **Re: Umarex Fusion Mods?**

Post by: **Bentong** on **January 21, 2014, 09:34:21 PM**

Try here and scroll down to the schematic diagram. PITA for first time then gets easy after you get it all back in with out getting extra parts.

<http://www.gatewaytoairguns.org/GTA/index.php?topic=59493.0>
(<http://www.gatewaytoairguns.org/GTA/index.php?topic=59493.0>)

Title: **Re: Umarex Fusion Mods?**

Post by: **Bwalton** on **February 13, 2014, 12:06:47 AM**

Quote from: Bentong on January 21, 2014, 09:34:21 PM

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(<http://www.gatewaytoairguns.org/GTA/index.php?topic=59493.0>)

Ok now that I got a second gun I'm slowly doing the mods. 1st thing that I did was to replace the side bolt mm o-rings with thicker standard size o-rings, cut .050 back so that the two would fit. I also adjusted the power adjust screw, and opened up the barrel ports and also put two larger size standard o-rings there too. Now I'm at the valve and need suggestions on what can be done there?

Title: **Re: Umarex Fusion Mods?**

Post by: **Bwalton** on **February 13, 2014, 01:18:47 PM**

A little help here Mr Wizard! Im a coming Bennie Boy! Any chime in what direction should I take with the mod on this vavle? I want less shots more power, just a tad, just to push the 8.4 pellet to 750fps.

Title: **Re: Umarex Fusion Mods?**

Post by: **Bwalton** on **February 20, 2014, 12:08:32 AM**

Well I feel that I have done enough to the Fusion @ 62deg Im getting a consistent 690fps. So when it warms up to 70deg should give me an extra 20fps and when it reaches summer I should get around 740fps with the 8.4gr. which will give me over 9.4ftlbs with great velocity It will be 70deg on Saturday so lets see if these calculations holds true. That is plenty enough for fun around the house. On to the next project.

Title: **Re: Umarex Fusion Mods?**

Post by: **Geoff** on **February 20, 2014, 10:06:13 AM**

Sounds good on the fusion. I will be interested in how fast she shoots when it is warm.

Title: **Re: Umarex Fusion Mods?**

Post by: **Bwalton** on **February 25, 2014, 01:51:46 PM**

Well after buying two Fusions and a bunch of spare parts from Umarex, I am now finish with the mods for this awesome little gun.

I will share everything that I have done, most of it was my own thoughts. I First I wanted all the air power going directly to the pellet. So I started with the Barrel 1st. There is two o-rings that seal the barrel going from the Valve into the pellet chamber. Those o-rings are metric and very slim, I machined out that space and

put thicker standard o-rings for more sealing surface. The barrel also has three port hole, I opened those up a bit. I applied Vacuum grease on all my o-rings so I will not mention this again. Ok great seal there, then I went to the bolt probe, there are two tiny metric o-rings on that so I elongated that area to fit two thicker standard size o-rings. The Qc in that area is poor. If you feel air blowing you in the face when you fire your gun , then you are loosing 20+ fps. Even with the larger o-rings I was still feeling a slight bit of air, So I bought some plastic dip and coated that area and it was solid! I also adjusted the power screw which is for inside the stock to adjust the hammer spring tension. I also opened up the port hole on the Co2 valve, I took the co2 tube out and wrap it up with Teflon tape. Now she shoots 711 with Air Arms 8.44gr pellets @ 68deg and will get even better as the weather gets hotter. That like 9.5ftlb which is awesome for a \$133 Co2 gun. She is so much fun around the house... I know that a longer barrel would give me even more, but maybe latter I will look into that..

Title: **Re: Umarex Fusion Mods?**

Post by: **Geoff** on **February 25, 2014, 02:10:15 PM**

Looks good. I may tear mine down next winter when I am bored. No need to mess with it when it is warm is my thinking.

thanks for the write up

Title: **Re: Umarex Fusion Mods?**

Post by: **Bwalton** on **February 25, 2014, 02:14:53 PM**

Yeah it was fun to tinker with her. I am content now, but I may look into a longer Co2 tube and bulk fill that..

Title: **Re: Umarex Fusion Mods?**

Post by: **gene_sc** on **February 25, 2014, 02:17:41 PM**

Just a note. Going along with Umarex's High Pricing the Fusion is way over priced IMO...:) U can buy the same Co2 version but with wood stock for \$120.00 at FD airguns all day long...:) Both guns come out of the same factory in China.

Great job you did on moding your Fusion though.

Gene

Title: **Re: Umarex Fusion Mods?**

Post by: **Bwalton** on **February 25, 2014, 02:28:31 PM**

Quote from: gene_sc on February 25, 2014, 02:17:41 PM

Just a note. Going along with Umarex's High Pricing the Fusion is way over priced IMO...:) U can buy the same Co2 version but with wood stock for \$120.00 at FD airguns all day long...:) Both guns come out of the same factory in China.

Great job you did on moding your Fusion though.

Gene

Dont like the wood look, plus \$13 more and free shipping I would not call way over priced?. The Fusion is a more updated version. But thanks for that reminder.. there

is a whole write up on the three guns the QB78, XS60c, and the Fusion.<http://www.umsr.com/2013/09/umarex-fusion-first-test-targets-and.html> (<http://www.umsr.com/2013/09/umarex-fusion-first-test-targets-and.html>)

The Fusion is hole in hole accurate, nice power, and a proven backyard pest exterminator. Heck the scope on that gun cost more then two Fusions lol not to mention the TKO half shroud and other things, the cost of the gun is the least worries. I have over \$400 sitting on top of it lol

<http://www.youtube.com/watch?v=SQPpiBpky7I&feature=youtu.be#>
(<http://www.youtube.com/watch?v=SQPpiBpky7I&feature=youtu.be#>)

Title: **Re: Umarex Fusion Mods?**

Post by: **Whatsquirrel** on **March 02, 2014, 12:00:10 PM**

I have a couple of questions at Bwalton. I have the fusion & was wondering about the valve mod you did. I read in one post I believe you channeled through the threads & opened up the port. My question is how big did you go on the port size & also how big on the barrel ports? On the barrel ports did you just use a drill bit, if so how did you get the bits of metal on the inside of the port edges smooth? Thanks.

Title: **Re: Umarex Fusion Mods?**

Post by: **Bwalton** on **March 02, 2014, 01:07:22 PM**

Quote from: Whatsquirrel on March 02, 2014, 12:00:10 PM

I have a couple of questions at Bwalton. I have the fusion & was wondering about the valve mod you did. I read in one post I believe you channeled through the threads & opened up the port. My question is how big did you go on the port size & also how big on the barrel ports? On the barrel ports did you just use a drill bit, if so how did you get the bits of metal on the inside of the port edges smooth? Thanks.

on the valve I took the gun totally apart, on the barrel I drilled, then cleaned it up with a dremel polish wheel. Its not that deep and does not get into the rifling. as far of the size of the ports, I just used a rill bit that was just a tad lager in Dia as the stock hole as to not over do it, and just left it at that. I would have to tear it apart to get the actual measurements.

Title: **Re: Umarex Fusion Mods?**

Post by: **Bwalton** on **March 04, 2014, 11:17:37 AM**

The Fusion is not done yet! want to see a Fusion shoot 800fps? This is the deal call Mike at FD and going to but the PCP air chamber thats on the XS60C pcp, So I would take off the moderator thats on the Fusion, make a larger dia in the tube holder or what ever you call it" those rings that hold the tube and the barrel. Put the barrel in the cnc and make a 1/4 20 male thread on the end to fit TKO shroud then fill up with nitrogen. Of course have to do some stuff to the Valve and such, but should come out on steroids! Maybe could even change to barrel to a .22 down the line.. fist things first stay tuned....

Title: **Re: Umarex Fusion Mods?**

Post by: **Whatsquirrel** on **March 04, 2014, 12:14:26 PM**

I'm on the verge of going to get another fusion just So I will have one to tear apart & play with & the other to shoot while I work on the other one. I've always wanted an accurate .177 & the fusion fits the bill. If it was just a little faster. The only problem is I don't want to give up accuracy for speed. My uncle taught me a long time ago no matter how fast a bullet is if you can't hit anything with it, its worthless. I'm with you if it would shoot 800 fps & keep the accuracy I'm willing do it.

What about hpa? Is it possible? I built a compressor for my p-rod. So I have plenty of air for that. Just a thought not sure if it would even be possible.

Title: **Re: Umarex Fusion Mods?**

Post by: **Bwalton** on **March 04, 2014, 12:32:57 PM**

Quote from: Whatsquirrel on March 04, 2014, 12:14:26 PM

I'm on the verge of going to get another fusion just So I will have one to tear apart & play with & the other to shoot while I work on the other one. I've always wanted an accurate .177 & the fusion fits the bill. If it was just a little faster. The only problem is I don't want to give up accuracy for speed. My uncle taught me a long time ago no matter how fast a bullet is if you can't hit anything with it, its worthless. I'm with you if it would shoot 800 fps & keep the accuracy I'm willing do it.

What about hpa? Is it possible? I built a compressor for my p-rod. So I have plenty of air for that. Just a thought not sure if it would even be possible.

Talking with Mike hpa would also be fine, Just no more then a 1500psi fill because of the Valve, I think that we would be just fine with that. The Fusion is a fun and very very accurate rifle. I think that it will keep the accuracy now that we will be able to go to a heavier pellet if need be. I am ordering the tube and fill port today. I too have to buy another Fusion. I will keep the one that I have now until the other one is built.. Thats the good part they are not costly. With a 1/4 20 thread on the barrel for a TKO shroud she is going to look very nice!

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