

Fuel Injection on a Scott.txt

The wal Phillips fuel injector. Of course this got me triggered right away.... Would this work on a Scott? Does anyone have any experience with this device? I'm very VERY curious!

Regards,
Erik

--- Read all about the Dutch Scott Run 2007 here! ---

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Roger Moss

Joined: 31 May 2004

Posts: 254

Location: Leicester UK

Posted: Wed Jan 24, 2007 10:22 am Post subject: The wal Phillips fuel injector

Hi Erik You will perhaps not be surprised that I could not resist trying this device and had two on a 350cc Douglas Dragonfly. They used the term "Fuel Injector" wrongly. It is a simple device to admit fuel in a ratio to air that can be varied by adjusting the length of the linkages. Wal Phillips was a successful and popular rider of "Speedway", that being a cinder covered dirt oval. This type of racing used to be very popular here and many towns had a track that usually could be used for greyhound dog racing also. Wal Phillips tried this idea and used it successfully and so made and marketed it. I found that it worked perfectly well, but you needed a little patience to find the best settings for your bike. From memory, it may have been a little less efficient at its tickover carburation. I think that most who bought them, either did not appreciate how to set them, or lacked the patience. It was not a quick route to extra horsepower, but it was an interesting and simple device that worked well and could give extra performance if mastered and set up correctly. If you look at how an Amal type carb works, you will see that it operates in a series of steps that can be OK if left how originally set. If you just increase the main jet size, you will often find that the fuel flow from the needle jet system, will not allow enough fuel to pass at high slide lifts, to supply the increased main jet with the amount of fuel it is capable of flowing. The wal Phillips device uses only one fuel metering device and therefore can deliver fuel in a step less range in proportion to the air. It is a delightfully simple way of solving a problem that many designers have attempted to conquer with breathtaking complexity and cost. I take my hat off to wal Phillips for embracing simplicity.

Kindest Regards
Roger

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Erik

Joined: 10 May 2005

Posts: 105

Location: Moerdijk, The Netherlands

Posted: Wed Jan 24, 2007 10:35 am Post subject:

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Hi Roger,

Why doesn't it surprise me that you have tried it ;o)

Thank you for the elaborate explanation but the question remains, would it be something to try on a Scott? I can get one fairly cheap (30 GBP) and might want to try it...

Any ideas?

Kind regards,
Erik

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Roger Moss

Joined: 31 May 2004

Posts: 254

Location: Leicester UK

Posted: Wed Jan 24, 2007 12:03 pm Post subject: W F Fuel Injector

Hi Erik

I inferred that it would work generally, so Yes it would work on a Scott

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lammy1

Joined: 19 Dec 2005

Posts: 19

Location: the Netherlands

Posted: Wed Jan 24, 2007 5:34 pm Post subject:

Hi Erik,

The Wal Phillips was used in the sixties some times on Lambrettas to make them go faster.

Arthur Francis and the wildcat team used to experiment with the device.

I think for more info maybe search in that direction ???

Good luck

Frank

See my Scott at www.scottin.nl

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efr215

Joined: 06 Nov 2004
Posts: 89

Posted: Wed Jan 24, 2007 7:38 pm Post subject:

I had a friend that tried a pair on his Vincent way back in my "yoof". I don't recall him claiming any noticeable improvement in power or fuel consumption and I don't remember him going any faster either. After a while he reverted to the original Amals.

What I do remember was that you had to turn the petrol off every time you stopped the engine because they leaked like a sieve, no float chamber you see, and even at 3/6d a gallon you didn't waste it, which is probably why he gave up on them.

All in all I again find myself in agreement with Roger Moss, an interesting re-invention of the wheel, not an injector by any measure and probably the living proof of why good carburettors are relatively complicated. Even so they are not complicated when compared with a real fuel injection system in its entirety. It should be remembered that getting exactly the correct fuel/air mixture into an engine is far from easy; in fact it is horribly complicated!

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Erik

Joined: 10 May 2005
Posts: 105
Location: Moerdijk, The Netherlands

Posted: Wed Jan 24, 2007 7:57 pm Post subject:

The sheer oddity of the thing attracted my attention. Even if it's a pain to set up I would just like to give it a try. Not on the Scott maybe but on one of my scooters perhaps. I might give it a go, if it does not work it will make a nice ornament for the workshop wall...

I know about the ongoing fuel flow. But this might be solved with the fitting of a modern vacuum petrol tap...

Erik

--- Read all about the Dutch Scott Run 2007 here! ---

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Folkert

Joined: 19 Jun 2006

Fuel Injection on a Scott.txt

Posts: 3

Location: Northern Germany

Posted: Fri Jan 26, 2007 10:24 am Post subject:

Hi Erik,

i remember a friend of mine tried Phillips "injectors" in our youth on a Norton twin: to our surprise and delight it started quite easily (i suppose the enormous amount of spilled fuel richened the mixture once we forgot to close the fuel taps). But everything less than full throttle was inferior compared to AMAL IIs.

It is an interesting device for 1/4-mile maniacs but certainly not for street use. Anyhow - it is desirable, collectable and will look nice on your workshop shelf but can kill your scooter's engine before you can sort out the problems with partial throttle opening...

Folkert

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John Farrar

Joined: 01 Jun 2004

Posts: 9

Posted: Thu Feb 15, 2007 12:51 pm Post subject: Fuel injector(ish!)

Hi Erik,

I have fitted these to various Scotts starting in 1968!

It took me several months before I became good at setting them up, but I found them to be better than the standard carb although there was a slight difference between a full and empty tank of petrol. I fitted a constant head device to one bike by sealing the cap and allowing air in via a small bore tube which passed through the sealed cap ending about 25mm from the bottom of the tank. This worked well, but I'm not sure it was worth the effort. The biggest problem with the device was the rubbish quality of most of the components. It really needs re-engineering with decent quality moving "bits". The standard version wears out quickly and in the worse case the butterfly flips over leaving you on virtually full throttle...very interesting when you are using a magneto for the sparks. Having said all that when running well they are as good as a TT Amal.

My advice for what it's worth is to try it and if you like it ,rebuild it! By the way Scotts need a much larger "main jet" than the four strokes. You will need to buy some small drills from about 35thou of an inch inch . I'd start at 35 and go up gradually. I ended up with about 48thou if I recall. On my modified Scott i used a 35mm bored out version with a much larger central spindle so that the larger jet would shut. This came from an alcohol version used on the speedway bikes. Anyway I definitely got better mpg(5plus) and mph(5 plus) but I never did a back to back with a decent unworn carb.

John Farrar