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Erik

Joined: 10 May 2005

Posts: 410

Location: Moerdijk, The Netherlands

Posted: Mon Dec 24, 2007 8:48 am Post subject: Two speeder kickstarter revisited

Hi all,

While working on my two speed gear I had a closer look at my kickstarter ratchet assembly. As you might recall I had a lot of troubles with my kickstarter working not properly. I blamed bad teeth on both ratchets for this. But looking closely they mesh quite well. Then I noticed something else. When you look at the pictures below you see that the position of the drum in rest is quite different from the drawing. With the cam on the ratchet only a quarter of a turn away from the cam on the kickstartboss it would seem that when starting the ratchet would be thrown out of engagement before it really had the chance to engage! While starting the bike this was just what appears to happen.

Might the spring be too long or attached at the drum on a wrong point? Any ideas on this? Maybe my whole problem can be solved by drilling another attachment hole in the drum or shortening the spring!
I have also placed a picture of my spring and one from the spares scheme.

Any comment anyone?

Cheers,
Erik

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Graham

Joined: 28 Aug 2006

Posts: 17

Location: Arkansas

Posted: Mon Dec 24, 2007 5:22 pm Post subject:

Now you are on the right track.... However, I don't think the return spring has anything to do with your problem. A spring just pushes or pulls. It's the positions of the ramps and stops which matter.... I will look at mine and see if I can pass on some help..... Graham

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Erik

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Joined: 10 May 2005

Posts: 410

Location: Moerdijk, The Netherlands

Posted: Wed Dec 26, 2007 6:26 pm Post subject:

Thank you Graham, I would appreciate that!

Cheers,
Erik

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Graham

Joined: 28 Aug 2006

Posts: 17

Location: Arkansas

Posted: Wed Dec 26, 2007 7:37 pm Post subject:

Erik, I just had a look at my kick starter mechanism and am now sure that yours is merely assembled/adjusted wrongly.

Looking at the ratchet drum, and using the spring attachment screw as a pointer I have the following:

When assembled for use:

at rest the screw is at 7 o'clock.

ratchet engages with the screw at 10 o'clock.

at end of kickstart stroke, ratchet just starts to disengage, with screw at 5 o'clock.

with chain disconnected, the ratchet is fully released when screw is at 6 o'clock.

My chain is 11.5 full links in length. A wrong length chain could position the ratchet drum wrongly. Your rod may also be a different length to mine.

Changing the chain length to get correct operation is probably the best place to start. When you have recovered from the Xmas celebrations, try that and see where it leads..... Graham

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Erik

Joined: 10 May 2005

Posts: 410

Location: Moerdijk, The Netherlands

Posted: Wed Dec 26, 2007 8:52 pm Post subject:

Many thanks Graham! I am sure your figures will form a good guideline when I have the gear back in the frame. At the moment this is in pieces on the kitchentable...

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Will post my results here later!

Cheers,
Erik

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Erik

Joined: 10 May 2005
Posts: 410
Location: Moerdijk, The Netherlands
Posted: Thu Dec 27, 2007 7:01 pm Post subject:

Hi Graham,

I have taken some pictures of my chain-rod assembly.

Total length 495 mm

Number of rollers: 20 (got a bit confused with your term "full links"). The last link looks a bit newer than the rest. Maybe the chain was lengthened?

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efr215

Joined: 06 Nov 2004
Posts: 216
Location: Leigh-on-sea, Essex
Posted: Thu Dec 27, 2007 11:20 pm Post subject:

As I understand the convention a "link" is a unit of a pair of inside and a pair of outside plates and three rollers. Half links are manufactured, in that case the single pair of plates are cranked inwards at one end with just two rollers.

Can someone tell me how to put pictures on here as it'd be so much easier!!!
(Worded for the computer illiterate please!)

And wot's wiv that metric ruler Erik?
Exits stage left muttering darkly . . .

[size=18][b][i]'Appy new year to all!

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Graham

Joined: 28 Aug 2006

Posts: 17

Location: Arkansas

Posted: Fri Dec 28, 2007 6:02 pm Post subject:

Eric, As I undersand the problem with your kickstarter, just as you commence a kickstart you are comming onto the ramp, which pushes your ratchet out of mesh. At the commencement of the stroke, you should be comming off the ramp. This suggests that your chain/rod combination is too long. ... Graham

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Erik

Joined: 10 May 2005

Posts: 410

Location: Moerdijk, The Netherlands

Posted: Fri Dec 28, 2007 7:20 pm Post subject:

@Graham: I think you are definitely right! When I put it back on the bike I will mark the drum so I can see where the ramp is and do some further checking.

@efr215: I posted a "how to" on including pictures in another section of this forum a while ago. Here the link. If it is not clear, please do tell me!

And the metric ruler, well just preparing you for the inevitable... . Reed more here...

Cheers,
Erik

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Erik

Joined: 10 May 2005

Posts: 410

Location: Moerdijk, The Netherlands

Posted: wed May 21, 2008 1:07 pm Post subject:

Update on the kickstart saga:

I did some dental work on my kickstarter:

More in my blog (entry from May 21st).

Cheers,
Erik

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Erik

Joined: 10 May 2005

Posts: 410

Location: Moerdijk, The Netherlands

Posted: Sun Jun 01, 2008 7:41 pm Post subject:

Well, somehow this story never ends... Today I tried my retooled kickstarter for the first time for real as I attended an classic rally today. The bike started after 3 kicks and that was the last time the kickstarter worked. During the day I had to start the bike about ten times and I never could get it to start on the kickstarter again.

The teeth engage properly most of the time but the pedal just does not seem to have enough stroke to crack the engine over properly/enough revolutions to fire up. Not even close. After pushing the bike in gear for a few meters she always started right up.

I adjusted the pedal so that the ratchet engages almost instantly, so there is hardly any part of the actual stroke lost on this. Could perhaps not using the decompression valves have anything to do with it? My dc valves are not connected what makes my engine harder to turn over. If I were to attach the valves, would my engine make more turns after each kick?

Or any other ideas?

Cheers,
Erik

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dave bushell

Joined: 09 Jun 2004

Posts: 231

Location: Caterham, Surrey

Posted: Mon Jun 02, 2008 2:09 pm Post subject:

Hi Erik

At what position of the kick start does the ratchet engage? The half compression valves shouldn't make much difference.

Dave

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Graham

Joined: 28 Aug 2006

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Posts: 17

Location: Arkansas

Posted: Mon Jun 02, 2008 4:36 pm Post subject:

Erik,

If the kickstart lever, shaft or cotter pin are badly worn the kickstart lever will lose travel. I had to weld my shaft up to get the kickstart lever to the correct starting angle, about 70 degrees past vertical. Now I usually have first kick starting if the engine is warm. I do use the half compression valves for starting as for me the kickstart is not well placed at the back wheel. Also retard the ignition for starting. The half compression valves are part of the engine and in my opinion should be left intact. They should not leak if there is clearance between the valves and the operating lever at rest. They can easily be screwed in or out for maintenance with a simple tool made from a piece of steel tubing.

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Erik

Joined: 10 May 2005

Posts: 410

Location: Moerdijk, The Netherlands

Posted: Mon Jun 02, 2008 6:23 pm Post subject:

@Dave: the starter engages at 9 o'clock (screw were chain attaches to as pointer) and at end of the stroke is at 3 - 4 o'clock.

@Graham: there is no play in any part of the assembly, everythings feels really sound. Below a picture of the starter.

The angle is a bit steeper in real as the bike is on the rear stand on the picture. The starter cannot go any higher as it is already against it's stop. I do retard the ignition and will try the decompression valves as soon as I find a fitting lever for this.

Thanks so far guys!

Cheers,
Erik

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Graham
Erik

Joined: 10 May 2005

Posts: 410

Location: Moerdijk, The Netherlands

Posted: Tue Jun 03, 2008 5:34 pm Post subject:

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I am using NOS Champion No 7 plugs, the ones recommended in the Book of the Scott. And yes, they are pretty recessed but I guess all those short 18 mm plugs are...

The magneto has been completely overhauled and I had the magnets remagnetised recently. The spark is perfect and the bike ticks over very well. As I wrote, push a few metres and she runs....

The engine just will not crank enough to get it running...

Erik

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dave bushell

Joined: 09 Jun 2004

Posts: 231

Location: Caterham, Surrey

Posted: Tue Jun 03, 2008 9:11 pm Post subject:

Erik. My kickstart ratchet engages after 5 -10 degrees of kickstart rotation. At what point does yours engage?

Dave

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lewis onions

Joined: 02 Jun 2004

Posts: 79

Location: Coleshill, West Midlands

Posted: Tue Jun 03, 2008 9:59 pm Post subject:

Hello Eric -

I initially experienced similar problems with my 2 speeder kick start. The whole apparatus is a bit flimsy and I found that I was cautious about giving it a really good kicking! I was always told that if you kick it twice and nothing happens than there is a problem - advice which is no doubt well-meaning but often a little detached from the reality of an old bike.

After some deliberation and practice I found that the following procedure worked and I think that I might have seen the practice adopted by an obviously knowledgeable (and aged) 2 speed specialist at the Banbury Run one year.

The travel on the kick start (at least on my bike) goes beyond the 180 degree mark but it is difficult to kick it that far when standing along side the bike facing forward in the conventional manner - or even for that matter standing astride. Nonetheless that extra 10-15 degrees travel is necessary.

Firstly, try kicking it whilst standing alongside but facing backwards (if you see what I mean). This operation is best done with the aid of a mate holding the bike for you by the handlebars (unless you are content to bend the rear stand). Certainly said subject at the Banbury run was so assisted.

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Secondly , try to develop a measured rythmic kick (honestly!). After two or three such kicks the engine builds up a bit of momentum in turning (or at least one of the kicks falls in sync with the turns produced by the last) and hey presto !

Anyhow, that's how it is with mine. I hope this might help.

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Erik

Joined: 10 May 2005

Posts: 410

Location: Moerdijk, The Netherlands

Posted: Wed Jun 04, 2008 6:55 am Post subject:

Thanks again guys! I will do some more testing this weekend and report back.

@Dave: my starter engages almost immidiately but I will check this too.

To be continued!

Erik

Joined: 28 Aug 2006

Posts: 17

Location: Arkansas

Posted: Tue Jun 03, 2008 4:31 pm Post subject:

Erik,

From your picture I would say that the kickstart mechanism is in good shape. That leaves other options, like the spark plugs. I am using NGK A-6.

Also if the spark plug points are partly hidden by being very recessed starting will be more difficult.

If the bike runs well and ticks over I doubt the magneto is the problem.....
Graham