

Mikuni carb on J416 Suzuki engine tuning info and specs HELP!

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sgjames
Registered
Joined Jun 17, 2015
9 Posts

Discussion Starter · #1 · Jun 17, 2015

Hey folks. So I am a self proclaimed small engines mechanic, with a bit more experience then the average rider. Being over 30, I'm not a little kid looking for a quick fix, impatiently pushing. I have followed trailrider230s 's stuff, and have used the search, and read over the forum here, with in reason, and found no solid answers. I hope to present some useful info for others, as well as find more info and expound on my current understandings. I've owned 5 LT variants over the past 10 or so years, and have done some major work to them. With my current project, I will be listing engine numbers, carb numbers, and other ID-able parts seeing as how this bike isn't an 87, or 85, or even a 91, it's a little bit of all of them.

Being a new member I can't add pics directly it seems, so here are hyper links (I hope) to my photobucket album of LT230 specs. [Quads by shotgunjames, I Photobucket](#)

I am working with a J416 engine, (87' LT230EH, <http://www.ozebook.com/compendium/suzi/engine-nos/page5.gif> AS WELL AS AN 88' LT230EJ, <http://www.ozebook.com/compendium/suzi/engine-nos/page6.gif>)

I am using the CLYMER Suzuki LT230 & LT250 1985-1990 Service, Repair, and Maintenance manual. I have the hard copy, but a pdf version can be found here::>> <https://docs.google.com/leaf?id=0Bz...MmM4ODA4ODFhNDNm&sort=name&layout=list&num=50> (with credit to Yotehunter 66 at <http://www.suzukiatvforums.com/forums/repair-maintenance/2505-lt230-repair-manual.html>)

The following photobucket pics are 'noted' up to show where i am getting confused. This first pic is straight from the book Carb Setting chart, found on page 145 (page 150 of the pdf)

FUEL AND EXHAUST SYSTEMS 145

Table 1 CARBURETOR SPECIFICATIONS		
Item	Shaft-driven	Chain-driven
Model No.	Mikuni VM24SS	Mikuni VM26SS
I.D. No.	22A00	No I.D. No. for chain driven? or same I.D. as shaft but different carb model??
1985	18A00	
1986	18A01	
Bore size	24 mm (0.94 in.)	26 mm (1.02 in.)
Main jet No. #14	115	112.5
Main air jet #8	115	1.2 mm
Jet needle	5HN23	
1985	4JR40	
1986	4JR45	same jet needles for differing model carbs??
Jet needle clip position	4th groove	3rd groove
Needle jet #12	0-2	0-0
Pilot jet No. #15	17.5	20
Starter jet No.	30	50
Pilot screw opening	2 3/8 turns out	2 turns out
Float level	23.5-25.5 mm (0.92-1.00 in.)	20.8-22.8 mm (0.82-0.90 in.)
Idle speed	1,350-1,450 rpm	1,350-1,450 rpm

My questions are these:

What are the carb I.D. No.'s for the chain driven models, using the Mikuni VM26SS carbs? And how does one even find out what model Mikuni one has, as the model number is not stamped on any of the varieties of LT230 carbs I own?! (They do have I.D. No.'s stamped on them but nothing with any of the letters or numbers from the model number.)

What jet needles are needed for the chain driven models, as they are blank spots just as the I.D. No.'s? Plus they list 1985, and 1986 specific needles for just the shaft driven models, this leads to my confusion...

What is the starter jet they speak of? Is this the same as the pilot jet or something?

The red numbered items on this first pic correlate with this carb schematic found on page 134 (page 139 of the pdf file).

About this Discussion

9 Replies 2 Participants

Last post:

TheBearAK Nov 2, 2015

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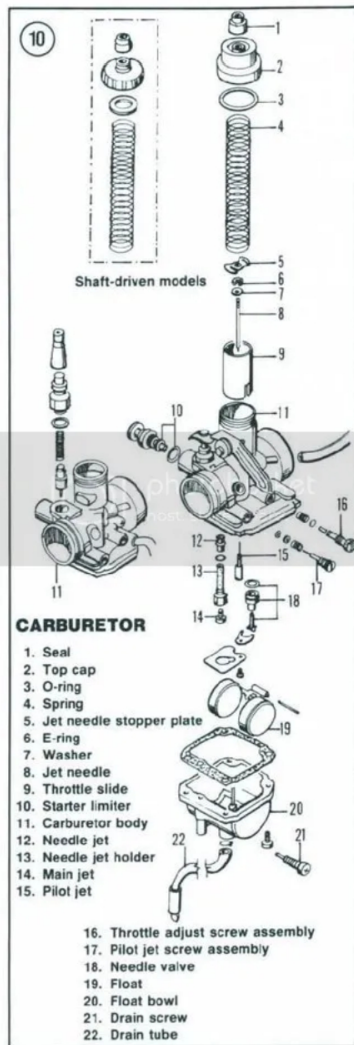
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The main air jet, and the Starter jet no. can not be found on this carb schematic. If i am wrong please show me.

And for the clip position I believe that this should be set in the 3rd groove, which is the middle of the 5 grooves. that's easy, since it's dead middle. BUT which way is position 4, is that towards lean or rich setting of the needle? Say I have my needle set as lean as possible, the clip would be on the shortest possible end of the jet needle. is that position 1 or 5? I think i have read over chapter 6 of the book quite well, and many times over the years, and havent seen that one explained. Shaft driven guys should know this and could benefit more than a chain driven guy would> still good to know.

This last image is from the 87 and later supplement section, and is titled Carb specs (LT250S), not sure if it applies, but it couldnt hurt to know. It has many similarities as the chain driven specs, but also some differences. For instance they use the same model carb but call for different size jet needles, needle jets, and pilot jets.

1987 AND LATER SERVICE INFORMATION

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Table 2 CARBURETOR SPECIFICATIONS (LT250S)

Item	
Model No.	Mikuni VM26SS
I.D No.	25C00
Bore size	26 mm
Main jet No.	110
Main air jet No.	1.2 mm
Jet needle	5HN31
Jet needle clip position	3rd groove
Needle jet	0-3
Pilot jet No.	17.5
Starter jet No.	50
Pilot screw opening	2 3/8 turns out
Float level	20.8-22.8 mm (0.82-0.90 in.)
Idle speed	1,400-1,600 rpm

A few years ago, I would of just ordered some carb kit, probably a Shindy 09177 sold as an LT230S carb kit, or a Shindy SH1 LT230E (89-93) kit.... and that's worked in the past, but mostly due to blind luck, or w/e. But with the latter I was always curious because I thought the 230's last year was in 91, weren't they? Either way, I've bought over 5 kits, and they usually come with different needles then the ones I pull from the carb (so i usually just reuse the old ones), and some times jets, and such arent numbered as the specs call for. In those cases I just rob orings and hope to clean the old stuff well enough.

I've hunted in the forums and crawled through pages to find very little on the Mikuni carbs themselves, let alone to fill the blanks in my understanding. Can someone shed some light? Thanks, and I'm on stand by to take any pics of my equipment one needs to give me a hand> 😊

***Additional info. I have had the cylinder bored and honed, and will have to dig for the specifics, but was told that I have about the equivalent of an LT240 now. It does not have a standard exhaust. I wouldnt call it aftermarket, but I think it's an old Ninja 250 exhaust welded and fitted for the setup. Current carb is marked with 22A10, as well as W7 5 7 on the opposing side. With the #112.5 main jet, 3rd groove, #17.5 Pilot jet, and the Y137 Jet needle, when it was last tested it started fairly easy with the pull start, but no matter what idle setting was it would red line, and suspect a rich mixture. I am still trying to find a number on the Needle Jet.... I also have two other carbs with the ID's 35B00 (and on opposing sides the markings W6 5 1, and W6 6 2 on the second) , and one carb with the 22A00. All of which came off of 230's, and at the end of the day I will need a total of two working carbs for two separate quads. THEN possibly have the spare two tuned and ready for quick swaps.... And if I had more funds I would upgrade to a flat slide carb or something, but I have these, and would like to utilize them as best as possible.

ANY HELP IS APPRECIATED, AND I AM EAGER FOR IT, THANKS AGAIN!!

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TheBearAK

Registered

Joined May 5, 2014
1,859 Posts

#2 · Jun 17, 2015

needle clip position is counted from leanest to richest (top to bottom, with the needle pointing down).

I think the starter jet is the size of the opening for the enricher/choke. I can't think of any real reason someone would need that info while cleaning or rebuilding.

I've always thought that the Air Jet is part of a CV style carb. It is the vacuum jet for the bellows. Obviously, your carb doesn't have. But the chart shows one on that non-CV carb, so evidently I'm wrong. I'll look in my Mikuni manual later and see what it says.

2013 Suzuki King Quad 500 AXi w/EPS
1990 Suzuki LT-4WD 250

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sgjames

Registered

Joined Jun 17, 2015
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Discussion Starter · #3 · Jun 17, 2015

TheBearAK said: ☺

I've always thought that the Air Jet is part of a CV style carb. It is the vacuum jet for the bellows. Obviously, your carb doesn't have. But the chart shows one on that non-CV carb, so evidently I'm wrong. I'll look in my Mikuni manual later and see what it says.

Thanks for the info- and there seems to be conflicting info here and there, which as you see, makes me scratch my head from time to time....

also, from the carb diagram, it doesn't distinguish the order of the oring, and metal washer that get placed into the pilot jet assembly. common sense tells me, oring first, metal washer, spring then pilot jet. in past experience removal of the spring yielded welcome results, and not sure why. it also allows the pilot jet to be screwed in farther....

I also measured the 'out side' or smaller end of the carb. The inner diameter is roughly 30mm on all 4 carbs i have. 'in side' or larger end I.D. is aprox 42mm, and the throttle slide port I.D. measures roughly 23mm. (my caliper battery dies, and I have to use the markings which are off by 1 or 2 mm. 😞)

Thanks again, TheBearAK! any updates are thanked for in advance.

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Discussion Starter · #4 · Jun 18, 2015

sgjames said: ☺

when it was last tested it started fairly easy with the pull start, but no matter what idle setting was it would red

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line, and suspect a rich mixture.

Now that i think about it, if my oring in the pilot jet assembly was bad, or backed out because i took the spring out, i could have an air leak, which I think would make it run lean and rev up/red line. it does that when i am nearing an empty gas tank on most of my 2- strokes.....

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Discussion Starter · #5 · Jun 20, 2015 (Edited)

This is the only closet Mikuni carb manual I can find, and it isn't the same as what I'm working with, it is close, but not it....

<http://www.mikuni.com/pdf/vmmanual.pdf>

Just to make sure I'm not mistaken, and perhaps I have something different then what the book says I should have, here are pics of my carbs, minus one that is on a quad- but is identical to one pictured. The farthest one on the left is just some random one I have in my carb box.



Below, you can begin to see some differences between the two (22A and 35B) carbs. The 35B's have a threaded hole on the throttle tube near the top for a lever choke handle, as opposed to the 22B's that

use the choke cable run to the handle bars.



Below is the ID marking of one of the carbs



Below, another notable difference between the 22A's and 35B's are the float types. I believe the 35B's are newer and use a poly/plastic type of float, whereas the 22A's use the old brass floats.





In the mean time, I set up the other 22A carb (not pictured) as best as I could, based on the shaft driven models, and have not been able to get the quad to start. I'm missing something, I know the rest of the system is good. I have spark, compression, timing is good, valves are correct, clean gas, fresh oil. The quad I am working on, and her sister, were both running quads. The current project worked well up until some point when it would bog down, lose throttle response, and was acting up. It sat for some time till I was able to clean the whole thing, tires to handle bars, and everything in between. I've fixxed and sold a few of these 230's, and have had them in boxes of parts, then rebuilt from scratch. I'm pretty familiar with them, but I am not an expert, and am missing SOME thing.... Thanks

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Discussion Starter · #6 · Jun 30, 2015



anyone? am i posting the wrong place or something?

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#7 · Jun 30, 2015



Not wrong place, just a lot to figure out.

2013 Suzuki King Quad 500 AXi w/EPS
1990 Suzuki LT-4WD 250



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Discussion Starter · #8 · Jul 4, 2015



well, where do you figure I can find the official diagram on these carbs, or the mikuni book on these specific ones? I can try a Mikuni distributor, but the last one i tried was not interested in my outdated stuff...

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sgjames

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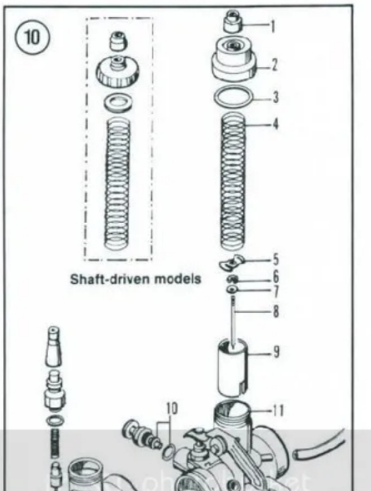
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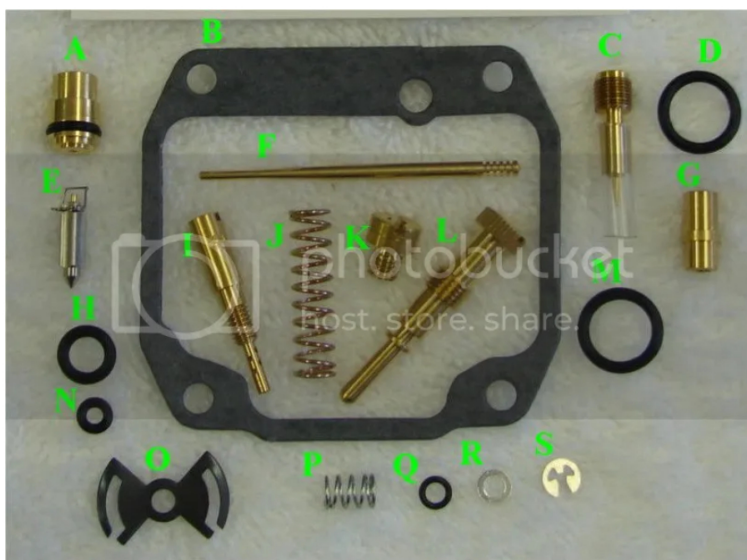
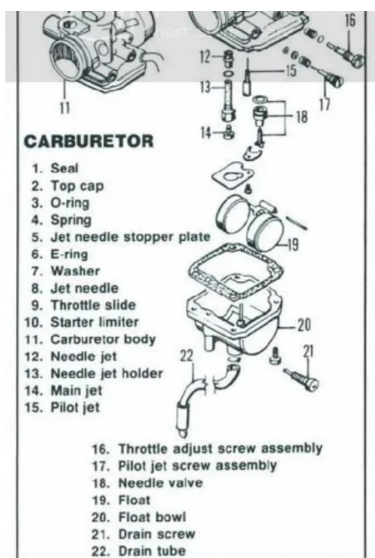
Discussion Starter · #9 · Nov 2, 2015



Anyone able to complete this puzzle of match up the letters to the numbers?

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Here's the link and description of the kits i tend to buy, and their components, etc. Seems like the kits may come with more parts then the parts book diagram shows. I could use any help, especially with the assembly order of orings springs and washer when it comes to the pilot and idle jets...

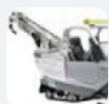
Thanks

[Suzuki LT230F Quadrunner 1989 1993 Carb Rebuild Kit Repair LT230 | eBay](#)

The orings tend to throw me off since there are two small orings w/ differing I.D.'s. Then the metal washer and the springs, and the order of them is not very clear.

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#10 · Nov 2, 2015

- A = Needle Valve Seat = 18
- B - Bowl Gasket (not numbered)
- C - Air Screw = 17
- D - O-ring
- E - Needle Valve = 18
- F = Jet Needle = 8
- G = Needle Jet = 12
- H = O ring
- I = pilot jet = 15
- J = Spring for either throttle adjuster or Pilot Jet screw = 16 or 17. It will only fit one.
- K = Main Jet = 14
- L = Throttle adjustment screw = 16
- M = O Ring
- N = O-ring
- O = Jet Needle Stopper Plate = 5

U = Jet Needle Stopper Plate = 5
P = I think this is the one that goes on C. = 17
Q = Oring
R = 7
S = 6

Unfortunately, the only O-Ring they list on the diagram is #3, which is a fairly large one and not in this kit.

Typically the O-rings will only fit in certain places and be effective. I would guess that:

N goes on C
H goes on top of A
D or M goes on #10
D or M goes on 21 or on the bottom of float bowl?

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1990 Suzuki LT-4WD 250

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34 4K U Username · updated May 11, 2015

1997 can someone help me with carb specs?

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4 1K B Brokejoke4x · updated Aug 15, 2017

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4 1K B blake9867 · updated Jul 22, 2015

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