

GSX1100S 630 to 530 Chain Conversion.

As a new chain was finally needed on the 1100 I decided that after some research to go for a 530 chain rather than the old 630, as modern 530 chains can easily take the power (bike is standard). Although there is info out there it wasn't all complete or in the same place, plus the forum gave some answers as well.

Useful sites on this subject were:

- <https://gsxkatana.wordpress.com/2011/05/02/530-sprocket-conversion/>
- http://www.suzuki-katana.com/katana_gearing.html
- <http://www.gearingcommander.com/> (this is a useful site)
- <https://www.rbracing-rsr.com/calcsprocketdiam.html>

As standard the bike had a 4.5v-17 (114/88) tyre fitted, so fitting a 130/90-17 tyre has raised the top end at the expense of a little acceleration. Using Gearing Commander, putting this into figures, at 8500rpm on the standard tyre you would be doing about 131.7mph. With the 130/90 tyre this increases to 138.7mph. The standard sprockets for the 630 chain are 15/42 or a 2.8 ratio.

When going to the 530, as the pitch goes to 5/8th (from 6/8th for the 630) to keep the sprockets the same diameter, so clearance is kept the same, you would have to go 18/50. This however takes the final drive ratio down to 2.777 or 139.8mph @ 8500rpm. The "accepted" sizes to go for are actually 17/48 (one web shop sells this combination) taking the final drive ratio to 2.824 or 137.5mph @ 8500rpm. This does give smaller diameter sprockets (by a few mm) but clearance should be OK. Personally I went for a 49 rear giving close on the same diameter as the 630 42t, with a final drive ratio of 2.882 or 134.7mph @ 8500rpm, which I think is a good balance of getting back to close to the "out of the factory setting", though a 50t would get this nearer at 132mph @ 8500rpm. For general riding around I will keep like that but for longer (touring?) distances I might go to the 48 tooth.

The number of chain links required for the 530 turned out to be 114. I bought 120 links and cut down as required.

JT Sprocket part numbers are:

Front 17: **JTF513-17**

Rear 49: **JTR816-49** (Replace the 49 for 48 if you want that size)

You also need the JT 6mm spacer – **JTF518B** - so that front sprocket nut will do up properly.

Table: Reference of Tyre / Chain / Sprockets

Tyre	Chain Pitch	Front / Ø	Rear / Ø	Speed @ 8500rpm
114/88-17	630 / 19.05mm	15 / 91.62mm	42 / 254.91mm	131.8mph
130/90-17	630 / 19.05mm	15 / 91.62mm	42 / 254.91mm	138.7mph
130/90-17	530 / 15.875mm	18 / 91.42mm	50 / 252.82mm	139.8mph
130/90-17	530 / 15.875mm	17 / 86.39mm	49 / 247.77mm	134.7mph
130/90-17	530 / 15.875mm	17 / 86.39mm	48 / 242.72mm	137.5mph

The cheapest place I found the DID Gold X-Ring chain and JT sprockets was www.bikespeeduk.com (I also had to get a set for the 400 and have used them before for the DL650). I have to say the DID chain breaker I bought a few years ago has more than paid for itself, so worth the investment.

Breaking the Chain at 114 Links:



Chain Clearance 630 15/42 vs 530 17/49:



Sprocket Diameter Comparison:

