Dual Disc Conversion

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I am going to try and write a bit on how I changed my front end to double disc, and if it is a bit all over the place I apoligize.

First things first.

Tools & Parts Needed:

- 1x calliper arm
- 1x calliper
- 1x disc
- 6x8mmx110mm bolt (for disc)
- 1xlower brake line (that makes two all up)
- 1x steel brake line to calliper (which again makes two all up)
- 1xdouble banjo fitting (for the two lower brake lines)
- 1x bigger master cylinder (some say GL goldwing master cylinders are ok. I used one off a modern dual disc bike.)
- 1x CB500/550 speedo drive plate (no modification)
- 2x6mmx30mm bolts and washers
- 1x8mmx35mm bolt and washer

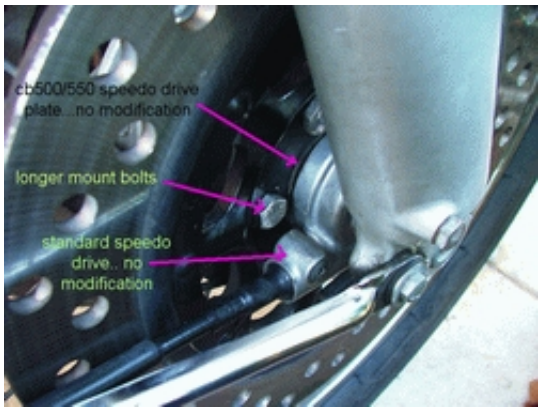
You will also need some patience and some spare 6mm washers for shims, and anything else I may have forgotten now...

OK for starters, put the bike on the center stand, and jack the front off the ground, take the wheel off, remove the axle and the factory disc bolts.

Remove the speedo drive,chrome retainer plate, speedo gearbox drive, and the rubber ‘O’ ring on the hub.

Now get your two discs... when you look through them back to back, they will line up, but only on a couple of spots, mark them so when you bolt them together on the hub, they will look the same when looked though; this is just cosmetic, but I am fussy with stuff like that and its easier to do it now then when you get it all back together and realise...!!!.

Right. Now that you have made sure they line up, and have marked them, get the 6, 110mm long bolts and pass them through disc number one. This disc is going onto the speedo drive side. If you put them in from the other side the nuts will hit the speedo gear box, so bolt heads MUST be on the speedo side(fig 1). Now feed the disc over the hub, with the bolts going right through the hub, and put disc number two on, with holes that were marked lined up, and do up the nuts. (Sorry I couldn’t find a torque setting for these bolts.)



Now put the CB500/550 speedo drive plate in the middle of the second disc, it should be a really neat [tight] fit, but it should fit, you wont be able to use your chrome dress ring - no room. Next put your speedo gearbox on, then refit your axle. If you have forgotten which side the shaft goes into, it insets from the speedo side, once this is done, your front double disc wheel is complete. Now the caliper.

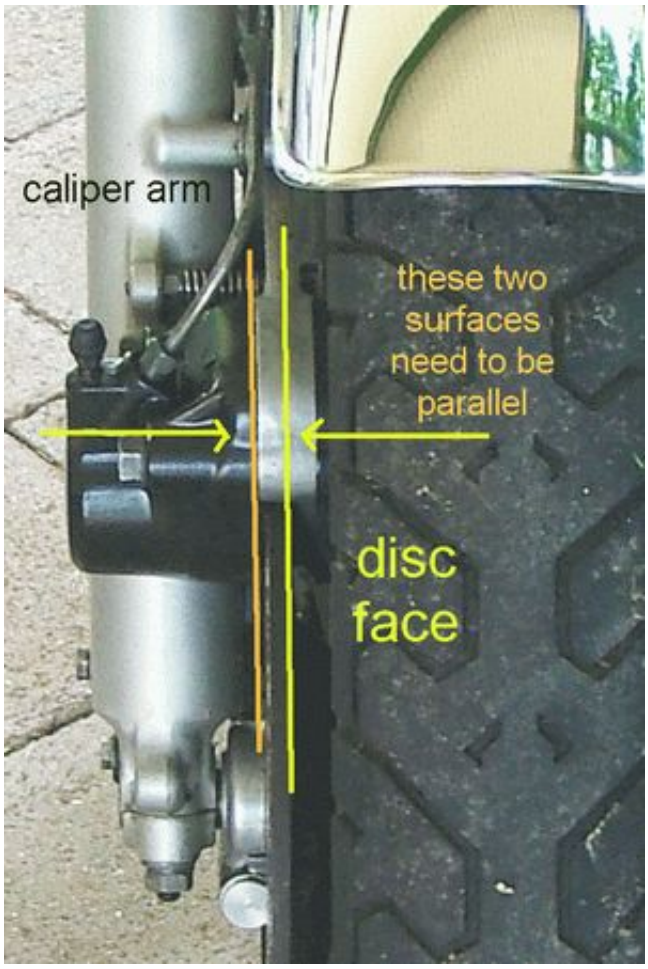
Now for starters, remove your front guard.

Now you are going to have to refit the wheel for this; from now on it is a lot of fitting, and removing of the caliper arm to get right.

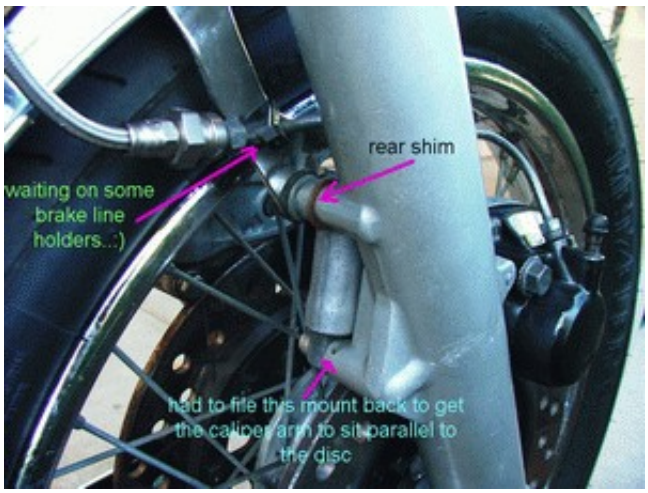
Firstly I fitted the caliper arm, and didn't check anything. BIG mistake! What happened was, when I squeezed the front brake the caliper wasn't parallel to the disc, and jammed the whole show up!!! I mean major drama just to get the caliper mount bolts undone so I could just move the bike.

So what you need to do is place the 8x35mm bolt and washer into the lower hole on the caliper pivot arm and just nip up. This will give a good idea of how out of shape the mounts on this fork leg are. Mine had a gap of more than 20mm between the top mounts on the fork to the top mount of the pivot arm.

Now this is where the patience and trial and error are coming into there own. You need to take the pivot arm off again, and file the lower mount little by little till you can mount the pivot arm parallel to the disc(fig 2), you can use a straight ruler along the side of the pivot arm to check parallel.



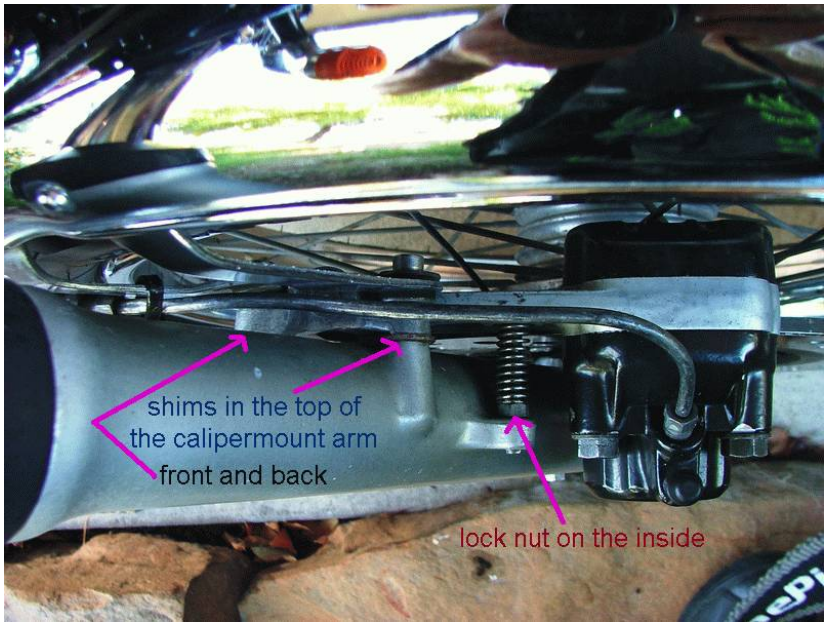
Now what I did was try and file the lower mount as close as I could to the fork leg, without fouling up the pivot arm, before I started shimming the top of the mount. (fig. 3)



This took some time to get right, because you have to file the pivot mount parallel to the disc as well, otherwise the top of the pivot arm won't mount to the fork. Take your time; you can always take metal off - its bloody hard to put it back on though, and also remember that there are metal filings going into the threads - blow these out before screwing a bolt into them otherwise it will destroy the thread, and that’s not a good thing.

Next, when things are parallel, nip the pivot arm to the fork leg, then measure the gap left between the top mounting points of the fork and the top mounts of the pivot arm, and then file back a pair of washers to fit in these gaps ,in (fig. 3) you see the rear mount shim, and in (fig. 4) you see the front mount shim.

You will also notice how parallel the caliper pivot arm and the disc are, this is essential to this set up working properly.



Ok now we have the pivot arm all nice and parallel; you would have also noticed by now that you have to try and get the bolt done up when the wheel is on. Don't uses socket head caps screws as the mounting bolts like I did - have you ever tried getting an allen key between a wheel to do them up!!! Stick to bolts for this application. Another thing - you are going to have to remove one of the calipers if you want to remove the wheel in the future since the wheel and tire just don't fit between the two pivot arms when they are both bolted on. There is always a downside.

Now, while looking at the bike from the front, mount the guard to the right side first using the bolts and washers that came off that side; on the left side use your 8mmx35 bolt and washer on the lower mount.

You will find at this point you may need to slightly bend your guard mount a little to get the pivot arm behind it (fig. 4). The guard has rubber grommets in it; take them out. Now you need 6mm washers between the guard mount and the pivot arm, and then you need 6mm washers between your bolts and the other side of the guard mount (the guard mount is sandwiched between the washers); this stops the guard from moving around and makes for a more solid plate form for you to tighten the upper pivot arm bolts.

Now you should have the pivot arm and the guard fitted and everything should still be parallel. Now to fit the adjuster screw, you will notice that the adjuster screw mount on the fork is in a different spot than the other fork which is why I put the lock nut on the inside; there just wasn't any room on the outside. You will see this in fig. 4.

On to the caliper... I would suggest that you rebuild them before you put them on the bike; nothing is worse than getting something finished and having to pull it apart again. The caliper mounts the same as

the normal factory caliper - just reversed - so nothing hard there. The steel brake line runs the same, though you may have to zip tie it to the guard, because there is no line holder on this side (fig. 3).

Now you need your new lower brake line, and the double banjo fitting, this is best illustrated with fig. 5.

You will notice that I am using stainless braided lines. I got my local hydraulics shop to make them for me, but the standard factory lines will fit as well. Connect your steel line (fig4) to your new lower line and this part of the convertion is done.

On to the master cylinder... I used a master cylinder from a VTR1000f (fig 6); only because I had one laying around. The master cylinder from any twin disc bike will do as long as it fits the handle bars. I have been told that you can use a master cylinder off a GL1500 goldwing to make the system look more authentic.

Now all that is left is to bleed the system. I think there is enough said about bleeding brakes to not warrant me going through it.

This is a well worth while mod, and when done correctly gives huge improvement over the standard set up.