The clutch tub

Iron Sportsters have wet clutches and dry clutches.

OK, most all the tubs in the Gorilla Rack are done, now onto that other rack full of tubs, with the smaller heavier stuff. First up is the clutch stuff.

Here is the tub as-moved. I can tell there is some stuff that does not belong-- I probably tossed some odd and ends into teh tub before the movers came.

Here is the smaller rack full of Sportster parts. The clutch tub is on the lower left. These tubs are much stronger. I think I got them at Office Depot. The structural ribs on the sides meant I could stack all these tubs on top of one another, which comes in handy if you are going to move them from California to Florida.

Before I laid out the tub, I took these handlebars laying around and put them with the other handlebars.

This is a goofy part that goes under the sprocket covers of 1977 models. I will put it in that tub when I get to it.

Another mis-file. This goes into the tub with motor mount stuff, I think that was the peg tub, but know I can look at the pictures and be sure without digging through the tubs.

More mis-filed stuff. The motor mounts and the electric start bracket will find home in the tubs with the same parts, same for the lever rubber pegs.

Here is a shot of the clutch stuff that does belong, although I am not sure about teh chain adjusters-- I think I keep them here, if not, then the tranny tub.

Another angle of the tub contents. You can see some of my Sportsters in the back. Theory is to either mount the parts, or sell them on eBay.

This is the dry clutch electric start clutch hub and basket used ion 1967 to 1970. The basket has two rows of bearing to make it more stable, the hub has a bigger oil seal compared to the early hub.

A montage of the three Iron Sportster clutch setups. Left basket is early dry clutch, middle is the 1967-1970 dry clutch, the right basket is the wet clutch. There are two early dry clutch hubs on the left, then two electric start dry clutch hubs in the middle and a wet clutch hub on the right. No, I don't count the 1984 abomination when they hid the electrical system under the clutch to be a motorcycle, maybe potable jewelry, but not a motor vehicle.

When the steel plates warp then your clutch drags. The closer ones are all warped, some are belled out like a Belleville spring. The ones in the back stack nice and are keepers.

Here is the proper service procedure for warped plates. Toss them in the garbage.

These are mystery hubs-- they are both dry clutch but obviously different. If anyone knows, drop me a line.

Here are the front sides of the mystery Sportster clutch hubs.

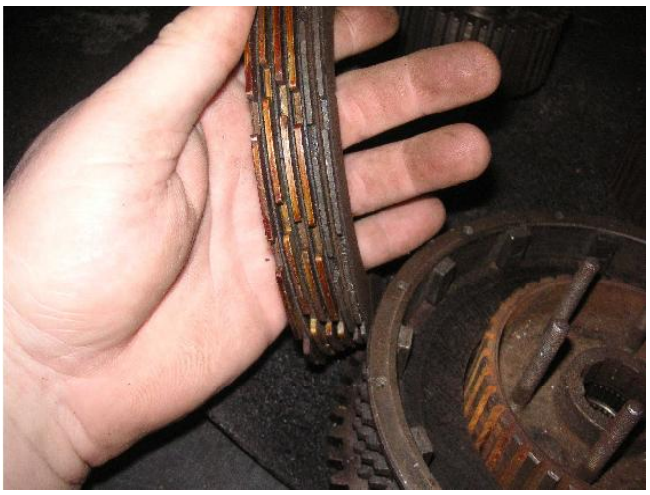
Here is a dry clutch hub positioned over the basket. You can see the seal is smaller than the 1967 setup.

Those nice flat clutch steels are on the right. The one on the left is the special backing plate that goes in first. A steel rests against this, then a friction plate.

Ahhh all organized and tidied up, a whole dry clutch setup for the tub.

I even put the lid on it. When I was looking in the parts book, I saw there were 7 steels and 7 friction plates, unless the bike had the "wet clutch kit." In that case it took 8 steels and frictions. I knew Barnett made wet clutch conversions, but I guess the factory had them too.

Here are the 1967 to 1970 electric start dry clutch hubs and basket.



Here are some wet-clutch conversion plates for the dry clutch setup.

Here is a wet clutch hub and basket.

I put the backing plate and guts into the wet clutch setup.

You can see some of the wet clutch steels are warped.

Here are the frictions and backing plate for the wet clutch setup. These frictions are the aluminum racer type. I don't like them, have had had two bikes with them and the clutches were grabby in both. Might just be a coincidence but I will take factory steel frictions thanks.

I do have some factory wet clutch stuff, a bunch of frictions on the left with the backing ring, a set of steels and frictions in the middle and some oddball steels on the right. The Evo springs at upper right are going into the trash.

Here are 4 sets of wet clutch springs. Don't replace these with the single-coil Barnett type. No battery how carefully they grind the ends, the single coil tilts the clutch plate when you engage the clutch. With the two factory springs, you can rotate them relative to one another until the clutch pulls in evenly. I keep these to keep trying different springs. Now you know why the old dry clutch used 6 separate little springs. More expensive, more time-consuming, but they pull in dead even, and you don't need some monster tool to put the plates in.

The heavy stuff goes into the tub first.

Here is parts for the compensating sprocket. I hated these, then loved them, and now I think I hate them again. You can't run the tin primary cover with a compensation sprocket, but I can see how it takes shocks out of the drive-train.

Here are some clutch release mechanisms, for both wet and dry clutch.

This is obviously a bunch of stuff I just tossed in the clutch tub before I moved. The drill is the tap drill for the bolts that hold on an early sprocket cover. There is a factory bolt and an Allen-head one. And a bunch of gas lines form m y K-Model tank. I also had the broken chunk of primary cover from when the chain broke on my 1962.

Since the broken chain took out a bunch of the case, I had to make this speedo drive into a tap so I could clean out the JB Weld when I glued it back together. I will keep this as a war trophy.

When a broken chain whips around and shatters the sprocket cover, it brakes the kickstarter bushing in half.

Some baggies needed more organization. I have a bunch of kickstarter pawls. I used to think bad ones caused "Sportster knee," but Duncan Keller tipped me off that what makes the kickstarter slip is that the bushing is loose on the clutch gear shaft, so the kicker gear tilts and the pawl pops out. You also have to be sure that the bushing will fit into the back of the clutch basket, or take it to the lathe and knock some material off.

Here are 4 different kick-starter pawls. The one with fine teeth is a Sifton unit.

I put the dry clutch springs and cups into a nice big baggie. Someone told me that if you convert to a wet clutch plate setup, you should get the stiffer springs from Barnett.

Much better, the kicker gear and springs in one bag, the pawls in another, and all the release mechanisms in the third. I have an Evo release mechanism, thinking I might adapt it to a dry clutch sprocket cover one day.

These baggies go somewhere else--.

The mystery nut. It looks like the one on the kick-starter shaft for threads, but the size is wrong. I will toss in the nuts and bolts tub.

A fuzzy but final image of the tub ready to go back into the rack.