THE 23rd SILK SCOTT — Part 4

Ged Rumble

In an earlier article I thought I'd sorted my Silk pump problems out. I hadn't, so here I am with another idea and during 1998 and now, 1999, it's worked a treat.

So let's go back to summer 1997 when I spent most runs clouding out the countryside and choking my fellow riders. It really was an embarrassment to be in the saddle. A 20-30 mile run was OK because at that time I was draining the sumps after each ride to check delivery to see if both crankcases had been the same, but on a 100-150 mile run, wow, what about that smoke!

So it's late summer, the riding season will soon be coming to an end, I'm totally fed up. I sit on a stool in my garage staring at the Pilgrim converted to dripper on my Flyer and that damned pump on the Silk Scott and thinking "shall I convert that to dripper?", then the penny dropped. We all need it on this planet and so do Scott engines through their crankcase glands: AIR. What is a Pilgrim pump doing when it isn't delivering a drip from beak to outlet hose? It's allowing the engine to suck air through those little holes under the bezel that holds the Perspex in place.

The Silk Scott pump is a pressure pump and as such there is nowhere for the air to get into the system as there is in a Pilgrim.

There is another problem with the Silk Scott engine that affects lubrication and that is 'crankcase suction'. On a Silk Scott engine with modern Neoprene crankcase oil seals and one-way ball valves on the crankcase oil inlets, the engine starts to suck through those valves as soon as the piston starts to rise and only stops at T.D.C. That's 180° of quite powerful suction. Multiply that by two and the pump is under threat from serious suction for all 360° of every revolution.

By comparison the three holes in a Flyer suction gland amount to 12° of rotation, multiply that by two and 24° of suction out of 360° of rotation is some difference.

So here's the problem. The engine sucks like mad, there's nowhere for air to enter the system, so regardless of the setting on the handlebar lever the engine just bypasses this and draws oil through the pump from the tank in huge amounts.

I have been asked how this can happen. Well, as I see it, all mechanical movement has to have running tolerances and in the case of the Silk Scott engine they are what it sucks through — those tolerances in the pump.

I came to the conclusion that the lubrication system needed venting to atmosphere between the pump and the engine so the engine could happily suck air when it wasn't receiving a pulse of oil from the pump. The arrangement is as follows: two home-made flow restrictors and $^1/_8$" B.S.P. side tees with fine copper gauze in the air inlet holes to keep out bugs and dust (see sketch).

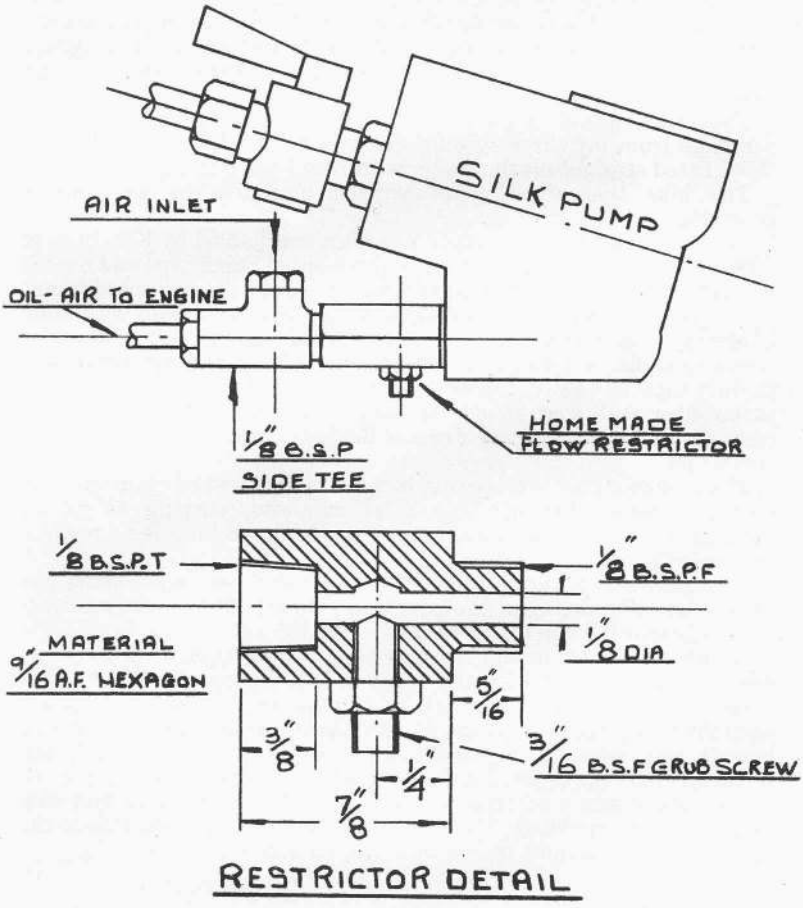
The set up goes like this: fit a mid-cable adjuster close to the pump, shut the bar lever down and forget it; be sure the pump is shut right down — zero drips. Leave the oil pipes disconnected. Start the engine and on a fast tick-over use the mid-cable adjuster to achieve about five drops/minute through both outlets. If they are not the same then balance the flow with the restrictors. Finally connect the pipes to the engine, start up, and watch the flow through the plastic pipes. If one crankcase sucks more than the other, you may have to give the

restrictors a final tweak so that visually the same amount of oil is going down each pipe. And that should be it.

It will, of course, take longer than it did to read that last paragraph, as the engine overheats and you have to give it a rest, but with patience the desired result can be achieved. Also, keep a small tin of oil handy to dip the nylon pipes into from time to time so the engine can have a good suck of oil to lubricate the mains and big-ends etc., while these adjustments are going on.

Do you have a Silk Scott making smoke? I know Geoff Bucknall and Roy Lambert have. Then try this fix-it. It has worked very well for me over the last 18 months. It should for you.

If you have a Silk Scott get out and enjoy it. It really is Scotting with a difference.



RESTRICTOR DETAIL