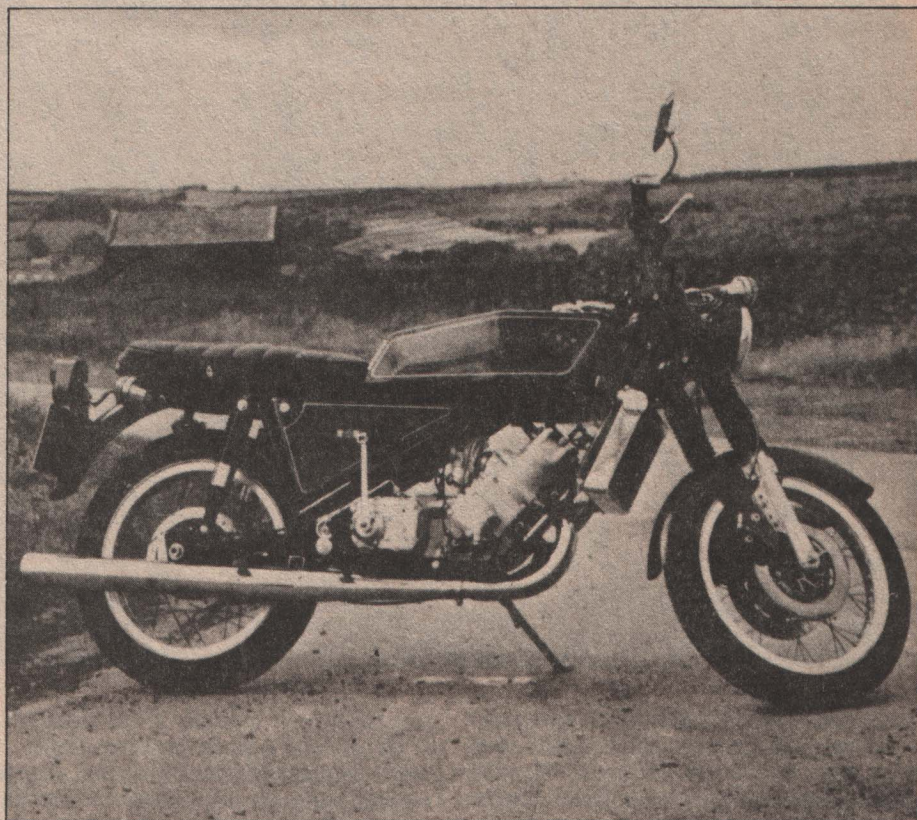


BACK HOME AGAIN

*The Silk 700S
returns to
Shipley, home
of its
forefathers*

Test and
photography:
John McDermott



THE River Derwent is pretty quiet right now especially along its Derbyshire section. The water level is down and bright green islands of plankton cruise along the surface at snail's pace.

So too flows the River Aire in Yorkshire as it cuts through Shipley and on towards Leeds, played on its way by the brassy strains of the Hammond Sauce Works Band as it passes the outskirts of town, a mere shadow of its former self.

I don't suppose rivers bother much about such things, but the two waterways have at least one thing (apart from both wending through Yorkshire) in common: whereas the Aire was a favourite lunchtime spot for workers from the Scott factory, the Derwent ambles past the front door of the Silk Engineering shop. And both factories have concerned themselves with the production of the self-same power unit; albeit that George Silk has researched and developed that basic idea to where it would be had the Scott marque survived to this day.

George Silk is an engineer in his early thirties, a busy individual who constantly stabs his tinted specs back onto the bridge of his nose as he speaks. His co-director, Hugh Cundall, with all the manner and bearing of a freshly retired half-colonel, pencils copious notes whilst he listens. In many ways they are chalk and cheese, but as far as the job in hand is concerned, they are more correctly

analogised as nut and bolt — with no slang interpretation on "nut".

The Scott, in its day, was more than slightly anachronistic with its twin cylinder, water-cooled power plant — and the same can be said of the Silk engine in the 1970s. It stands alone, the only member of its class and one that is worth more than just a passing glance. Silk Engineering is, in essence, where the British motorcycle industry is at — small, compact, bespoke. Gone are the days when we competed, let alone led — in volume production terms with other world factories. They may return in time but not until government thinking and union influence are sharply about-turned; not until investment money is free of punitive taxation and men want to work without being cajoled and wooed into it.

The Silk will never compete with Yamaha, Honda or any of the other major manufacturers. I doubt that it will ever be *marketed*: it will simply be

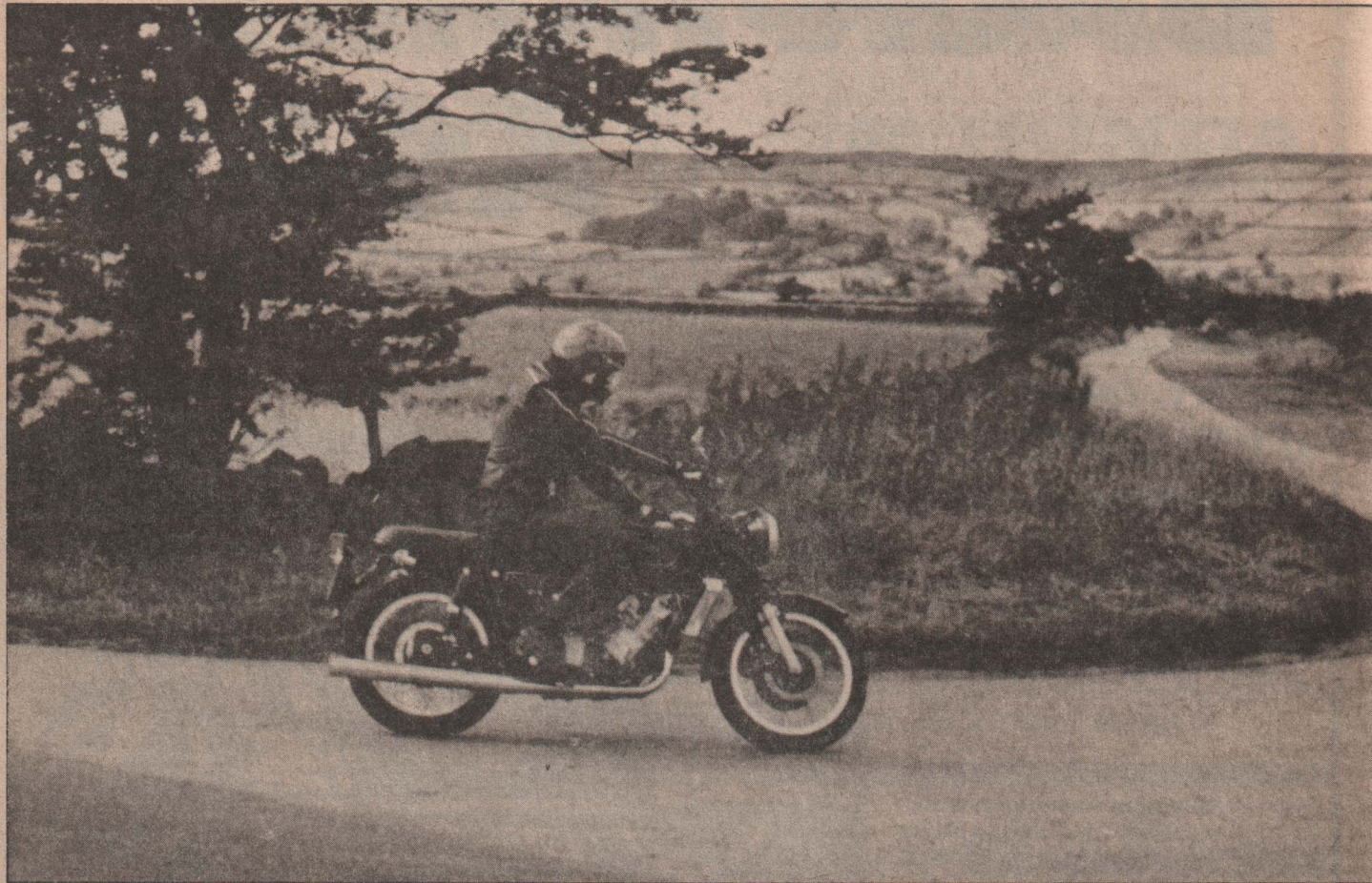
bought. Production has now reached one a week — almost two in fact, but fractions of a completed machine don't count — and almost fifty per cent are for export.

A Silk is for the man who wants one and he will only want one after he has test ridden it, thought about it and thoroughly immersed himself in it. It's not the kind of machine you make a snap decision on. "I don't know whether to go for the RD400, Suzuki 500 or the Silk" cannot have been heard too often, I'll warrant.

No. That's what keeps Silks, Morgans and TVRs kind of special.

At first glance, the 700S either pleases or it doesn't. It's so slim you could almost believe it was modelled on the single-edged razor blade; so uncomplicated it could have been designed by the man who invented the Oxo cube. And so neat they should have one on show at the Design Centre. A regular second or third-kick starter, the pokey noise that

BACK HOME AGAIN



issues from the long silencer is a mixture of potency and good manners but before the key is slotted into the nacelle-mounted keyhole, *Problem One* becomes apparent. To turn the fuel supply on, the side panel has to be unlocked — not too much of a hassle I agree, but the same rigmarole is necessary to get to the reserve supply — and when you're gushing along a motorway with an eager E-Type up your jacksy, a dead motor is more than just a nuisance.

Within yards one feels at home on the Silk. Everything is just about where it should be — with the exception of the gear stirrer. The lever is situated on the right side of the machine and the ratios are found by upside-down selection. (There will no doubt be many cries of "You fool, that's the *right* way and the *right* side" from traditionalists steeped in the British way of doing things; but I stand firm on this point. Things have changed and the majority rules.)

So up-for-down gear selection on the right boot in my book is a no-no. Once you've figured it out and made a couple of mistakes, the lesson is learned though and the problem is no longer there.

Handling is first rate. So much so that

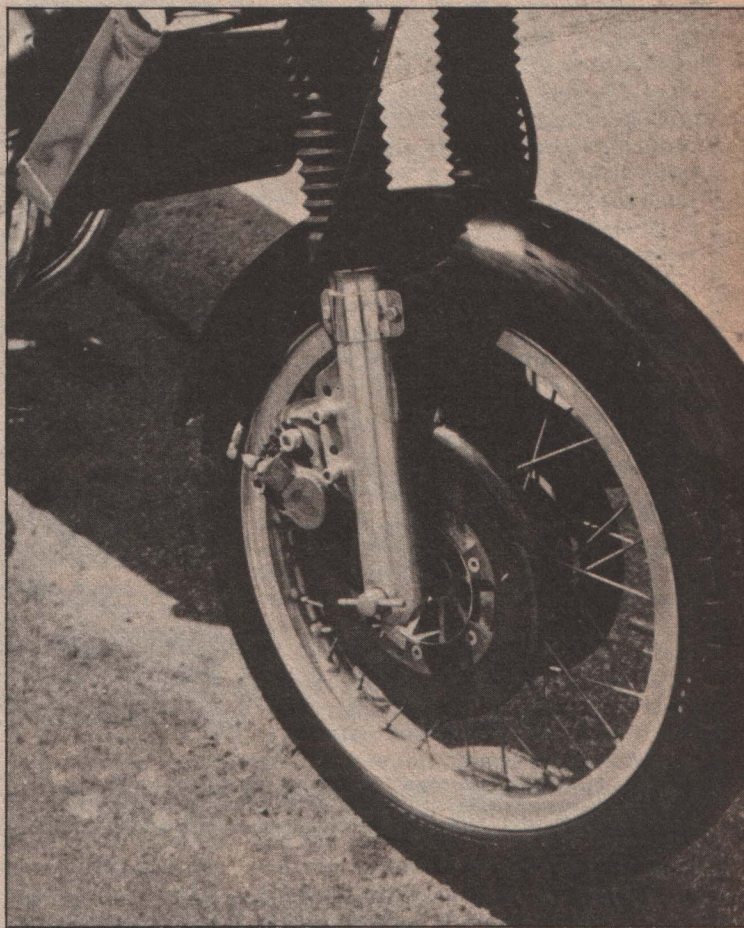
the machine is actually steered by ESP — all you have to do is think 'right' or 'left' (preferably with the knees, not the brain) and the bike reacts. Try and wrestle it around corners and other impedimenta and you will very quickly find the error of your ways. In fact I bet you could weld the steering head permanently into a dead-ahead stance and still waltz around bends faster than many bikes on the road. It's nice to meet a machine that handles so well.

It also stops well. When you order your bike you can stipulate a big drum stopper or a single disc on the front. Our test bike had the optional (at £40) double disc setup and that, matched to the rear drum, gave all the retardation needed under any circumstance. The discs were nice and rusty after a day's wet ride and a night in the garage — visual proof that the right material has been used — cast iron. No snatch, no lock-ups, no worries with this powerful and positive stopper. There was a certain lack of feel initially but I got used to the feedback characteristics in a very short time and after a couple of days' riding, knew that brake like an old friend.

I found the rear shocks rather stiff on their top position, but a graunch mark around the rear tyre's central deaignage channel bore witness to contact with the oil tank's top mounting bolt (where it pokes through the underside of the mudguard) at some time. Probably made whilst travelling two up, it nevertheless persuaded me to keep the rear struts jacked up high rather than risk the possibility of another meeting between rubber and metal.

That apart, comfort was good. The slim three gallon tank fitted neatly between my knees and the seat was nice and spongy. I later learned that this bike had been fitted with a 'rogue' saddle, one that had not had its stitching proofed properly during manufacture. At some time or other it had got wet and soaked enough moisture in to award me the order of the soggy crutch every time I used it.

The wide, almost flat handlebar was perfect for town and high-speed motorway work alike and the correlation of handlebar, seat and footpegs was fine for my long frame. Seat height, at 28-30in (71-76cm) depending upon the rear suspension adjustment, is great for most



riders and at a lean 309lb (140kg) dry, there will be few problems that can be put down to weight.

Performance is quite surprising and the claimed 48/70/92 and 111 mph at 6000 rpm in the gears was matched by me on many occasions — through the first three ratios anyway. Obviously, with attainable speeds like those, the gearing is high, so take-off is made with a lot of clutch slip and power feeding — but what fun it is. Not the zip-zip-zip of a two stroke multi blessed with a narrow power band, but a smooth and progressively rapid slam in the manner of a Gold Star. Not surprisingly, one learns that the cogbox is in fact a Velocette item — or rather the ratios have been copied from such.

Speaking of four strokes, the Silk has a mild fancy to be one at very low rpm. The rhythmic purr gives way to a thrum, an off-beat stifled bark, at tickover and twice a little hiccup interrupted this four-stroking and reversed the direction of the crank. An amusing moment was had on both occasions as the bike reversed up the street, reminding me of many a 'reverse sprint' held on Clapham Common in my youth, on knackered old BSA

Bantams.

The breathing on the 700S could be improved, for whilst the change from a 32mm to 34mm carb has given a tremendous improvement in tractability and bottom end punch, the bike is somewhat asthmatic below 3500rpm (and I'm taking a guess at that reading, for no tacho was fitted). Massive induction roar emphasises the Silk's respiratory problem when the throttle is snapped open at low engine speed and it makes a sound like an asphyxiant about to physically demolish the door that stands between him and the fresh air of life; a pained, desperate sound as the lungs fight for less poison and more air.

Once they get it, things get going nicely and the speedo needle zooms around the dial. High rpm brings in the only vibration felt on the Silk, and the higher the revs, the more intensive the buzz.

When I collected the machine one of the bottom engine bolts was loose and both head steady bolts were gone and I can only assume that vibes and lack of a spanner session at bedding-in time were responsible, for when everything was hunky-dory again, the lack of vibration

was very noticeable. At the end of my test, after a fairly leisurely blat down the M1 (60-70mph), one of the rear turn signal stalks was found hanging loose and banging about on the tyre. The brazing was fractured where the stalk meets the frame, so again, I can only put it down to vibration.

But all these problems are being ironed out one by one. The bike we had on test was the ninth ever built — better than the fourth but not as refined as the twelfth. George and Hugh are learning every day and with every completed machine. New pistons have been used on recent builds, so too have new fuel tanks. A slicker, better seat and rear end toolbox is now being finalised and a sickle-shaped kickstart, to alleviate the need to fold the right side footpeg up before starting is on way. The Borrani alloy rims have been dumped in favour of alloy Barums — because customer feedback is acted upon.

Anyone who had ever owned a minority market item will tell you how good the service is: that the customer is the most important man in the world — well, that's true of Silk customers. Years ago I had a HydraGlide tailor made for

BACK HOME AGAIN

me at Fred Warr's Harley shop. I chose the colour, trim, accessories, in fact damned near everything but the piston rings. I called by a number of times to see it grow from embryo to fully-formed being and I was actively encouraged to bring it back once in a while so they could see how it was getting on. The Silk Engineering shop does business in the same way.

They might blanch a bit if you ask for a Touring 700 with buckhorn bar, tassled dualseat and a candy-apple tartan paint finish, but if that's what you want, that's what you'll get. Rumour has it that they even run a tape measure up your inside leg and ask for your collar size when you fill out an order.

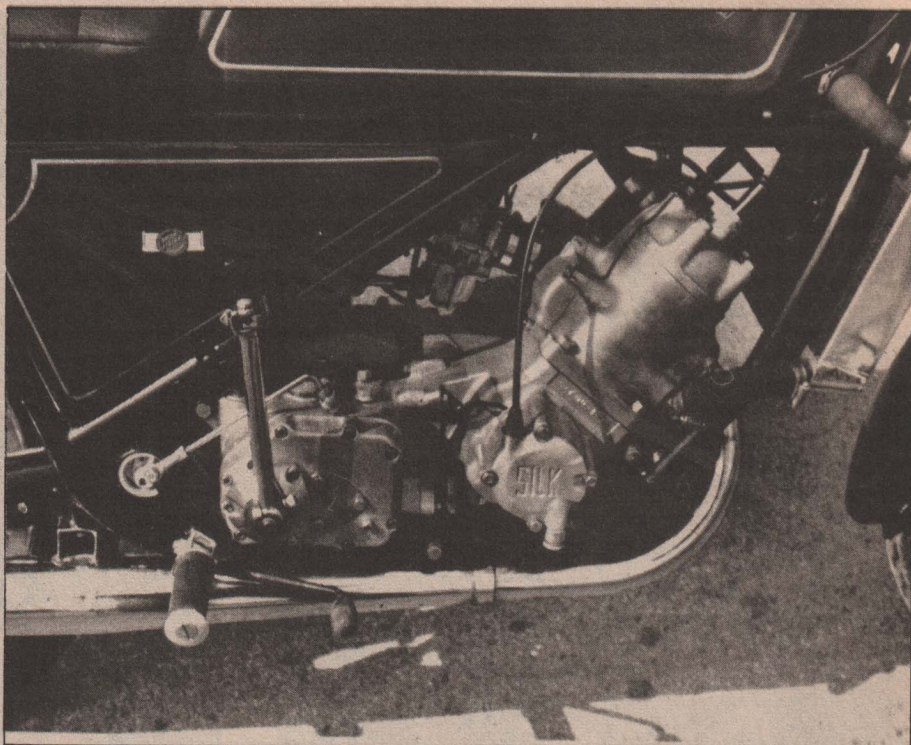
It's nice to do business that way.

I called by to have the test bike updated with the new pistons, a new exhaust system and have one or two other adjustments made and found that, whilst business must continue, I was made to feel very much at home.

The test bike is actually Brook Lister's demo machine and Barry Lister felt that, to compare what was with what now is, it might be a good idea if I put a few hundred miles on the bike before having the alterations made. And I'm glad I did. To be honest, I was not too keen on the bike as found — the improvements made since this machine was built have made it a much better animal.

I took a peek around the Silk shop at various stages of the production just to see what goes into the 660 twin. And whilst there is nothing in terms of complexity, there is a lot of thought and care — all very valid points for anyone wanting something special. So simple is the engine that no special tools are needed to work on it — absolutely none. One service tool is listed, that being for the clutch nut, but a reasonable man with access to a workshop can find a way around that.

The crankshaft is a pressed-together item running on 4 caged needle rollers that has been counterbalanced and perfectly matched to the paired conrod/piston assemblies. Big ends too are caged needle roller and when all this is mated to the cylinder block and hand-finished crankcases, the result is an extremely neat and compact power unit. The oil pump, what Silk call the *DUPU* system, is copied from an aircraft oil-metering pump. It is an amazingly simple device and an economic one too — giving between 300-600 miles per pint of lube. This is bolted onto the right end of the crankshaft and, as it does stick out a bit and could be prone to damage in a

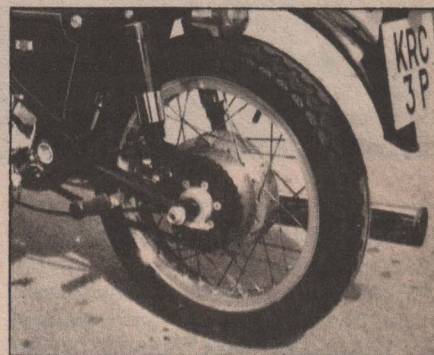


fall, a bolt-on guard can be fitted. Ours was prone to leak around the pipe union however and I'm sure an improvement can be made in respect of this.

The gearbox is a nicely rigid bolt-on item containing the four Velo ratios and the clutch, an impressively heavy lump of engineering, uses standard Triumph clutch plates. The whole engine/gearbox shebang can be whipped out of the frame and put on a workbench in a matter of minutes.

Simplicity is the key word at Silk. Even with the basic Scott design, changes have only been made where needed because the actual basics of the motor are hard to improve upon. This philosophy is adhered to throughout the rest of the bicycle too — the water cooling system is a thermosyphon activated one — nature's own. It does away with the need for thermostats and pumps and keeps weight, complexity and possible failure down to the minimum. Thus, all the distinct advantages of water cooling — mechanical quietness, ultra-even temperatures with no hot-spots, and clean exhaust emission are achieved simply and logically.

The port feeding and lumpy-topped 'velocity contoured' piston negate the need for reed valves and other such devices and still give a good performance. Maximum horsepower is achieved at 6000 rpm and maximum torque is reached at 3000 rpm — which meant that a simple four-speed gearbox



was enough.

Again, the frame, a beautifully made all-triangular structure, is as simple yet strong as could be. It is very light and keeps the centre of gravity down where it should be, somewhere near ankle height. A fully enclosed rear drive chain is fitted as standard, although our bike, because of a supplier's oversight, was without this item, and when the infrequent adjustment has to be made, it is by means of a snail cam at the front end of the swinging arm — so you don't have to check wheel alignment after.

It is thought like this and attention to detail that guarantees Silk Engineering steady business. Recent acquisition of a percentage of Silk share by Furmanite International Ltd, an engineering company based in Kendal, has released more capital with which to invest in R&D and actual production and may even lead to a larger production facility in Cumbria.

BACK HOME AGAIN

That would leave the Derby shop free to concentrate on research and development and ensure that the Silk is improved upon year by year. The twin cylinder engine could no doubt be carved down into a punchy little 330 single — or maybe even expanded by adding another cylinder to one side à la *Flying Flea* motor ... it already has a good industrial capability.

A one, two and three cylinder range of machines with as much love and care as goes into the current twin would make a nice stable for any factory to offer, especially with the huge advantage of the entire line being backed up by common-to-all spares.

SPECIFICATION

General description

A lightweight, high-performance, sports-tourer, designed and manufactured in limited quantities by enthusiasts for enthusiasts.

ENGINE

Type and dimensions

Inclined twin-cylinder piston-port two-stroke, water-cooled, pressure-pump lubricated. Bore and stroke 76mm x 72mm, 653cc.

Construction

Separate cast-aluminium head, block and crankcase, with integral water cooling. Centricast iron dry liners, jig-machined for accurate porting. Two-piece crankcase, horizontally split. Pressed-up counter-balanced crankshaft, running in 4 caged needle-roller bearings. Forged con-rods with floating gudgeon pins and caged needle-roller big-ends. Specially designed ported-skirt pistons.

Lubrication

Crankshaft-driven Silk "DUPU" micrometering duplex pressure pump; pressure-retaining non-return valves.

Approximate rate of oil usage better than 300 miles per pint. Separate 3¼ pint oil tank.

Ignition

Lumenition transistorised ignition, with centrifugal advance/retard and dual coils.

Carburation

34mm Amal Concentric Mk II carburettor.

Exhaust system

Siamesed expansion type with specialist-designed silencer.

Summing up the Silk 700S is easy. It is a healthy performer, an economical tool, one that can be kept running sweetly by even the most ignorant of bodgers, and a bike that is an absolute joy to ride.

It steers incredibly well, stops superbly and opens up new angles on all those roads you thought you knew absolutely. It has its shortcomings too, all of which I noticed I have recorded here. Show me the perfect bike and I'll show you the perfect woman. But make up a list of ten most important attributes of the former and I'll bet the Silk rates high on each.

It is not though, for the man who just wants a motorcycle. One has to graduate to a Silk and really want one. If you've

tried the rest and perhaps owned and liked, say, the Suzuki 500, early Yamaha 250 or Honda Black Bomber, then consider a test ride on a Silk. And when you do throw your leg over one, don't expect anything at all — the only way it will impress you is in the negative rather than positive way. It's an acquired taste, perhaps. One that needs living with for a while to fully appreciate — which is why only one a week is completed.

Next year maybe 200 will be built, each one hand made on its own bench to your specification by men who enjoy their work. That makes the Silk something special. So they aint for the everyman. They are for 'The Few'. <<

THE TRANSMISSION

Primary chain

7/16in Reynolds Duplex chain in enclosed oil bath. Speed reduction 24:49.

Clutch

Specially designed multi-plate clutch, using standard clutch-plates, running in enclosed oil bath.

Gearbox

Rigid casting assemblies flange-mounted onto the crankcase, with rigid cost covers, multiple-bolted. Heavy-duty close-ratio gears: 1st 2:29; 2nd 1:59; 3rd 1:21; Top Direct.

Final drive

Totally enclosed 5/8in x 1/4in roller chain, grease packed. Adjustment by eccentric in swinging-arm fulcrum. Standard gearing: 19-tooth gearbox sprocket, 36-tooth wheel sprocket with Cush-Drive.

Frame

Lightweight duplex triangulated frame at steering head and swinging-arm pivot points. Manufactured in aircraft-grade tubing by Spondon Engineering. Complete engine and gearbox removal by taking out ten bolts, without dismantling.

Steering head and front fork

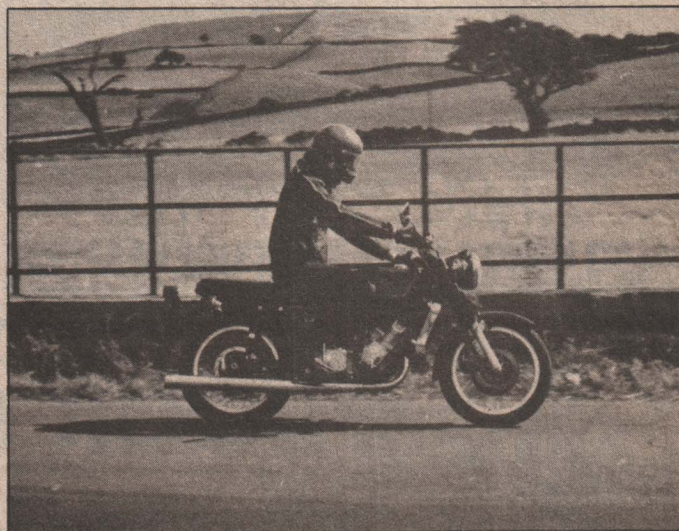
Twin Timken tapered-roller steering head bearings, pre-packed with grease and sealed. Hydraulically damped front fork. Full gaiters.

Rear suspension

Swinging-arm pivoting on Tufnol bushes. Grease-nipple lubricated Girling suspension units, adjustable to suit load.

Brakes

Twin 10in disc Lockheed hydraulic



front brakes. Finned light-alloy caliper. Disc in cast-iron. Handlebar-mounted master cylinder. 7in light alloy drum rear brake.

Wheels

Aluminium alloy rims. Rustless spokes. Avon Roadrunner tyres. Sizes: Front, 3.60 x 18; Rear, 4.10 x 18.

Quickly detachable rear wheel.

Fuel tank

Light aluminium tank, approx 4 gals with Snap action filler cap.

Electrical equipment

12V negative earth system. Crankshaft-driven 150W alternator with rectifier and battery. Special Lucas 7in quartz-halogen headlamp, with built-in parking light.

Headlamp fairing includes speedometer, ignition switch, ammeter, light switch, headlamp highbeam indicator, flashing indicator warning light. Amber flashing indicators front and rear. Large

area combined stop-and-tail light reflector. Horn.

General

Nuts and bolts are stainless steel; standard threads are UNF or UNC.

Dimensions

Wheelbase: 56in (142cm). Length: approximate 81in (206cm).

Ground clearance: approximate 8in (20cm). Weight: approximate 305lb.

Fuel capacity: 4 gallon (18 litre) or 3 gallon (13 litre).

Oil capacity: 3¼ pint (1.85 litre).

Approximate performance:

Speeds at 6000 rpm

Top ...	111 mph (178 kph).
3rd ...	92 mph (147 kph).
2nd ...	70 mph (112 kph).
1st ...	48 mph (77 kph).

Fuel consumption — Average touring: 55 mpg (7.0 l/100 km).

Oil consumption — Average touring: Better than 300 miles/pint (850 km/litre) (0.12 l/100 km).

Price £1695