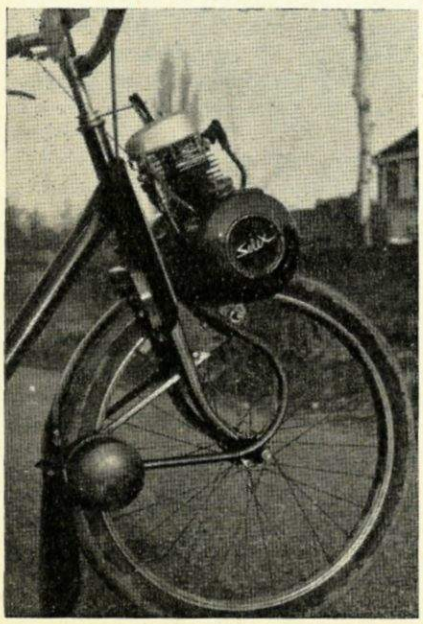
Velo-Solex

A two-year test Report

EVERYTHING about the *Velo-Solex* is unique. The machine was first built in Paris during the war when cars were not available to Frenchmen and a pint of black market petrol was worth its weight in franc notes, the machine soon established itself as the simplest, most economical, quietest and safest form of powered transport ever devised. It has developed over the past 20 years but always quantity produced as a one model range and because of this rationalisation of production it is the cheapest motor vehicle in the world, selling on its home ground at about £28.

This machine was never meant to be a mo-ped in the modern sense of the word; it is a motorised cycle, a "cycle that rolls by itself" to quote the advertising slogan, with a designed mean maximum speed of 20 m.p.h. Over the years since it was first marketed the power output has been nearly doubled, but the speed limit has been deliberately maintained and all the extra output has been put into pulling power.



A remarkably compact unit, engine, clutch, tank and roller drive all in one

To look at the frame is that of a fairly conventional, sturdy, open type bicycle but in fact the only tubular member in it is the large diameter down tube, all the rest, even the conventional looking fork blades, being in channel section pressed steel resulting in a very strong and rigid structure without undue weight. Layout is compact with 24-inch x 1¾-inch wheels with endrick rims and stainless steel spokes. The hubs have sealed annular bearings that require no maintenance.

Handlebars are adjustable for height and saddle for height and angle so that all sizes of rider can be accommodated in comfort. Brakes are hand operated side pull calipers. A sturdy carrier, strong enough to carry a hefty child in safety, is standard and carries a small steel toolbox containing the two metric spanners which fit *all* the nuts on the machine, a remarkable feat of design not equalled on any other make of machine we know.

The engine is mounted on bearer plates on the front forks and is a single assembly with its fuel tank and headlamp and the carborundum roller that drives on the front tyre.

A 49 c.c. unit, it is designed to pull from the lowest revs upwards with a maximum torque range between 8 and 16 m.p.h. for climbing purposes. Matching circular casings enclose the flywheel magneto and automatic clutch on the near and the 3-pint fuel tank on the offside which feeds to the carburettor through a simple diaphragm pump in the front of the crankcase. The entire unit hinges back by means of a short lever attached to the cylinder head which engages in a gate mounted at the steering head to hold the roller clear of the tyre when required and permit the machine to be used as a normal pedal cycle.

The model we have been studying for the past two years is the "1700". This has since been replaced by a further improve dversion called the "2200" but the differences are small, an increase in power (not speed) and a modification to the throttle control to couple it with the front brake. In all other respects this test as applicable to the current *VeloSolex* machine.

Extended testing

This machine came into our hands in February 1960 with only a few miles on the clock. We ran it ourselves for three months, mainly for two or three mile journeys in a country town, then it was used for a similar period by a professional man in a London suburb on slightly longer but still local journey work. After a spell of idleness it was cleaned up but required no mechanical adjustments to be handed over to a country schoolmaster for daily journeys home-to-school. Between whiles three well assorted teenagers learned to ride on it and two passed their driving tests.

Back in our hands last November we found an exhaust decoke needed (actually we lifted the cylinder but found no attention needed within) and both brakes requiring adjustment. The engine engaging lever had been broken off in a fall from a kerb but no damage caused to the engine apart from scratched paint. The front tyre and the brake blocks are nearing time for replacement.

It will be seen that this machine has not covered a very great mileage but it has had fairly hard and varied usage in the hands of a number of very different types of rider. The evaluations given in this report are built up on all the opinions collected.

A true bicycle

The first thing that must be said about the *VeloSolex* is that it is a true bicycle. With the engine out of engagement it can be pedalled smoothly and easily at speeds only limited by its rather low gearing and about 20 lbs. more weight than a normal roadster pedal cycle. The riding position and cycle saddle make for comfort added to by the large section tyres and the solidity of the machine as a whole. The sweet running sealed bearings, 3/16th. roller chain and quality freewheel keep tractive resistance to a minimum and any experienced cyclist will feel happy with this machine from the first ride onwards.

The female young rider who learned on it said she preferred to use it this way in town for ease of handling but all the other riders left the engine in engagement all the time and made use of the automatic clutch and low speed

pulling power of the engine to eliminate all but the merest twiddle of pedals when starting off.

There is only one engine control, apart from the cold start choke, and this is a short thumb lever under the left hand connected by a straight more or less rigid wire to the carburettor. Normally the throttle spring keeps this in the wide open position. Speed can be reduced by pressing the lever in with the thumb and pressing it right in brings in the decompressor for starting or stopping the engine.

absence of mechanical noise and the smoothness of the roller-to-tyre drive.

A cruising speed of 20 m.p.h. which is also the maximum on the level is sufficient for traffic work in the centre of a town but on any more open road the "Solexiste" becomes a free-wheeling cyclist being passed by everything else including the younger pedal cyclist at times. This pleased the younger pedal cyclists but the young Solex riders disliked it. The three older men just did not care.

Half a mile of very bumpy, unmade

Most of the riders found this control rather insensitive and some heavy handedness when wearing big gloves led to the control wire being bent and jamming up on occasions. All the experienced riders thought they would sooner have a twistgrip but this seemed to be a case of preferring the devil we know as none of the novices could see the point.

The automatic clutch behaves beautifully and withstands any amount of abuse. The machine could be stopped on the brakes with the throttle left open and the engine continued to run, tugging against the drive and ready to pull away the moment the brakes were released (not recommended). The incredible quietness of the exhaust is matched by a complete

path at the home end of each journey for one heavyish rider did not cause any trouble at all to the machine, but heavy mud in wet conditions did cause the roller to slip. Surprisingly, snow did not cause this trouble except for some slip in getting the engine started. Mudguarding is excellent and there is no blow-back of spray from the roller in wet weather.

Stability on normal roads is first class, the advantage of front wheel drive in pulling the machine round corners instead of pushing against the steering as with rear drive can actually be felt. The powerful brakes stop quickly but never lock the wheels and the modest 15 lbs. or so of engine weight on the front wheel makes no apparent difference to steering. All riders felt confident all the time and the two youngsters who entered for and passed their tests had no qualms or difficulties.

Riders choice

Of the three men, two of us in our fifties and experienced riders for many years, liked the *Solex* unreservedly and would certainly own such a machine if available, probably as a second string to the family car, to be ridden for quiet pleasure and convenience. The third man, the school teacher, found the performance inadequate and subsequently bought a faster mo-ped and later a 200 c.c. motor cycle.

Of the young people the girl and one of the youths were completely happy with the machine and would buy similar models for personal transport if the price were right. The third young man regarded the *Solex* as a useful stepping stone to faster things. All three confessed to some slight resentment at being passed by cyclists and thought a top speed of 25 m.p.h. would suit them well without detracting from the safety and silence characteristics of the machine.

All riders remarked on the considerable public interest aroused wherever they stopped. Strangers approached and asked if the machine was on the market and at what price, almost all of them volunteered the information that unpowered cycling was a thing of the past for them but powered cycling had strong attractions.

Nothing to compare

A general assessment of these qualities of the *VeloSolex* has to be made on its own as there is nothing else on the market with which any direct comparison can be made. This is not a mo-ped, as we know these things, it is a cyclemotor. It is a sound, solid bicycle plus a silent, reliable engine, remarkably easy to handle and comfortable and safe as well.

The potential market for this type of machine in Britain must be as great as it has already become in France, Holland and many more distant parts of the world, but to achieve this potential the *VeloSolex* needs to be taken out of the conventional motor vehicle class and treated as what it really is—a modern bicycle. We can only hope that legislation to make this possible can be won in Britain soon.

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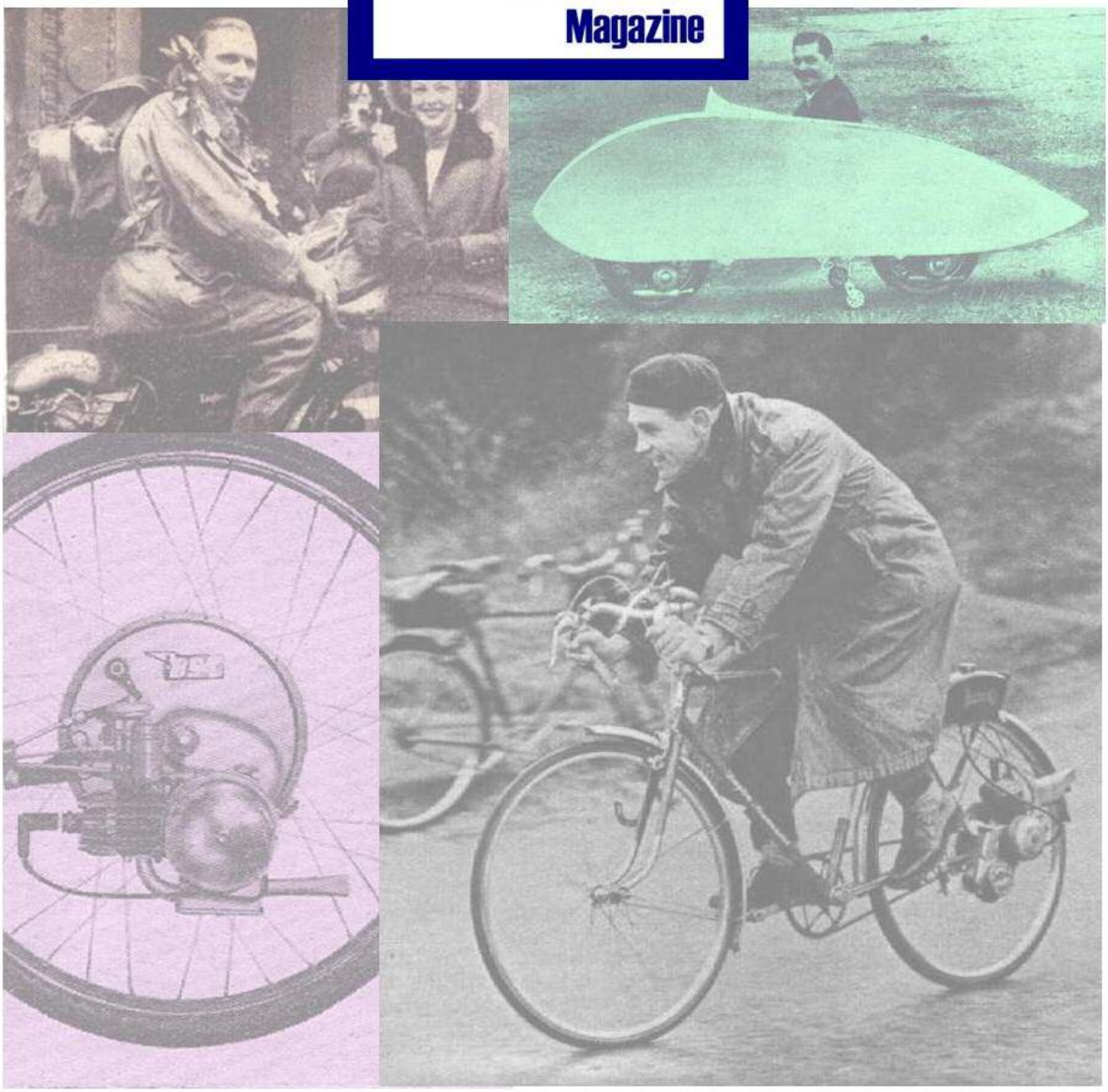

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