

Puch vs Batavus

Mopeds, the near ideal around town commuter transport should be comfortable, reliable, simple to maintain, cheap to run, safe and easy to ride. Here, we test a Batavus Starglo 2 and a Puch Maxi Zippy, representing two different types of moped, and compare them for their zippiness!

With changes in legislation (in the UK) affecting the performance and specification of mopeds, a new class of machine is emerging. Most of these are equipped with tiny wheels and, in consequence, while they are cutely styled their handling is frequently overlight. A large school of moped buyers still prefer the traditional large wheel moped so we have put two of these through their paces.

Both are single speed automatics with

centrifugal clutches, but the Puch clutch runs in oil while the Starglo's is dry. The Zippy has a single chain drive while the Starglo has a single chain drive and one pedal chain to the rear wheel. The only other major external differences are that the Puch we tested, has rigid rear suspension and a single saddle while the Starglo has friction damped shockers and a semblance of a dual seat. Both machines are similar in price, and power is very nearly equal.



On the road

From cold both bikes started well. The Batavus was slightly less easy than the Puch, needing a bit of co-ordination between foot on pedal, left hand on clutch lever and right hand on the choke lever. On the Puch, with the carburettor tickled and the choke knob depressed, a light dab on the kickstart produced instant engine fire up. The Batavus needed no time to warm up and pulled well from cold while the Puch seemed happier if given a bit of revving on its centre stand. The Batavus choke is a spring lever on the bars and is only needed as the pedal is used to start the bike. The Puch choke – a knob on the top of the carburettor – stays on until automatically returned by movement of the throttle.

Once warmed up there was little to choose between the way the bikes performed. With both, a simple twist of the throttle was all that was needed to instigate forward motion. The initial acceleration was however, very gradual and here, the pedals on the Batavus could be used to gain speed quickly from standstill, however the footrest on the Puch felt more secure while travelling.

After the slow pull away, both machines produced their best acceleration between 16–32 km/h (10–20mph), with the Batavus seeming to have slightly more poke. Above 32 km/h (20mph) acceleration as such died away and both gently gathered speed to reach their legal maximum of 48 km/h (30mph), the Starglo having a slight edge on the Zippy in final acceleration.

Riding either machine proved very simple, the slightly superior lighting and switch gear on the Puch being the only feature to commend it above the Starglo. The Starglo's optional dual seat (single seat is standard) felt more secure than the Zippy's bouncy saddle. However, both the Puch and Starglo seats leaked, sopping up water like sponges ready to wet the rider's trousers an unnecessary failing.

Braking on the machines was about equal with surprisingly good power from both bikes' rear brakes. Admittedly the brakes did not have much of a job – the bikes are light – but even so both sets performed creditably, rear wheel lock-ups being easy to instigate.

Rear suspension on the Batavus is by friction damped shockers while the Puch has a bicycle type rigid rear end.

For commuter transport there is not much to beat a moped for the short about town journey



The Puch Maxi Zippy is a single speed automatic, rigid rear end, kick start, pedal-less machine

Most commuter style riding conditions made it impossible to tell the difference between the two set ups, but on really

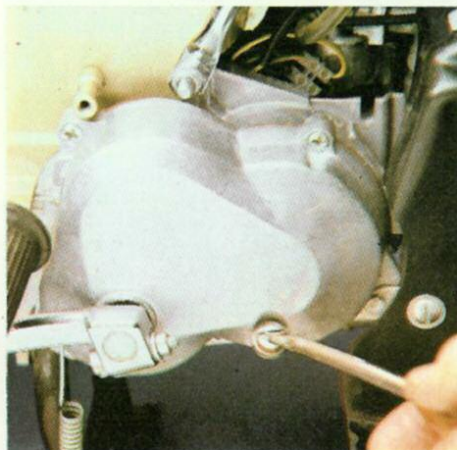


The rear end of the Zippy has a useful chrome plated carrying rack with a spring loaded retaining arm

poorly maintained roads, and on some pot-holed bends, the Batavus handled much better and gave a more comfortable, secure ride. Front suspension on both bikes is by friction damped telescopic forks and again there was not much to tell between them except that the Puch's springs were softer, and



Under the right panel of the Zippy is a very useful tool kit and also a hand pump for the tyres



On the Puch, the oil is changed through this little plug on the lower right side of the crankcase



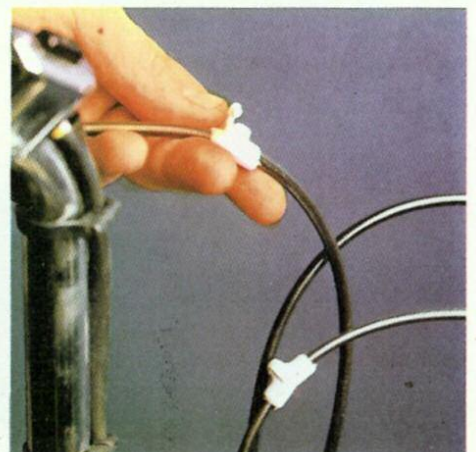
The rear end of the Puch is unsprung. Chain adjustment is made by a simple lock-nutted tensioner



Under the left panel is the air filter which must be cleaned out at intervals of 800 km (500 miles)



Next to the black tickler button is the throttle stop screw which is turned to adjust the idle speed



The control cables have very useful nipples in them to make cable oiling easy and quick

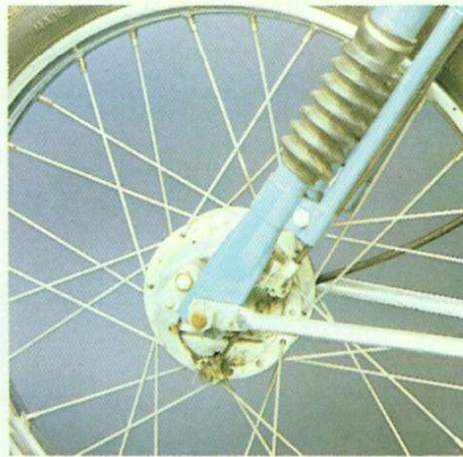


Rear chain adjustment on the Starglo is the same as the Puch. The extra chain has its own tensioner

allowed the forks to bottom under really hard braking.

The Zippy came equipped with one of the many Puch accessories – plastic leg shields. In wet weather, they kept some spray off the riders' boots but made the bike rather wide lower down. When trying for the slimmest of gaps in a traffic jam, or creeping along the kerb, they impeded the progress of this otherwise superb car dodger. The Batavus was not held back by any such impediment and is perhaps the most nimble around town bike we have tested.

There are all kinds of bits available to bolt on to both bikes such as panniers, top boxes and screens, but the Puch with its standard original equipment scores heavily over the Batavus, its rear rack being one example. In addition,



The front brake of the Batavus is a small very efficient cable operated drum similar to the Puch's



A plus on the Batavus is the front fork greasing point which enables the mechanism to be greased easily



The Batavus Starglo 2 is a single speed automatic pedal assisted moped

Service schedule

Batavus Starglo 2

Every 800 km (500 miles):

- Clean and re-oil the air filter
- Lubricate the brake cam spindles with 2 drops of light oil
- Adjust and lubricate the drive chain
- Clean and adjust the contact breaker
- Grease the pulley bearing
- Clean and adjust the spark plug
- Check and adjust the drive belt

Every 2,400 km (1,500 miles):

- Remove clean and lubricate both the drive and pedal chain
- Adjust and lubricate the control cables
- Decarbonise the exhaust
- Grease the front forks
- Re-pack the pedals with grease
- Grease the speedo drive
- Grease the steering head bearings
- Grease the wheel hubs

Every 4,000 km (2,500 miles):

- Clean and adjust the carburettor

Puch Maxi Zippy

Every 50 km (30 miles):

- Check the chain tension

Every 1,500 km (1,000 miles):

- Check the tyre pressures
- Check gear oil level
- Clean and lubricate the chain
- Check the spark plug gap
- Check the brakes
- Lubricate the control cables

Every 3,000 km (2,000 miles):

- Clean the air filter
- Decarbonise the engine
- Clean the exhaust
- Tighten all nuts, bolts and fasteners
- Clean the carburettor
- Adjust the idle speed
- Check the lighting system

Every 6,000 km (4,000 miles):

- Change the gear oil
- Clean the fuel cock and lines
- Check the ignition system and adjust if necessary
- Check and adjust the wheel hub bearings

Every 12,000 km (8,000 miles):

- Grease the lubricating felt on the contact breaker cam
- Check and clean the brake linings
- Adjust and lubricate the steering head bearings
- Also repeat all the other tasks carried out during the more frequent services

Handling characteristics

Puch Maxi Zippy	(Marks out of ten)
In slow town traffic	9 Just what every short distance commuter needs
Manoeuvrability in traffic	7 Would be better without the legshields
Braking in the dry	7 Good enough for its size weight etc.
Braking in the wet	7 Drums don't let you down
High-speed cornering	-
Rough road cornering	4 Rigid rear end can give a hard ride
High-speed motorway	-
Country cruising	-
Two-up touring	-

Batavus Starglo 2	(Marks out of ten)
In slow town traffic	9 Near to ideal for short commuting trips
Manoeuvrability in traffic	9 Slim enough to squeeze through tiny gaps
Braking in the dry	7 Fine for all normal demands
Braking in the wet	7 Again, the drums don't let you down
High-speed cornering	-
Rough road cornering	7 Rear shock absorbers make the ride better
High-speed motorway	-
Country cruising	-
Two-up touring	-

the Puch also has a hand pump for the tyres and a small tool kit. On the Batavus tested, there were no turn signals but these are normally supplied as standard. They operate from a small, six volt, dry nickel-cadmium battery which requires just an occasional re-charging.

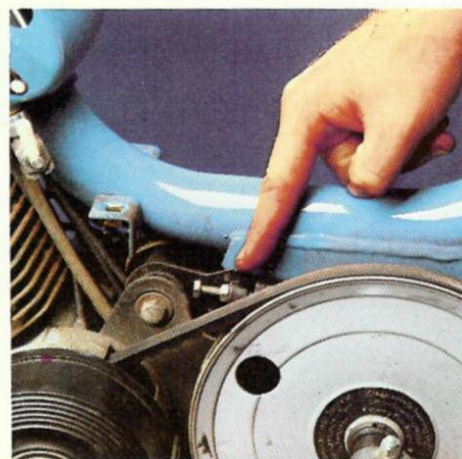
The standard of finish on the bikes was about the same. The Puch's more substantial engine covers being balanced by the sensible alloy mudguards on the Batavus. The chrome on both sets of wheel rims looked a bit thin, however, both exhausts were solid and looked as if they would last a long time. In terms of looks, the Batavus was more attractive – the Puch's leg shields giving the Zippy a sort of bath chair look.

Fuel consumption was very nearly equal, with the Puch coming out on top

with good consumption and the higher fuel to 2-stroke oil ratio. But the difference was so small as not to matter. Fuel tank capacity is also very similar giving almost identical pump to pump ranges.

In the workshop

The main difference in terms of maintenance tasks between the two is that the clutch of the Starglo has a pulley belt primary drive compared with the primary gear driven Puch transmission. The pulley has to be occasionally adjusted or the bike will lose power as the rubber V-belt slips. There is no oil to change as with the Puch transmission, but it is a bit of a job. The side cover has to be unbolted in order to reveal the belt and adjuster. The two through bolts are slackened and the lock nut undone on the adjuster screw. The ad-



The Batavus has a rubber belt drive to the pedal pulley which should have a maximum of 1 cm (½ in.) free play

juster is then tightened until the required 1 cm of up-and-down play is attained. The lock-nut is then re-tightened and the through bolts done up. Also, the large pulley, through which the pedal spindle runs, has needle roller bearings that need greasing periodically. On the Puch, all that is required is a regular oil change, which in the Zippy is automatic transmission fluid.

The magneto type points are identical on both machines. Adjusting the gap and setting the ignition timing is simple and straightforward. The points gap is checked by inserting a feeler gauge of the correct thickness (see panel) through the window in the magneto at the point when the gap is widest. Adjustment is made by slackening the points screws and moving the points gap until it is correct.

A good feature on the Zippy is the grease nipples on the front forks for greasing the fork sliders. The Puch's single rear chain will require less maintenance than the twin chains on the Batavus. Adjustment is identical for



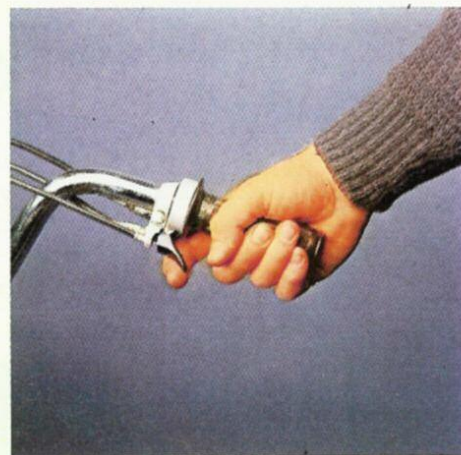
The steering lock on the Batavus is a bit of a fiddle to operate but the alloy mudguards are well made and effective

Service data

	Puch Maxi Zippy	Batavus Starglo 2
Plug type:	Bosch W175 T1 or Champion L86	Bosch W240 T1
Plug gap:	0.4–0.5 mm (0.016– 0.020in.)	0.5 mm (0.020in.)
Contact gap:	0.35–0.45 mm (0.014– 0.018in.)	0.35–0.55 mm (0.014– 0.022in.)
Timing:	0.8–1.2 mm BTDC	1.8–2.2 mm BTDC
Engine oil:	50:1 premix 2-stroke oil to petrol	32:1 premix 2-stroke oil to petrol
Transmission oil:	Automatic transmission fluid	—
Tyre pressures		
Front:	1.8 kg/cm ² (25psi)	1.95 kg/cm ² (28psi)
Rear:	2.25 kg/cm ² (32psi)	2.25 kg/cm ² (32psi)

Technical data

Engine	Puch Maxi Zippy	Batavus Starglo 2
Type:	Air cooled 2-stroke	Air cooled 2-stroke
Bore:	38 mm	40 mm
Stroke:	43 mm	38 mm
Capacity:	48.8 cc	47.8 cc
Compression:	11:1	7:1
Carburation:	Bing 1/14/152	Encarwi S22/25
Induction:	Piston ported	Reed valve
Lubrication:	Petroil	Petroil
Transmission		
Type:	Single speed automatic	Single speed automatic
Clutch:	Centrifugal	Centrifugal
Final drive:	Chain with split link	Chains with split links
Frame		
Type:	Monocoque pressed steel	Large diameter single tube
Front suspension:	Friction damped telescopic forks	Friction damped telescopic forks
Rear suspension:	Rigid	Swinging fork with friction damped shock absorbers
Overall length:	1,700 mm (67in.)	1,625 mm (64in.)
Overall width:	690 mm (27in.)	660 mm (26in.)
Wheelbase:	1,120 mm (44in.)	1,092 mm (43in.)
Seat height:	735 mm (29in.)	735 mm (29in.)
Dry weight:	42 kg (92.6 lbs)	38.5 kg (85 lbs)
Front brake:	SLS drum	SLS drum
Rear brake:	SLS drum	SLS drum
Front tyre size:	2.00-17	2.00-16
Rear tyre size:	2.00-17	2.00-16
Electrical		
Ignition:	Magneto ignition	Magneto ignition
Generator:	6 volt flywheel magneto	6 volt flywheel magneto
Headlight:	18/18 watt	18/18 watt
Capacities		
Fuel tank:	3.2 litres (5.6 Imp.pt)	3.5 litres (6.2 Imp.pt)
Transmission:	0.22 litres (0.39 Imp.pt)	—



The choke on the Batavus is on the handlebars and only needs to be put on at the moment of starting

engine warmed up the adjuster is screwed in or out to raise or lower the idling speed.

The Puch should be decoked every 4,800 km (3,000 miles) and the Zippy rather more frequently at 2,400 km (1,500 miles).

The leg shields on the Puch get in the way of regular maintenance and need to be unbolted and swung loose if access is to be gained to the flywheel magneto.

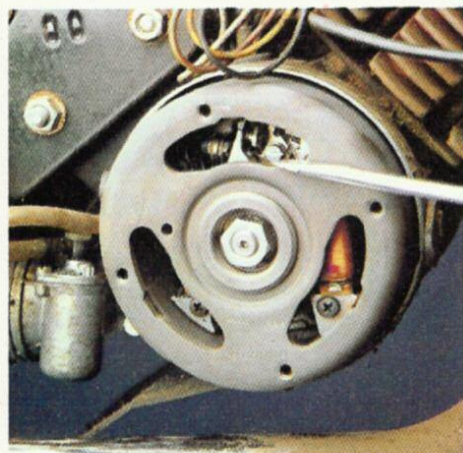
Summary

Both machines are straightforward, unpretentious commuter runabouts. Equal in initial cost, the only difference in running expense was that the Puch used marginally less fuel and 2-stroke oil than the Batavus. It is also slightly easier to maintain and simpler to start. The Batavus has superior power and handling and retains the pedals for quicker starts.

If buying a moped, a decision between these two bikes will depend on how simple you want the bike to be. On this score the Puch comes out on top. However, the Batavus might be better suited to the more enthusiastic rider who wants a little more performance and a smoother ride.

both bikes and the pedal drive chain on the Batavus is automatically tensioned.

The Puch and Batavus carburettors do not have provision for mixture adjustment, only for idle speed. In both cases, free play on the throttle cable is checked so that the carburettor slide is not being held open. Then, with the



The contact breaker points on the Starglo are similar to the Puch's and are seen through a magneto panel

Fuel consumption

Average:	Puch Maxi Zippy	Batavus Starglo 2
	47.8 km/l (135mpg)	46.0 km/l (130mpg)

Performance

	Puch Maxi Zippy	Batavus Starglo 2
Top speed:	48 km/h (30mph)	48 km/h (30mph)
Maximum power:	2.2 hp at 4,500 rpm	2.4 hp at 5,000 rpm
Maximum torque at	3,600 rpm	3,000 rpm