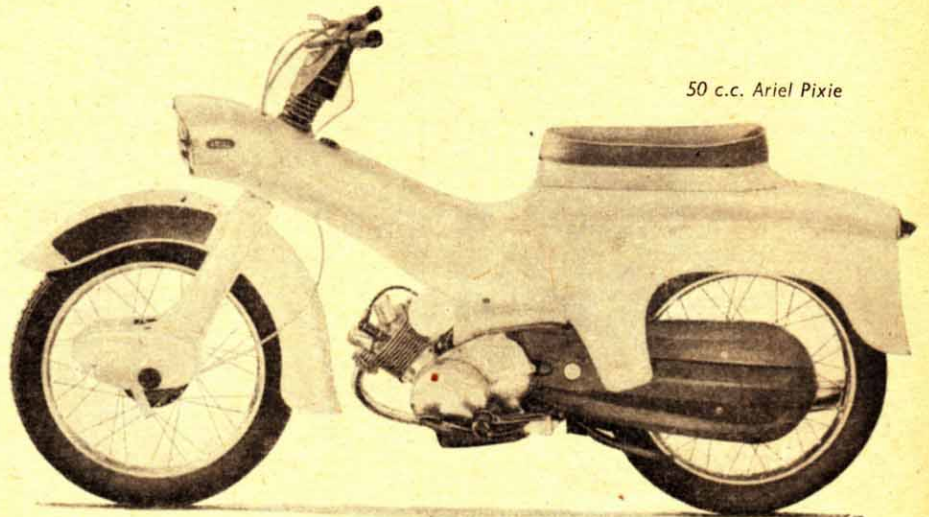




Meet the PIXIE

**B.S.A. and Ariel
Surprises: Earls Court
Debut for Overhead-
valve Ultra-lightweights**



50 c.c. Ariel Pixie

BIGGEST news for years in the little-machine field is the entry of the B.S.A. group into the feather-weight battle. And it is a two-pronged attack: from Selly Oak comes the unconventional Ariel Pixie, a four-speed overhead-valve fifty; the Small Heath contribution is the B.S.A. Beagle seventy-five. Except in cylinder bore, the power units are identical.

Says Edward Turner, introducing the models: "A two-stroke lightweight would certainly be cheaper to make, but

the four-stroke has a much better fuel consumption and is an altogether more sporty proposition. We have incorporated a four-speed gear box, the better to take advantage of the high r.p.m. which the new unit has been designed to withstand.

"Our object is to provide a pair of machines—exciting little things to ride—which will appeal to those interested in motor cycling as such, rather than as a mere means of transport."

Both the Pixie and the Beagle are expected to be in production by April or May, 1963.

In each version of the engine the stroke remains at 42mm, but while the Ariel has a bore of 38.9mm, that of the B.S.A. is 47.6mm; true capacities are thus 49.94 and 74.77 c.c., respectively. Cast iron is employed for the cylinder barrel, light alloy for the head.

Widely splayed, the push-rods (on the right) operate rocker arms disposed transversely and housed in rocker-boxes integral with the cylinder-head.

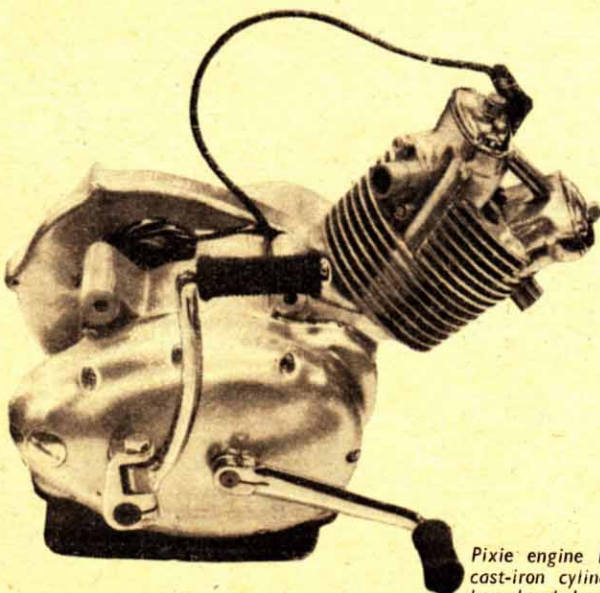
A flywheel magneto with direct-lighting coils is mounted on the engine left-hand mainshaft, outboard of the primary drive pinion. Since gear primary transmission is

adopted, it follows that engine rotation is the reverse of normal practice. Based on that of the Triumph Tiger Cub, the integral four-speed gear box has "up for up, down for down" operation.

Yet another unusual feature is that wet-sump lubrication is adopted, and hence the 1½-pint oil container is a simple steel pressing bolted to the underside of the power unit. There is, of course, no need of a scavenge pump, so a single plunger pump delivers oil under pressure to the big-end and main bearings, with gravity return.

Somewhat continental in appearance, the 75 c.c. B.S.A. Beagle is a true miniature motor cycle, with spine-type frame built from steel pressings.

The fuel tank, of two gallons capacity, occupies a conventional location atop the frame beam. Tubular stanchions with pressed-steel lower ends form the front fork, in which the wheel is carried by forged-steel lead-



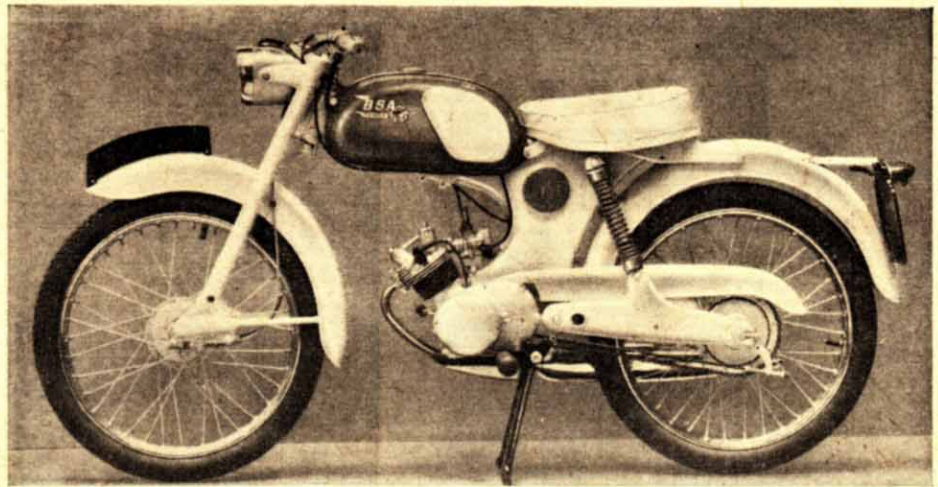
Pixie engine has cast-iron cylinder barrel and aluminum-alloy head

ing links controlled by coil springs.

At the rear is a pressed-steel pivoted fork, also with coil springing. Brakes are, respectively, 4½ and 5in diameter at front and rear. Tyre size is 2.25×19in.

Development of the 50 c.c. Ariel Pixie was entirely independent of the B.S.A. project, and the Selly Oak origin is immediately evident in the lines of the massive steel body—a single unit extending forward from the rear number-plate, beyond the steering column, to the headlamp housing.

The front fork, too, is Arrow-like in appearance; but



Continental style, a truly miniature motor cycle—the 75 c.c. B.S.A. Beagle

and BEAGLE

appearance is deceptive, for though the wheel is carried on trailing links the springing medium is, in fact, rubber in compression.

Located within the body is a petrol tank (holding nine

pints), which might be described as banana-shape, with the filler neck at the rear and reached by hinging the seat rearward. The seat cavity is also used to house the battery, tool kit and tyre pump.

An ingenious fabricated sub-frame, secured to the main body by just three bolts, carries the engine-gear unit and affords pivot points for the rear fork. Near the base of the sub-frame is the footrest-

hanger tube, through which passes the cross-over brake shaft. Removal of the three securing bolts, therefore, permits the entire power unit, transmission, rear fork and wheel to be detached from the machine; for overhaul nothing could be simpler!

Forward of the rear wheel, a cross member bridges the rear-fork assembly and provides a mounting for the rear-springing unit—a rectangular block of rubber sandwiched between metal plates; forward mounting of the suspension block is on the sub-frame.

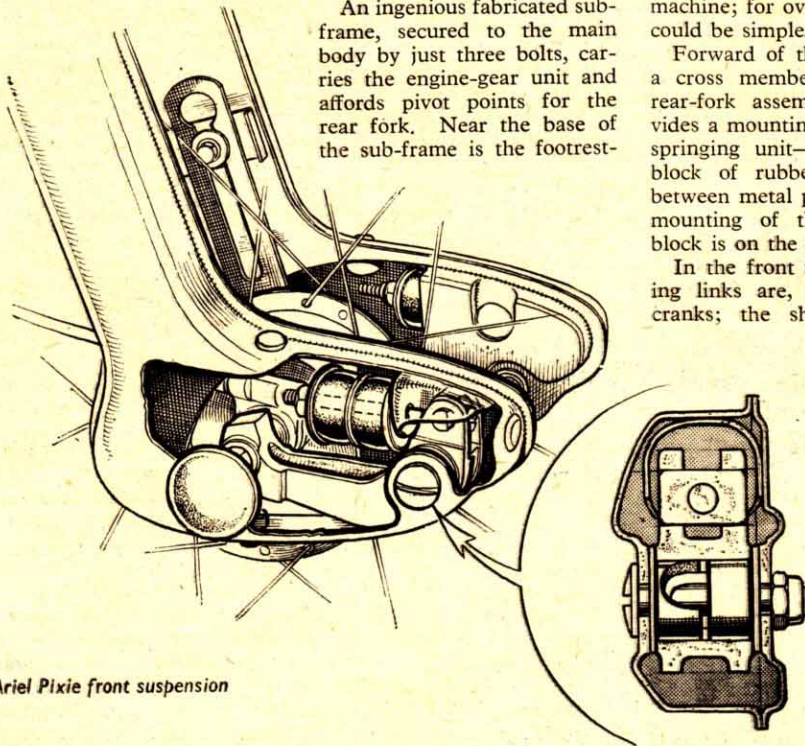
In the front fork, the trailing links are, in effect, bell cranks; the shorter arm of

each link operates a pull-rod which passes through the centre of a horizontally disposed rubber cylinder. A fabricated assembly with tubular end-pieces, the handlebar is adjustable for height in bicycle fashion, for a long bolt with expander nut passes inside the steering stem. In the middle of the handlebar is provision for the (optional) speedometer.

Nylon Bearings

Explains Ariel general manager Ken Whistance: "The need for maintenance has been cut to a minimum. Nylon-bush bearings are everywhere—the brake cross-shaft, rear-fork pivots, front-fork link pivots; even the front-brake anchor arm, which is slotted so that it rises and falls with the wheel and so maintains true braking geometry, is sandwiched between a pair of nylon blocks."

Other details of the Pixie: tyre size is 2.50×15in, brakes are 4in-diameter front and rear; a folding kick-starter pedal is standardized; the electric horn is mounted within the frame beam, behind the headlamp; an ivory finish is adopted for the frame, front fork and mudguard, in combination with blue or red for the handlebar assembly, seat, rear chaincase and rear fork. Total price of the Ariel Pixie is £79 10s, and of the B.S.A. Beagle, £92 10s.



Ariel Pixie front suspension

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