

FELID HYBRID?

PERHAPS ONE OF THE MOST DIFFICULT STEPS FOR THOSE FOLK WHO HAVE STARTED A BUSINESS IN THEIR CHOSEN MEDIUM OF CUSTOM MOTORCYCLES, OR EVEN IF THEY SIMPLY WANT TO ADD A TAG TO THEIR FAVOURED PASTIME, IS CHOOSING A SUITABLE NAME. IT'S FAR HARDER THAN UNDERTAKING ANY OF THE TASKS INVOLVED IN THE BUSINESS ITSELF.

WORDS: DAVE

PICS: SIMON EVERETT

OLD-SCHOOL ARIEL WITH BITS OF VW BEETLE IN ITS MAKE-UP

I could quite simply breeze over Chris Channell's choice of 'Kellas Cat Customs' and make you rely on Google's answers (other search engines are available), or I could educate you on the evolution, behaviour and physiology of the Kellas Cat. Or, far better, I could just say that the Kellas Cat is a hybrid feline that came about after a tough-as-nails Scottish wildcat took advantage of a tame household kitty, and leave it at that.

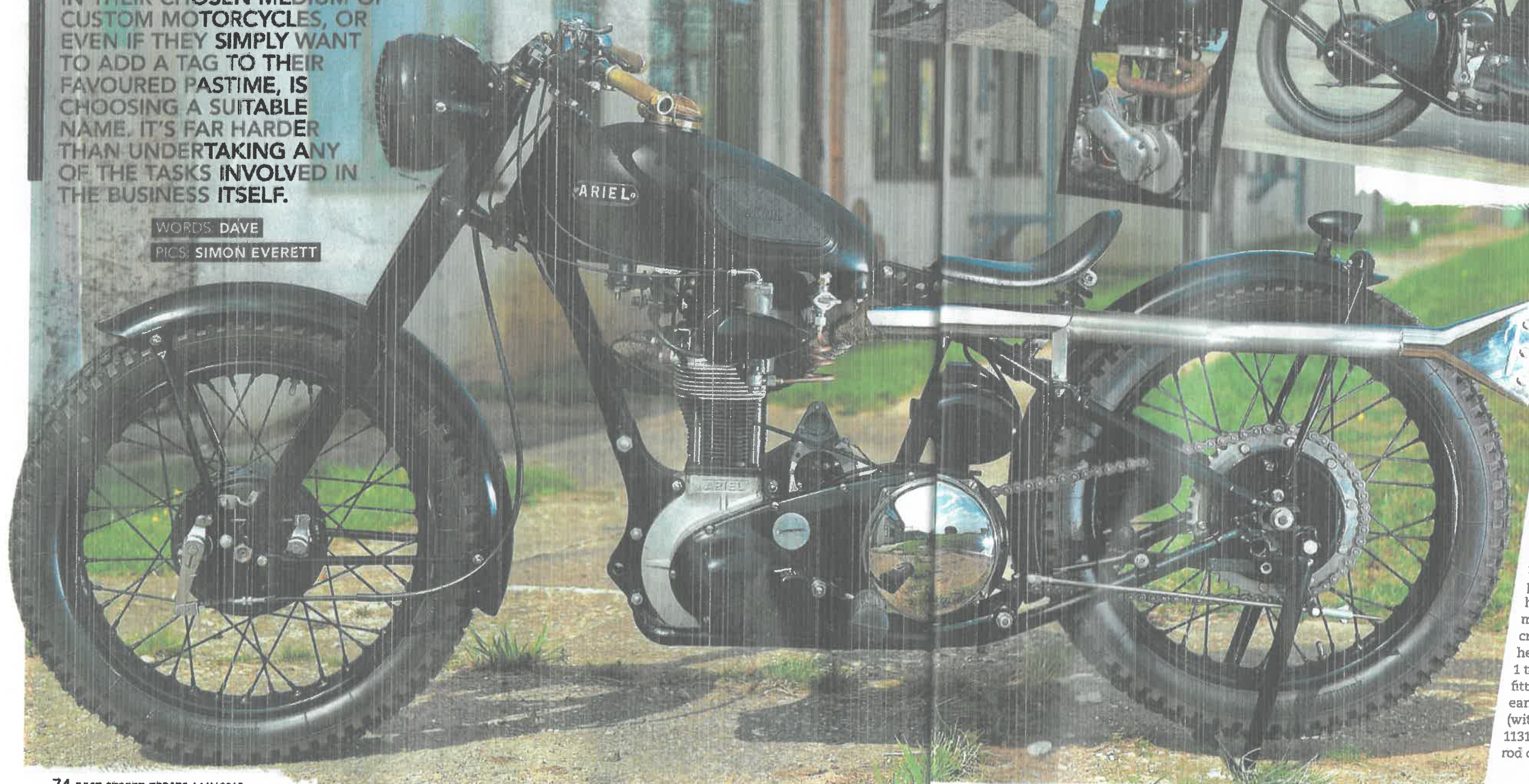
So, given the predilection for custom bike builders to make hybrids using parts from two

(or more) different donor vehicles, Kellas Cat Customs is a rather good name for a bike builder, don't you think?

Having spent a considerable amount of time playing around with different products of the Ariel company thanks to his association with Draganfly Motorcycles (Suffolk-based specialists in Ariel motorcycles), Chris was keen to use many of the Bournbrook factory's products. (Note: the south Birmingham Bournbrook factory in Seely Oak was where the original Ariels were built until 1962, when the remaining product lines of Arrows and Leaders made the move to the BSA Small Heath factory – the new Ariels, such as the Atom car and vee four-engined Ace bike, are built in Crewkerne in Somerset.) Unlike most bike builders, he wanted to try and make his own engine but, rather than actually fabricate new parts from scratch,

he wanted to modify existing parts so they could be used together in creating a new powerplant. So, starting with the bottom end of an Ariel NH350 engine (which, rather conveniently, fitted into the Ariel swinging arm frame he had at the time), he started scouting around for parts that were suitable, in particular looking for air-cooled parts from push-rod engines that'd match up with the bottom end. He ended up with a rather large and varied pile of parts from a significant number, and variety, of bikes and cars...

The choice of bottom end was a stout one – the overhead valve 350cc single had proved something of a stalwart for Ariel, since the introduction of the capacity into the range in 1933. Nearly 48,000 three-fifties were built for the war effort, although very few remained in Blighty after peace arrived in '45, being shipped overseas thanks to their performance, light weight and favourable handling compared to other ex-WD machinery. Chris had the crankcases and crank from an NH350, and added a barrel and head from an air-cooled Volkswagen, a Type 1 to be precise. The Type 1 engine was that fitted into VW Beetles, as well as some of the early campers, and is a flat-four boxer engine (with two banks of opposing dual cylinders) of 1131cc capacity, with overhead valves of push-rod operation. So how can a flat-four barrel and





with a Royal Enfield conrod, and a BSA B33 piston, to all get along with each other. With a big Amal carb, and a straight-through exhaust terminating in a funky fishtail, it sounds sublime... although that exhaust note probably has something to do with the 9.5:1 compression ratio – rather high for an engine of this provenance (the original motor was 6.2:1), so Chris probably has a strong right leg! (He does have the benefit of the one-off home-made valve lifter, made in brass, that you can see at the front of the cylinder head, he does admit.)

dual cylinder head be used on a single? By cutting the head in half of course! The Beetle barrels are already singular and, being air-cooled, there are no issues with coolant channels so, as long as he could sort out the alignment of cylinder studs and pushrod tubes, it was all easy-peasy, right?

When he first built the engine it was, as I said, in an original Ariel swinging arm frame, although it'd been converted to monoshock using a Yamaha R6 rear shock, and had Kawasaki ZZR600 forks and

Yeah, right... Lots of measuring, researching, further measuring, and yet more researching followed, with bespoke spacers, gaskets and fasteners made to allow the Veedub and Ariel parts, along



wheels. He was never really happy with the style though, so started looking for a rigid Ariel frame, as used on earlier incarnations of the NH350. A year later, he found one. During this time the engine'd been laid up, without being started, so with the help of some mates, he dragged it out and tried starting it. They had no petrol to hand, so they relied on brake cleaner as fuel and... amazingly, it started and ran really well, right up until the point that the rear wheel rattled loose... Followed, shortly after, by the exhaust falling off and then, finally, the carb jumping off too, bringing the raucous beast to a silent stop!

With the engine (and Burman gearbox) retrofitted to the rigid frame, it was rebuilt to the form in which you see here. A very neat, very clever, ultra-retro with a number of neat touches (not just the engine, the front brake has been uprated using BSA and Honda parts) that only the most avid Ariel fan would notice. It's something that's becoming more commonplace nowadays (Aled Corps' Norton from a couple of issues ago is a prime example), and something that we'll be returning to in forthcoming issues of BSH – neatly modified classics that have all the style of a factory rigid some 50 or 60 years old, yet with much of the imagination and creative thought that epitomises a true custom bike. **Hybridisation** at its finest! 🇬🇧

SPEC:

ENGINE: Hybrid Ariel NH350/Volkswagen Type 1/Royal Enfield/BSA combination, modified 1300cc twin port VW Type 1 head, 1500 VW Type 1 barrel, Ariel 350 crank, Ariel Arrow 250 clutch, Ariel HS single lobe cam, Royal Enfield 350 Bullet conrod, 30mm Amal 900 series carb, Burman gearbox, VW Beetle indicator 'airbox', one-off pushrod tubes, one-off valve lifter, bespoke electronic ignition housed in old magneto body, stainless steel straight-through fish tail exhaust

FRAME: 1949 Ariel NH350, original foot-pegs/hangers

FRONT END: 3.25x19" Heidenau K67 tyre, BSA 19" half width hub, Honda CB360 twin leading shoe drum brake, Ariel telescopic forks/cast iron yokes, Eddie Dow type fork

damper, bespoke stainless 7/8" handlebars, brass mesh grips

REAR END: 19" Ariel fixed half width hub/drum brake, 3.25x19" Heidenau K67 tyre

BODYWORK: Stainless front/rear mudguards, Ariel WNG tank/knee grip rubbers, brass filler cap from boat, JAP stationary engine fuel tank as oil tank

ELECTRICS: Lucas 7" headlight with stone guard, aftermarket rear light by owner

PAINT: Gloss & matt black by owner

POWDERCOATING: Aerocoat (01493 488485 or www.aerocoat.co.uk)

ENGINEERING: All work by owner at Kellas Cat Customs

THANKS TO: "Bob Channell; Mick Holmes; Graham Fairhead; Charlie Brook; & Draganfly Motorcycles (01986 894798 or www.draganfly.co.uk)..."



KELLAS CAT CUSTOMS ARE BASED IN SUFFOLK, AND THEIR PHONE NUMBER IS 07735 967466. BEING YOUNG, HIP AND GROOVY, AND TECHNOLOGICALLY SAVVY THEY HAVE A WEBSITE AT WWW.KELLASCATCUSTOMS.CO.UK OR YOU CAN FIND THEM ON INSTAGRAM AT @KELLASCATCUSTOMS

Draganfly Motorcycles



Specialist in: Amal Ariel BSA Burman Triumph & Classic motorcycles



All models from the 20's to 70's, plus all Triumph Twins

Here at Draganfly we specialise in the classics. Need spares for your Ariel, BSA or Triumph? Then we're right up your street.

Another classic pack has returned!

This pack supplies the Inlet and exhaust valves and guides for one cylinder, as well as a £20 gift voucher! Note: if your bike is a twin or quad cylinder, then please buy in quantities of 2 or 4 respectively as the pack caters for one cylinder.



PACK-ADV-002

Over £65 of parts for just **£39.95!** • VAT

Our website continues to grow! The latest Triumph section is now live: **1968-71 250 Singles!**



Staff Tip!



Trevor says.

Getting your valves mixed up? Exhaust valves can be used in the inlet and exhaust if they fit, but inlet valves can only be used in the inlet. Also, exhaust valves are usually non-magnetic.

So call, visit or check our website for all your classic motorcycle spares.

www.draganfly.co.uk 01986 894798 Open Monday - Friday, 9.00 - 5.00

Craven Equipment

Est. 1951

Vintage luggage for a modern age



01986 891096
www.craven-equipment.co.uk
Open Monday - Friday, 9.00 - 5.00