

For many readers of this illustrious organ, Rocket Bobs Cycle Works might be a relatively new name, but, as is so often the case with the majority of people running specialised businesses within the UK custom world, it's been far from an overnight success for Pete Pearson, the man behind the company.

gas'd rat

ROCKET BOBS' 1979
SHOVELHEAD

Rocket Bobs may have opened its doors just four years ago, but Pete had previously spent the best part of three decades heavily involved in the field of motorcycle racing, employment in which his not inconsiderable talents as both designer and engineer were consistently put to good use. Prior to commencing life as a Grown-Up, Pete's adolescent years were also dominated by a healthy fascination with wheels, albeit largely of the sort you'd find attached to skateboards. Even so, the seeds had already been sown for what was eventually to become a lifelong love affair with Harley-Davidson. As we've said on these pages many times before, behind every great man is a good woman (usually to be seen rolling her eyes...), and it was with the inestimable and wholehearted support of his wife, Lisa, that Pete decided to take the plunge and turn his passion into what

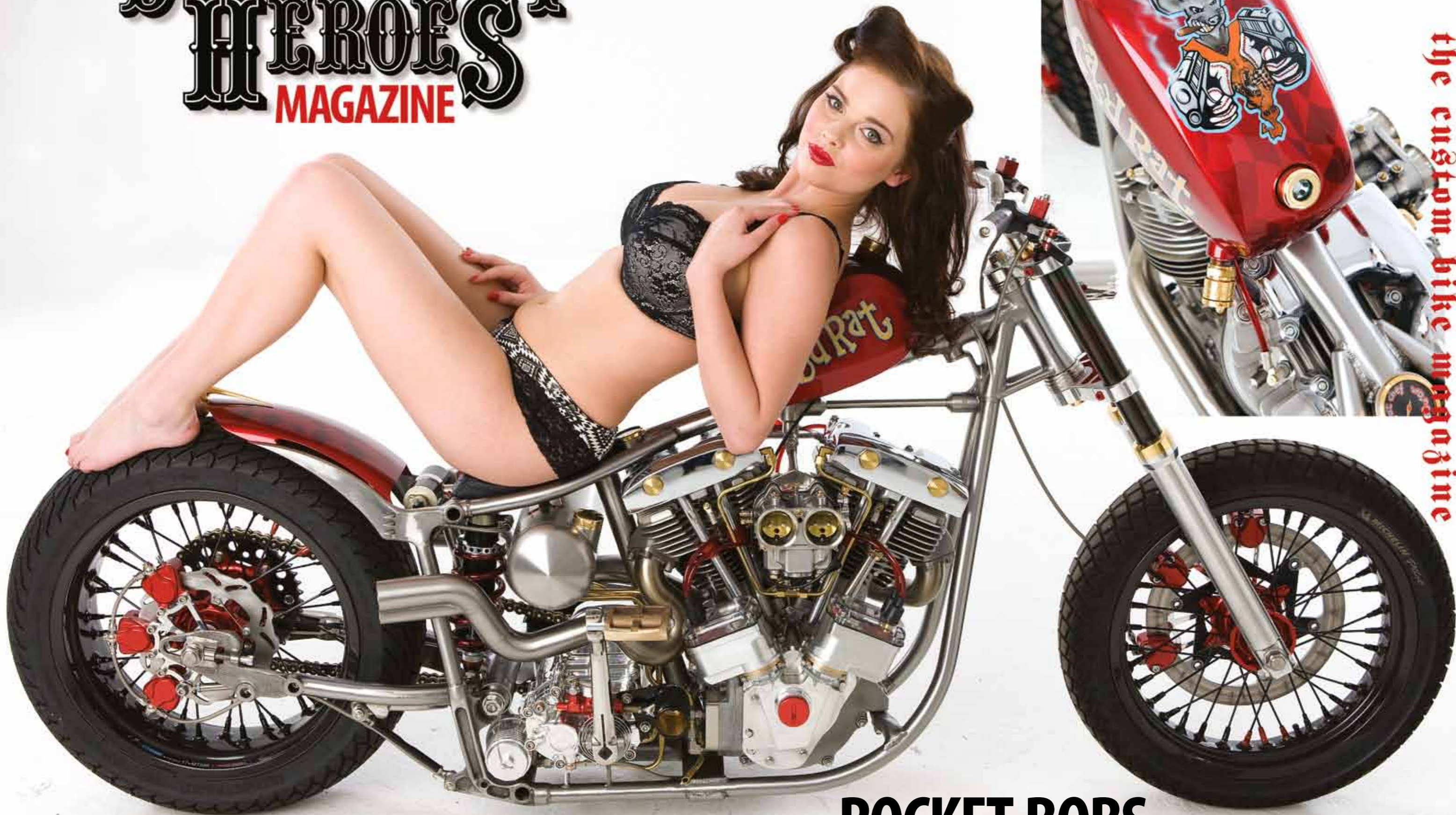
he hoped would end up being a livelihood by launching his own custom Harley business from premises in Faringdon, Oxfordshire, in the shape of Rocket Bobs.

Since 2009, Pete has succeeded in building a solid (and growing) reputation amongst both his peers and the public within the custom scene, not only in the UK but further afield, too. He's rapidly becoming renowned for the high quality of his work that's evident in the uncompromising, stripped-down and eminently rideable bikes that he builds, as well as in the company's innovative and stylish range of original aftermarket components. It has only really been with the completion of Gas'd Rat (and, hopefully, with the publication of this article), though, that Pete's skills and consummate attention to detail are becoming – quite rightly – known to a wider audience. And as far as Rocket Bobs is concerned, Gas'd Rat has most definitely raised the bar, taking things to another level.

From this side of the keyboard, the problem with describing Gas'd Rat is, well... where the hell do you start? As Lisa said in conversation during the studio shoot, "There's just so much going on in there." Well, you can all see that the bike's based on a Shovelhead – a 1979 FXS Low Rider, to be precise – and while there's a long, long list of engine mods to talk about, the thing of which Pete appears to be particularly proud is the enormous amount of work



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**ROCKET BOBS
CYCLE WORKS' GAS'D RAT**

that went into the chassis. He's a fan of the 4-speed Big Twin frame, with its 'squared-off' rear end look that's invariably seen complemented by a pair of shock absorbers, sometimes shrouded, sometimes bare. Pete, however, figured that's just what everybody would be expecting, so he decided to do something entirely different and convert the back end into a monoshock configuration using an air adjustable Penske race unit, and keeping the whole rear of the bike uncluttered and suitably slim.

Three solid weeks of work until Pete was satisfied might seem like rather a long time for a frame that wasn't built from scratch, but it becomes perfectly understandable when you take a closer look and discover exactly what was involved. I'll let Pete himself tell you;

"Every joint was bust apart, dressed or replaced. Every blemish and imperfection was removed from the tubes as well as every lug and bracket, after which everything was re-jigged and TIG welded back together. The work on the headstock alone took a full week in the workshop, which involved hand-grinding, machine burring and dressing before being braced with 13mm diameter 320 stainless tube, the same stock that I used for the new upper frame brace. Oh, and the stainless bearing cups are one-offs, too, designed with integral hidden steering stops."

"The

1961 arrowhead-type swinging arm was extended by 30mm and re-braced with hidden plates, as well as having all of its original casting marks totally flattened and a new pivot point for the rising rate suspension welded to the underside. The rising rate wishbone is ball raced with SKF sealed ceramic bearings, while the fully ride height adjustable tie rods are mounted to original, but reinforced, lower frame spurs. The stainless hoop mount features a hidden seamless pinch bolt for the remote reservoir of the Penske race monoshock unit while, lastly, a set of 320 stainless axle runners was made to suit the one-off machined 20mm diameter titanium axle.

"Just about all of the rear end of the frame was built from scratch, including a new seat post and integral mudguard struts in 316 stainless, as well as the rear downtube braces. A taillight was also incorporated into the dual frame torque braces. The one-off oil tank mount that doubles as a seat support was also fabricated in 316 stainless, as were the mounts for the speedo, remote oil filter mount and 6-speed Baker gearbox. Several reinforcing braces were added

to the frame, but they've all been hidden from view, while the swinging arm pivot point was substantially re-worked, with the pivot itself being a one-off flanged hex head affair machined in stainless.

"From start to finish, that little lot involved three non-stop weeks of machining and hand finishing work on the frame."

Considering the lengths to which Pete had gone with the chassis, the engine for Gas'd Rat was always going to have to be something a bit special, too. Thus, the original 1979 Shovelhead crankcases were heavily re-worked and the crank balanced before being mated to a set of shaved and profiled big bore Rocket Bobs barrels fitted with Keith Black pistons; it's a combination that produces a capacity of 98 cubic inches (about 1600cc in old money), and which features an 11.5:1 compression ratio. In order to improve the flow of gases at the top end, twin-

plug S&S cylinder heads were duly polished and ported in-house, as well as having their fins re-shaped to match those of the barrels. Pete decided to use Evo-style hydraulic lifters in conjunction with adjustable pushrods, and chose to drive the valve train courtesy of an Andrews cam. And just to make sure that everything on the inside of the engine would be efficiently lubricated, he also fitted a Rocket Bobs oil pump.

When it came to the engine's means of aspiration, the easiest and cheapest thing to have done would've been to fit a readily available and much more common single throat carb, a big Mikuni, for instance, or possibly an S&S Super E. But the last thing that anyone would be able to say about this bike was that it was 'ordinary', and as such, Pete chose a much less common dual throat offering from S&S. He declined to fit an air cleaner, which would have hidden those brass butterflys from view, and instead machined up a one-off pair of stainless knife-edged open velocity stacks. Directly below the carb, and nicely complementing the engine's 'dual' flavour, is a pair of wonderful-looking Morris magnetos to provide the all-important ignition sparks, and these are delivered by way of a set of Lowbrow HT leads.

The high level 2-into-2-into-4 exhaust system was, you won't be surprised to hear, hand rolled by Pete himself from 0.7mm Inconel sheet, and



"TAKING THINGS TO ANOTHER LEVEL..."

the rigid brass oil pipes, too, were all hand-made at Rocket Bobs, too. The transfer of power from the engine is handled by an open 2-inch BDL belt primary hooked up to a Baker 6-in-a-4 gearbox (6 gears contained within a reproduction 4-speed H-D case), but most impressive of all is that the engine pulley for said belt primary is a one-off, machined to incorporate an internal sealed tube containing 35grams of mercury that dynamically balances the bottom end. Trick stuff indeed...

Similarly high-tech – in terms of finishing processes, anyway – are the front forks, which have been anodised using cutting-edge facilities. What might appear to be plain old black anodising is, on closer examination, a unique blend of random patterns in all colours that constantly alters its appearance according to the light conditions and with movement. Apparently, the layer is of just 3 microns in thickness, and the process is, Pete says, universally used by Formula 1 teams to treat many of their cars' internal engine components, and you can't get more state-of-the-art in terms of technology than that...

Securing the forks is a pair of yokes, both of which were, yes, machined especially for the project in-house by Pete. Made from 7075 aluminium, the lower yoke is 25mm in

thickness, the upper 20mm, and both have been very nicely 'windowed', with their internal faces then anodised red to match much of the other fine detailing work to be found elsewhere on Gas'd Rat. The handlebars are what Pete has dubbed 'Lobster Back' 'bars (available from Rocket Bobs); made from 17 individual sections of stainless tube pulse-welded together, they feature built-in risers held by M16 bolts in 316 stainless with a 7mm through bore to allow for the throttle cable. The internal throttle unit, adjustable control assemblies and 'bar ends are all one-offs, and even the leather grips were hand-sewn in-house.

The front wheel, like the rear, comprises a 17-inch carbon Matrix rim laced to a billet Kite hub and fitted with Michelin full wet racing rubber. Both wheels also feature the same unique braking system – three twin-pot Harrison Billet calipers on one-off machined mounts, the only difference between front and rear being the use of a Beringer floating disc at the bow and a one-off Rocket Bobs disc at the stern. I doubt whether you'll be able to see from these photos one particular detail that Pete included in these brake set-ups, but on the inside faces of the three front calipers he machined the letters G, A, and S'd, while those at the rear boast – yes, you've guessed it – R, A and T. On the

subject of fine detail, you may, like me, have spotted that three of the spoke nipples on each wheel have been anodised red, rather than black, though I have no idea about what their significance might be. Answers on a postcard to the usual address, please.

The suitably distinctive petrol tank hailed originally from a Gilera step-through moped of early 1970s vintage, though it soon found itself subject to a number of modifications by Pete. The tunnel was removed entirely and hidden sockets added to fit one-off rubber-mounted frame lugs, while a new stainless outrigger petrol tap mount was welded in place to

accept a brass Golan tap, a product that's primarily intended for marine applications, but which is also perfect for custom bikes, too. Up top, the stainless 'chimney' and brass filler cap were machined as one-offs, as was the nifty Rocket Bobs Gas Light see-through fuel gauge. Slightly aft of the tank is the bike's speedo; sourced from Moto Gadget, Pete decided it would look better with the calibration marks on its face overpainted and the legend 'Eat at Wongs' applied in their place. And no, Pete has no idea, at

any given moment, at exactly what speed he's travelling...

Now, the phrase 'too much to list' – or words to that



"THERE'S JUST SO MUCH GOING ON..."

effect, anyway – is an often (and over...) used term in both published bike features and classified adverts alike. However, I've never found a more appropriate application for it than in this instance. We've already established that Pete Pearson is a man with a highly meticulous approach to the detail and fine finish of his bike builds, one result of which is that, about Gas'd Rat, there genuinely is too much to list here, though looking the images hereabouts should prove to be a good alternative. We also learned earlier that Gas'd Rat had taken things to another level for Pete himself, as well as for the Rocket Bobs brand. I don't know – would it be too much of an exaggeration to also suggest that Gas'd Rat has done something similar for the domestic custom bike scene, and maybe even beyond...?

words: **STU**
photos: **MIKE PRIOR**
model: **KYM**

SPEC: GAS'D RAT

ENGINE:

98 cu in (1600cc) 1979 Harley-Davidson Shovelhead V-twin, rebuilt by owner, re-worked Shovel crankcases, bottom end rebuild and balancing by Rocket Bobs, shaved/profiled barrels, Keith Black pistons, 11.5:1 compression ratio, modified S&S Cycle twin-plug cylinder heads, Andrews cam, H-D Evo-type hydraulic lifters, adjustable pushrods, S&S dual throat carburettor, one-off 316 stainless knife-edged velocity stacks by Rocket Bobs, dual Morris magneto ignition system, Lowbrow HT leads, one-off 2-into-2-into-4 exhaust system hand rolled from 0.7mm inconel sheet, Baker 6-in-a-4 gearbox, brass kicker pedal, hydraulic clutch, one-off engine pulley by Rocket Bobs, Tech Cycle gearbox sprocket, open 2" BDL belt primary drive.

FRAME:

1979 Harley-Davidson 4-speed FXS Low Rider, fully rebuilt and heavily modified by owner, converted to monoshock suspension.

FRONT END:

Stock length anodised fork stanchions and dampers by Rocket Bobs, one-off fork boots, shaved Sportster lower legs, one-off windowed billet yokes in 7075 aluminium by owner, 17" carbon Matrix wheel rim laced to billet Kite single-disc hub, 120/60 x 17" Michelin full wet tyre, Beringer floating disc, triple 2-pot brake caliper assembly by Rocket Bobs/Harrison Billet, braided stainless brake line, one-off 'Lobster Back' handlebars with integral risers in 316 stainless by owner, one-off brass riser cups, Rocket Bobs control levers/master cylinders, one-off leather grips, Rocket Bobs billet 'Night Nemesis' headlight on one-off stainless bracket.

REAR END:

Penske racing car monoshock unit, 17" carbon Matrix wheel rim laced to billet Kite hub, 160/50 x 17" Michelin full wet tyre, Talon drive sprocket, one-off disc by owner, triple 2-pot brake caliper assembly by Rocket Bobs/Harrison Billet, braided stainless brake line, Rocket Bobs 'Voodoo' mudguard and mini strip light.

MISCELLANEOUS:

Rubbermounted Gilera petrol tank heavily modified by Rocket Bobs, One-off brass filler cap and fuel level sight glass, heavy duty brass marine fuel tap, one-off cylindrical oil tank in 316 stainless by Rocket Bobs, one-off all-gel solo seat by Rocket Bobs, Moto Gadget mini speedo, Rocket Bobs stunt footpegs, one-off stainless head steadies, minimal wiring loom, one-off sidestand, stainless fasteners throughout.

PAINT AND FINISH:

Fire Cherry candy paintwork, gold leafing and graphics by Art Slade. Powder coating by Rocket Bobs.