



BSA Wasp looks like a useful off-roader, but in reality lacks a clear purpose in life. Still the unit 500 twin is a lot of fun

Bumblebeesa

■ *Fierce and noisy like the insect it's named after, BSA's 1966 export 500cc Wasp was too heavy and awkward to be a competitive dirt racer*

Mick Duckworth pics: Jason Critchell
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At tickover it sounds like stones raining on a pile of empty oil drums. A violent heave on the 1966 BSA Wasp's kickstarter has overcome the hefty compression of two 10.5:1 pistons, shattering the rural peace as open exhausts spit explosions straight from the combustion chambers. Soon the 500cc motor is warm enough for the air lever, one of few controls on the uncluttered handlebars, to be

opened. No blipping is needed, as the twin Monobloc carburetors can sustain slow running. But the slightest twitch of the twin cable twistgrip results in a snappy response at the pipes, merging the detonations into a rasping crescendo.

The twin is tall as well as loud, with BSA's Western handlebar rising 9in and a dual seat that forces you to stretch your legs when at standstill. Along with the racket, this makes the 500cc Wasp an

intimidating animal, even at rest.

But gear engagement, via a long pedal on the right which is actually a 175cc Bantam part, is easy for a booted foot. Smoothly feeding in the clutch has us pootling along tamely in first with the throttles barely off the stops. Yank them open and the Wasp takes off with exhilarating suddenness. After snicking the right foot pedal up for second gear, a check of the rev counter shows that while the

engine pulls strongly at only 2000-2500rpm, the sting is delivered from 3500rpm with power surging in ever more lustily as revs increase.

Raw, grunty performance like this comes as a surprise from an A50 twin, a model normally viewed as stolid but lacking excitement. On slightly taller gearing the Beesa would be ideal for storming corners and gradients on country roads but I can't do that on the Wasp.

As a US market competition model, it lacks the silencers, horn and registration plate required to be street legal in the UK, so I ride it on private lanes and fields found for the purpose.

■ Wasp stings

Yet the A50 2W is no dirt demon. Bumbling dry weight of 386lb, plus fuel, makes it an unwieldy beast to wrestle on the rough, especially for an inexperienced off-road rider. The lofty riding position is unhelpful, especially as it doesn't result in generous ground clearance. Strangely for a track racer, the Wasp is encumbered with a centre stand which graunches on severe bumps. More frightening, the tyres are original equipment Dunlop K70s with very limited off-road capability. At least the ground is dry and these are new Dunlops in good condition.

▼ **Tester Duckworth would be happier scrambling on the street. But he finds the Wasp manageable off-road**

Once confidence is gained, real fun is had buzzing the Wasp along dirt and gravel tracks. The front end soaks up ruts and potholes admirably, thanks to the improved two-way fork damping BSA installed on the unit twins for 1966. None of the topping out typical of earlier Beesa forks is evident. The all welded frame common to A50s and 654cc A65s is clearly sturdy, if overweight, and ancillary items like side panels, chromed steel mudguards and chainguard withstand the off-road acid test by not clattering, loosening or buckling.

Instant stonk can be used to pull weight off the front over more severe hazards and an accomplished motocrosser could probably hover a Wasp on its rear wheel for vast distances.

Chugging at low revs digs you surely out of tight holes, yet the crisp running engine spins surprisingly freely. On flat going the engine speed hits 5000rpm, at which point my nerve begins to fail, but the twin carburetors should stoke this unit up to at least 7000rpm.

■ Wasp earns its stripes

Potency for blasting speedily over smoother surfaces is one thing, but there are times when braking power is necessary, too. I'm bowling along a loose surfaced pot holed track with the power turned well up in second.

Suddenly the end of the lane appears and it opens out onto a busy road. I've just had time to visualise what might happen if I don't have the bottle to brake hard, when a pick-up truck turns into the lane and heads straight towards me. Cautious but firm pressure on both brake controls slows the BSA rapidly and controllably. Disaster is avoided as I take to the verge and ease safely past the van in the lane entrance.

The episode shows that the front drum, a standard early A50 and A65 8in single leader type containing relatively wide shoes in a half width hub, is effective and has enough sensitivity for safe use on dodgy surfaces.

It is hard to ignore the engine covers bulging out on either side but thanks to the miniscule 1.67 gallon fuel tank the BSA is slim in the middle, though not exactly wasp waisted. When the machine needs to be propped up quickly, the long side stand is easy to kick down. The unbraced bars look as though they might give way under heavy braking, but the clamps on the top yoke prove unshakeable. The same can't be said of the footrest mounts, though, and the pegs gradually succumb to ►





◁ repeated jolts — and perhaps an overweight rider — by shifting downwards on their mounts. This can probably be cured by tightening the hanger nuts really hard. To comply with US competition regulations, the rests fold up.

Worth the weight?

The A50 Wasp is a rare species which, like BSA's other 500 unit twins, has been overshadowed by the company's more powerful 650s of similar weight.

All A50s are basically small bore A65s, identical to the bigger twin below the cylinder barrel except for flywheel balance factor. That results in relatively light pistons, a sturdy bottom end and a plonking long stroke configuration, making the Wasp's lively responsiveness all the more remarkable.

Emphasis on sporting success as a marketing tool in the mid-Sixties prompted BSA to create high performance variants of its unit twins. The pattern for the Wasp was set by the twin carburettor A65 Spitfire Hornet and A50 Cyclone Competition of 1964, designed specifically for dirt and desert events in North America. There were also home

▲ Top end of A50 motor distinguishes it from 654cc A65, everything else is identical. Tank and sidepanels are glassfibre

▼ Long gear pedal comes from a 175cc BSA Bantam. Folding footpegs satisfy US competition regs. Boyer ignition trigger hides behind the round inspection cover



market twin carb roadburners in the form of the A65 Lightning Clubman and its unwanted 500cc counterpart, the A50 Cyclone Clubman.

BSA rehashed the US Competition 500 into the Wasp for 1966, distinguishable from the Cyclone in having a glassfibre fuel tank and side panels in place of steel items and a Sapphire Blue finish.

Many cycle components are common to Competition twins in both sizes, such as the chrome plated fork top shrouds minus headlamp lugs and the crankcase bashplate fixed to the lower frame tubes by crude U-bolts. Frames were the same across the range, with brackets for down-swept roadster exhaust pipes visible on the bottom tubes. Apart from the Hornet's red finish, the cosmetic variance is the 500's flat topped dual seat, dropped from the 650 in favour of a humped style for 1966.

High compression twin carb motors with Spitfire profile cams fitted to the Cyclone, Hornet and Wasp were described in sales literature as 'full race' engines. Both Hornet and Wasp had Energy Transfer ignition powered by alternating current straight from the Lucas alternator but this example has the reliable modern equivalent, a Boyer Bransden electronic ignition and a Power Box from the same company to replace the battery.

Banjo connectors plumbed to two fuel taps feed the Wasp's pair of Amal 389 Monobloc carburettors. They have 1 1/4in chokes, generous for a 500cc twin, although their top end performance advantage has to be set against restricted valve sizes in a small bore.

For late Wasps made for 1967 a blend of handed 389 and 689 instruments was specified with both float bowls facing outwards, making it easier to tickle the one on the right.

Ratios in the Wasp's four speed gearbox are the same as on the Royal Star, BSA's single carburettor A50 tourer. The test machine has a 17 tooth gearbox sprocket giving a usefully short overall ratio for off-road play, but 18 and 20 teeth options are available.

A wide front wheel rim for a fat tyre is a typical dirt track feature, the Wasp having WM3 steel rims front and rear where roadsters normally have a slimmer WM2 front item. Diameters also reflect US tradition with an 18in rear size rather than the 19in commonly found on UK roadsters of the period.

Wasp is a suitably aggressive name, especially for a twin related to a Hornet. But its use by BSA risked confusion with the Wasp marque of Salisbury, Wilts, which began building off-road competition machines in 1962 and is still in business today.



▲ Centre stand looks out of place on off-road styled machine, especially an open piper lacking other road niceties

Origins of the species

Thought to be the only A50 Wasp buzzing in Britain, this immaculate example was built recently by BSA and Royal Enfield specialist Mick Page of Burton Bike Bits (01283 534130). A star of the BSA Owners Club's *Classic Bike* Show stand, it is based on remains which arrived in a batch of re-imports from the States. New parts content is higher than 50 per cent, including the fuel tank and side panels.

"That's my very last new twin carb 500 cylinder head," explains Page, who bought and hoarded genuine ex-factory BSA spares when they were first dispersed through the trade. Apart from electronic ignition, every effort has been made to make the Wasp original. Colour is known to be spot on, having been matched from an original piece of pigmented glassfibre. Only an engine cut-

out button is missing, which should mount on the left side of the handlebars.

When Page once rescued a load of BSA glassfibre tanks' metal filler necks and caps from scrap, he noticed dozens of them were blue, suggesting they were for Wasps. But it seems BSA produced only tiny numbers of its dirt 500. And why equip a dirt machine with road treads and a centre stand? Probably because the Wasp's spec was only provisional. Before being used in anger many cycle parts would be changed. On top level flat track racers, including BSA's works bikes, purpose built rigid chassis replaced stock frames. If nothing else, the stand would be handy for shipment and storage.

With the 650 Hornet option eligible for desert racing, TT Scrambles and motocross, demand for A50 twins was limited to National flat track and road racing events. In these races, the ▶

◁ High 9in rise bars are fitted with cable guides. Wasp appears slender from the top, but impression is ruined by chubby motor

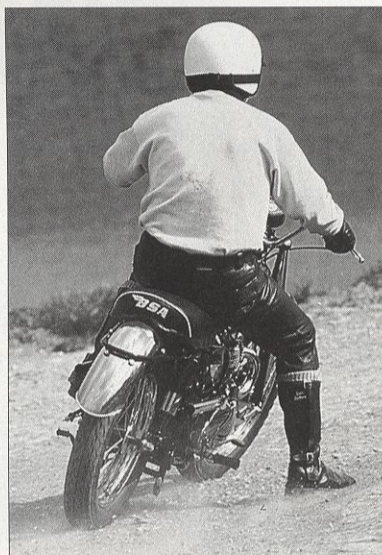




1966 BSA A50 WASP

Engine	ohv parallel twin
Capacity	498cc
Bore & stroke	65.5 x 74mm
Compression	10.5:1
Carburation	2 x 1 1/4in Amal 389 Monobloc
Output	40bhp @ 7500rpm (est)
Electrical	12v alternator, Boyer Brandsden electronic ignition*
Clutch	wet, multiplate
Primary drive	triplex chain
Gearbox	four speed
Frame	tubular steel duplex cradle
Tyres	front 3.50 x 19in Dunlop Gold Seal K70, rear 4.00 x 18in K70
Brakes	front 8in sls drum, rear 7in sls drum
Wheelbase	55in (1397mm)
Fuel capacity	1 1/2 gallon (7.9 litres)
Kerb weight	396lb (180kg)
Top speed	96mph (est)

* Lucas Energy Transfer original



▲ Dirt digging Duckworth might lose his novice off-road status if he spends enough time on the loose stuff. He enjoyed himself

◁ AMA's traditional Class C rule restricted ohv engines to 500cc, as well as stipulating that they share main components with models available for sale.

BSA aimed to make an impact with A50s in Nationals which explains why factory records show six Wasps converted from Royal Stars plus two spare engines, all prepared in Small Heath's experimental department, were despatched to BSA East's New Jersey HQ in February 1966.

So, despite being such a specialised and functional looking motorcycle the Wasp lacks a clear role or purpose, just like the

▲ Too heavy in this standard trim to take on Triumphs in flat track races, many cycle parts were changed by riders before taking to the dirt oval

troublesome striped insect with time on its hands when nest building finishes in late summer. It owes its existence to a racing homologation exercise, but cannot claim a glorious track record. BSA's 500 twins could not compete with faster 650s in motocross and TTs or with lighter Triumphs in flat track.

But riding a surviving Wasp with its well built motor is loads of fun all the same. If I had one I think I'd do what many American owners did with their Hornets — add a lighting kit, insert flute mufflers in the exhaust pipes and scramble on the street ●

Down in the dirt

BSA had made a highly competitive 500cc dirt tracker in the form of the Gold Star. But Small Heath chose to discontinue the single in 1963, just before racing returned to favour with the arrival of new company boss Harry Sturgeon. It fell to the A50 twin to take over and it found the Goldie a hard act to follow.

The much faster 654cc SH was successful in unlimited capacity TT Scrambles, motocross and even regional road races. Less powerful A50s of similar weight were mostly outpaced, but Small Heath made serious efforts to make the 500 a winner.

Highly tuned lightweight A50s competed at Daytona from 1966 to 1968. In the second year twins described as Wasp racers with magnesium engine covers and special frames were claimed to produce

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more than 50bhp at 8150rpm. But unlike the winning Triumphs, which claimed 49bhp, the Beesas were disastrously unreliable due to ignition failures.

On dirt tracks BSA twins did not reach the top until 1969, when a rule change admitted ohv engines up to 750 in flat track racing.

Then tuned Beesa twins, first 650s and later 750s, scored well in Nationals ridden by top liners David Aldana, Dick Mann and Jim Rice. The demand for A50s in the USA went from very small to zero.

A50 engines did enjoy track successes in Britain in the hands of top sidecar racers like Chris Vincent competing in international events with a 500cc capacity ceiling.

◁ Jim Rice rode 650 and 750 BSA twins to great effect in US flat track National events. Demand for 500s went down as sales of the big twins went up

