

Hejira: a rolling testbed for a new kind of old-fashioned

CENTRE FORWARD

Not many people know this but Hejira built what must have been the first modern cantilever motorcycle as early as 1973. Mr Honda saw it and uttered an inscrutable "Ah so" with a broad grin and a wrinkle in his eye.

The excellently enthusiastic Derek Chittenden (pictured opposite) had built it for his own motorcrosser after years of experimenting with home-made frames and suspension alternatives ("if it didn't fit or suit me I'd alter it"). What he learnt from the suspension needs and characteristics of dirt bikes led him naturally into road racing. By 1978, Hejira Racing Developments, a specialist design engineering shop "had been set up by Derek and partner Danny Wilson". Quietly and methodically, they've been creating, building and refining suspension systems and racing chassis ever since, never seeking the limelight or the quick sell but always keeping an eye on quality and value for money. They get their products and their happy customers do the talking for them. Clubmen are their biggest market and they build some beautifully finished gear for all manner of lightweight Rotax and Yamaha engines. They are realists rooted in the real world.

It was unfortunate that at the 1984 Road Racing Show, they chose to unveil their hub-centre steering project bike or "Bulkhead Racer" and received lots of press of the "it'll be nice when it's finished" variety. The whole point, says Derek, was and is that it's a mobile test bed, a mobile jig if you like. "It's a mock up based on bulkhead construction and designed to incorporate a Ciba-Geigy honeycomb construction. We wanted to test everything before we built it properly and that testing is now nearly completed. Around Silverstone, we're near to the lap time our conventional racer can turn and the handling has improved tremendously."

It was a shame that Heron Suzuki's Project 500 beat them to the first bite at the honeycomb sandwich, but Hejira's bike too will eventually wear a carbon-fibre composite, two sided frame with appropriate access to the engine: the rest of the spec though will be much as pictured.

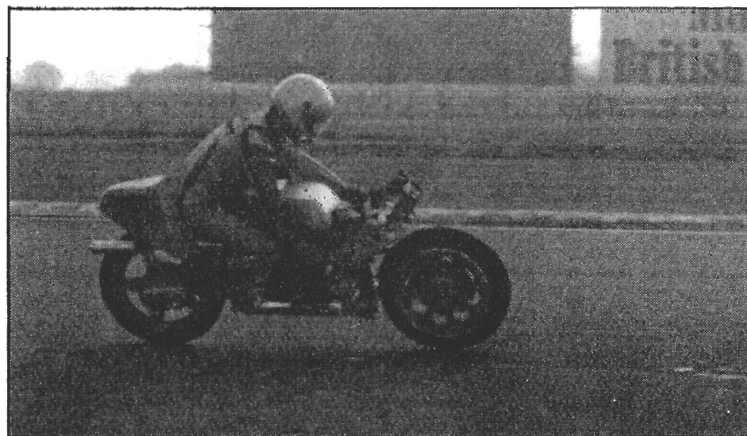
Hejira took the hub-centre route because they wanted the bike to be very stiff and low enough to take full advantage of the aerodynamic possibilities. All the steering and suspension assemblies were built in-house. The twin wishbone front suspension has the steering pivot located directly over the tyre contact patch and reputedly offers good steering feel though the lock is restricted to 20 degrees either way. The rising rate rear suspension is straight off their clubman racer and, like the front, uses Hejira-designed, long-travel Spax units with carefully calculated damping rates (close to a 2:1 ratio between wheel and damper movement — long travel but with precision damping, resulting in a cooler operating unit and hence less heat, frothing and fade).

The engine is currently a 250 Rotax though any 125, 250, 350 single or twin could be accommo-

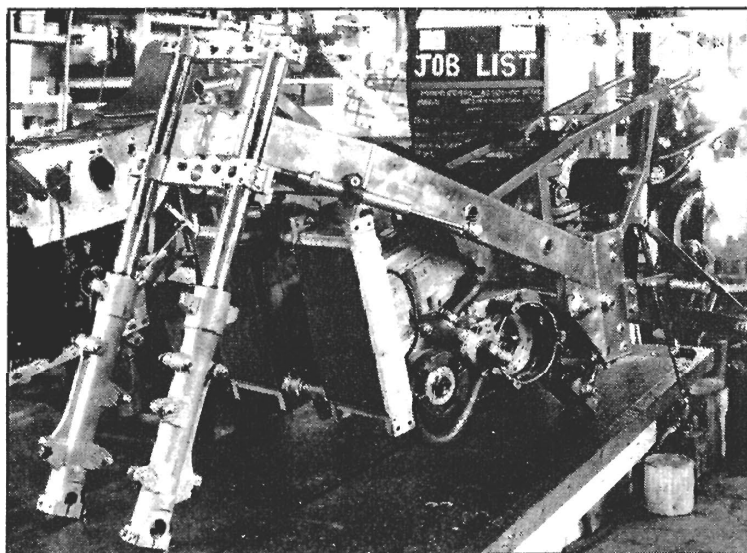
dated. What looks like the fuel tank is actually a dummy cover. The real tank is a three gallon oblong affair fitting underneath the engine (removed in the pic) with the fuel lifted to the carbs by a crankcase pulse pump via a regulator. Like everything else they build, it's all in steel and though they didn't make specific concessions towards weight-saving, it ended up about the same as their standard 250

racer plus the few pounds of an extra shock.

Hejira have built over 100 racing bikes over the years, always in steel never in aluminium. They've gone from a round tube to a square section double cradle and most recently to a twin beam construction in thin wall, box-section. The result, for 125 and 250 Rotax singles, is very sweet indeed. For £480 you can have the frame and swing-



The Hejira hub-centre steerer is more than a mock-up. Here the rider looks to see where his forks have gone. Below: the clubman's favourite, the beam-frame, with Rotax motor



arm, vertical shock and all linkages. The catch tanks and rear master reservoir are incorporated into the bronze-welded frame tubes. Taper roller bearings all round, bright zinc plating for the swing-arm and crash deformable plates for the footrests and fairing mounts. Attention to detail.

All this and much more is described in their excellent catalogue (send a large SAE to the address below) and their prices are very competitive because "we are content with a small profit and regular, satisfied customers".

Interestingly, they do a complete rolling chassis for a Pantah, a monoshock conversion for big Kawasakis and a host of proddie racing bits for LCs. Brakes, forks, tanks, pipes, dampers, Rotax advice and tuning, the famous Hejira electric tach and more recently, their tyre temperature gauge, plus all the usual bits and bobs that go to make up a racing bike, they can supply.

"We try to cater for the club racer who is working on a limited budget. We do not skimp on materials or quality, but try to keep our overheads as low as possible, and we shop around for the best possible price on bought-in components." Then there's their milling, drilling, brazing, welding and electric crack testing facilities. Compare their prices with some of the more upfront concerns and you'll be astonished.

Finally there's pro-squat. Not only are Hejira virtually unique in advocating long travel suspension with ace damping (less heat, less fade and less tyre wear) but they also spurn anti-dive and promote pro-squat braking. On the clubman's mount as well as the hub-centre project, the caliper is underslung and they use its torque reaction to compress the suspension by pulling on a tie-rod mounted between the caliper plate and the sub-frame. Their long-time development rider, Chris Palmer, can outbrake anybody, not only because he uses both brakes, in itself a rarity these days, but also because of pro-squat, getting the anchors to work good and hard by putting weight onto the tyre.

I spent some time with Derek Chittenden at the Hejira workshop near Buckingham and though it's certainly what you'd describe as a cottage industry, by the end of the day he'd convinced me of several important things; like that Hejiras are competitive in terms of design, weight, price and quality. That they'd be GP racing if only they had the backing. Didn't former World Champion, Kent Andersson, finish in sixth place on a single cylinder 500 Hejira Rotax in the Swedish open 1300cc class? They are also firmly committed to the clubman and the boys in the street. This is their bread and butter work and they've built it up on craftsmanship, reputation, trust and good service. The hub centre steerer is finally coming together. Now Derek has ideas for linked brakes and leading link forks. And how about his fabulous dictum on suspension action — "longer, harder and easier." You know it makes sense.

Hejira Racing Developments are at 18 Gorricks, Stony Stratford, Milton Keynes, MK11 1HB (0908) 563281.

SUPERBIKE



Pics by Roger Phillips