

6. HAGON

SUSPENSION SPECIALISTS

Established: 1958

Based: Hainault, Essex

Why they're great: Manufacturer of suspension for over 1000 different models of motorbike.

"You'll definitely walk out with swarf on the soles of your shoes," says Hagon's Head of Sales, Tony Hutchinson, describing the manufacturing company where he's worked for eight years. Formed in 1958 by famous grasstrack and drag racer, Alf Hagon, the company is still run by Alf's former world champion son, Martin.

They have the springs wound to their specification, but virtually everything else is made on-site. This is good honest engineering that's British to the core, and all done beneath one corrugated roof, under the provocative gaze of a dozen glamour calendars.

Hagon list shock fitments for over 1000 twin shock, monoshock, classic, race and road bikes. Kits for lowering bikes is also a growth area, and Hagon build shocks to order so, as Hutchinson puts it, "They're built to suit the vertically challenged or less aerodynamic riders."

Wheels are built upstairs. Rims and hubs are bought in, then the wheels are laced by hand.

All around the two-storey factory are spotless speedway bikes, many of them from the past few years; methanol-burning reminders of the amount of sponsorship Hagon put back into bike sport, nearly 60 years after they started in business.



Aside from the springs, everything at Hagon is engineered on site and by hand



7. REYNOLDS ENGINEERING

FABRICATION GURUS

By Adam Child
SENIOR ROAD TESTER

Established: 1993

Based: Milton Keynes, Buckinghamshire

Why they're great: Sublime engineering, and builders of the trackday addict's ultimate drug.

This is the probably the best chance you'll ever have to own a CRT MotoGP bike. The stunning DR Moto, built by Reynolds Engineering, is powered by a heavily tuned R1 with

nearly 200bhp, propelling this 160kg, MotoGP-eligible, trackday weapon into a class of its own.

The frame, swingarm, rear sets, and shock linkages are all made from billet aluminium, which means it's lighter, stronger, and precision built. Imagine turning a solid block of aluminium the size of several breezeblocks into a section of frame weighing just 1kg. These sections are then welded together to create an ultra-lightweight, billet aluminium chassis. It looks, and indeed is, incredible.

All the development and engineering

has been carried out by Dean Reynolds, founder of Reynolds Engineering, which produces machined components for clients in F1, WSB, BSB and MotoGP, and were one of the first to produce full billet swingarms.

The engine started life as a cross-plane R1 unit, but is unrecognisable now. Internals include Pistal pistons, Pankel titanium rods, a Nova gearbox, YEC kit generator, Suter slipper clutch, active bell-mouths, and a billet factory-style deep sump. The whole lot is controlled by an M800 Motec ECU via a ride-by-wire throttle. The engine and

ECU alone account for £25,000. But the motor is now developing 198bhp and 112ftlb of torque. The electronics package is immense, uses a Motec 'Advanced Dash Logger' ADL2 dash and takes information from almost every part of the bike; from suspension potentiometer front and rear, to airbox temperature and pressure.

While the spec is mind-boggling, it's nothing compared to the experience of unleashing it on track. It snarls with total aggression as Dean warms the motor ready for my first outing. My ears are intoxicated by the noise, Dean

aluminium instead of thin-wall mild steel. His friend, Andrew Renshaw, bent up the first set, and the duo soon combined their names and set up in business together.

Renthal products have been fitted to so many world and national championship-winning bikes it's hard for the factory to keep count. At the last count it was 181 world and 184 US motocross titles, as well as 62 TT wins.

A workforce of around 90 staff produce handlebars, clamps, clip-ons, levers and sprockets, trusted by some of the greatest racers of all

time. Renthal grips and chains are manufactured elsewhere.

While the manufacturing base is still in the North West, in 2006 the company was sold by the founders to US group, MAG, who own a number of brands including Vance and Hines and Roland Sands Designs.

Renthal produce consumables, items that wear out, like sprockets, or are damaged in a crash; stuff we need throughout our riding lives. It is their heritage, reputation, innovation and marketing that keep buyers returning to Renthal.

8. RENTHAL

HANDLEBAR KINGS

Established: 1969

Based: Stockport, Cheshire

Why they're great: UK company that has a hand in 180-plus world titles and 62 TT wins.

When Henry Rosenthal grew sick of bending his handlebars every time he took a spill, it was his aunt who suggested making replacements from

