

Left: engine still carries Westlake trademarks, although Dave Nourish now manufactures these eight-valve twins



RACER TEST

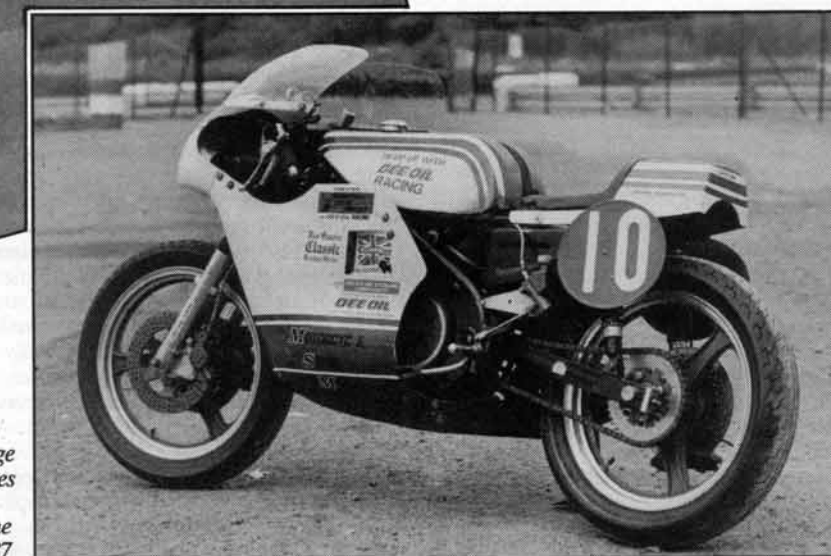
850cc Nourish-Miles

by Mac McDiarmid

Wild thing

FAMILIARITY breeds contempt, or at least carelessness. The dotted black line of tormented rubber should have served as a warning. This legacy of someone else's discomfort began at the approach to Mallory Park's Gerards, made a tangent with the inside kerb and told a tale of either a severe tank-slapper or a brake intermittently locked-up over the bumps all the way to the tyre-wall. Someone had clearly got things badly wrong, or their bike had, or so it was comforting to imagine.

After a dozen or so laps on Gavin Hunter's Nourish twin, with its Miles Engineering chassis, I gradually re-familiarised myself with the right-hand gearchange and steadily upped the pace. I was prepared for the lively uncertainty of the exit from Gerards but, pushing the bike into the corner with increasing confidence, what happened next took me completely by surprise, particularly in the light of the owner's testimonials to the machine's behaviour.



Main pic: in its present form, the mighty twin is slow to change direction and subject to front-end wobbles

Right: wire wheels may replace the cast wheels to make the Nourish-Miles eligible for CRMC events in 1987

PHOTOGRAPHY: JOHN EBBON

About level with the pit entrance to the circuit you sit up, aim for the inside kerb which will be your line for the next quarter of a mile, and hit the brakes hard. Because of the necessity to pick a line and brake, the hump guarding the entry is taken at a slight angle of lean and often with sufficient aggression to bring a puff of smoke from the front tyre as it lands again.

The Nourish shook its head as usual – no cause for alarm, it usually did so but then quickly pulled itself together. This time, though, it didn't: instead of damping themselves out, the steering oscillations became worse, the front wheel yawing violently. The right line was suddenly a compromise between trying to take the corner and inevitably being spat off, or picking the machine up only to run out of road, neither solution being attractive. A never-say-die acrobat like Randy Mamola would know what to do, but I'm not Mamola. Sit up, wrestle with it, above all hold on and hope for the best – that's my answer to situations like this.

Eventually, just as the run-off area was getting too close for comfort, the weave subsided. Back in the paddock – I wasn't going to try that again without some alterations – Gavin expressed surprised that his baby had turned feral.

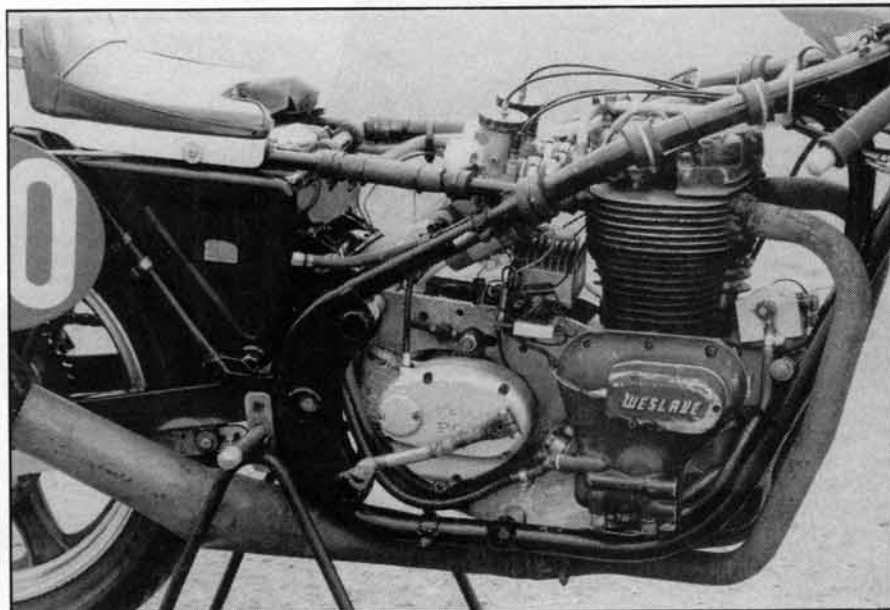
'The bike's really forgiving – it's only once shaken its head really badly, and that was overtaking on the exit from Gerards,' he told me. And yet in winning the 1985 Fair Spares classic championship by a clear thirteen points and taking third place this year, Gavin, a herdsman from Worcestershire, was clearly accustomed to pushing the machine harder than I.

The bike is forgiving in other respects, though. The eight-valve engine, originally bought as an 11.5:1 compression dope unit which had been grass-tracked with some success, has torque all the way from 4,500rpm to the redline at 7,000. 'Leave it in top everywhere but the hairpin and the chicane – it's quicker that way, just like a tractor', Gavin said.

This is just as well: in common with most other Norton-derived boxes asked to handle far more than their designed output, the gearchange is dire by modern standards. Selection, up or down, is uncertain even with a very deliberate technique: try to rush things and a neutral awaits, often preceded by a crash of gears. Fortunately there's plenty of valve-to-piston clearance in the 9.8:1 engine. Even in the heat of competition Gavin reckons to miss only about one change per race, which says a lot for his coordination in a crisis.

And yet the box is apparently an improvement on a five-speed type he tried which was 'forever breaking gears and bending mainshafts'. A Petty PGT box followed until the associated diaphragm clutch-type mainshafts became unobtainable, Gavin's enforced low-budget philosophy being to use as many standard and freely available components as possible.

The current four-speeder (with inher-



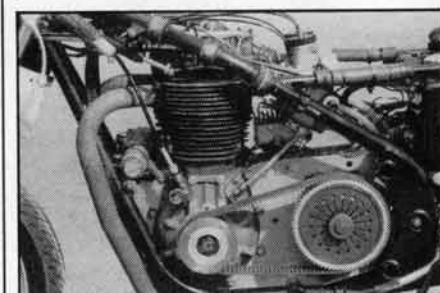
ently wider and stronger gears) employs a Techno-drive belt-driven clutch made by Graham Salter and a cheap and sturdy Granville Motorcycles conversion. The former has cured persistent slipping and dragging problems while the latter, which uses replacement top gear pinions to speed up the layshaft and raise the bottom three ratios, has improved the gearchange. The 42mm primary drive belt had, at the time of testing, done 37 meetings without adjustment; Gavin is impressed enough to contemplate dispensing with the adjustment slots in the engine plates.

The powerplant, originally a 1972 Weslake unit, number 62, was no more trouble-free until Dave Nourish laid hands upon it. It arrived with a rod through the cases, a prophetic condition which Gavin's regular saviours, his local blacksmiths Swinbourne Brothers, welded up. Then another old-type Weslake rod let go ('the engine just fell to bits in the frame – only the head and rocker boxes were left'), a set of alloy barrels split, and a big-end cap fell off, taking most of the drive-side with it.

In mid-'84 the engine found itself in Langham, Leicestershire, home of the twin-cylinder successors to Weslake, Nourish Racing Engines. A complete rebuild and a blueprint, including the replacement of lots of secondhand 'mix'n'match' bits, set Gavin back £350: a subsequent rebuild for the 1985 season, including gas-flowing and road race cams in lieu of dope items, cost £320. Since then, except for a broken head stud during the last race of 1985 and a blowing Cooper-ring head gasket, the engine has more than justified the expense in its reliability. Maintenance is limited to checking the ignition timing annually and tappet clearances three times a year, and changing the oil (supplied by sponsors Dee Oil) every meeting.

In its current form, the 842cc eight-valve engine runs Cosworth pistons (Cortina items, though heavier, will fit), ultra-strong Nourish rods, early iron barrels and 38mm Amal MkII carbs, which

Massive torque means that four-speed gearbox internals are sufficient

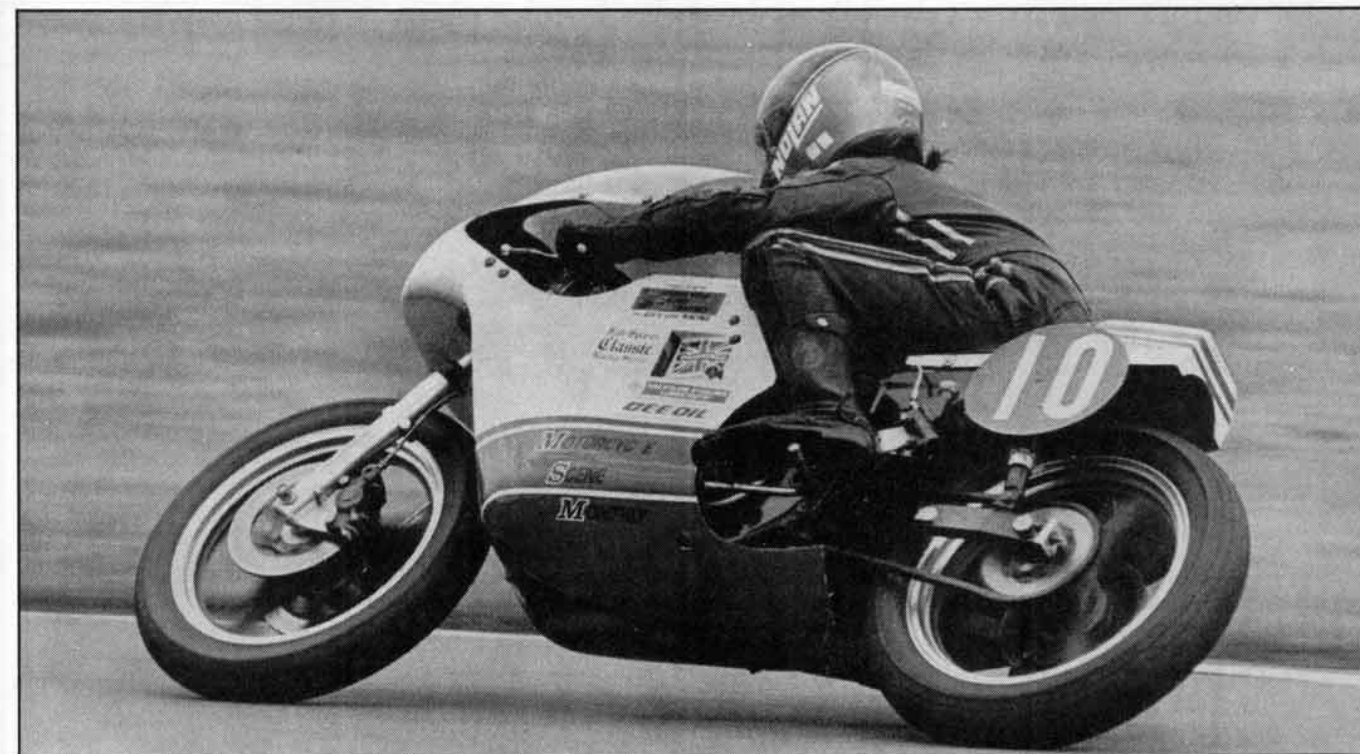


Techno-drive primary belt drive conversion has proved to be tough and maintenance-free

Gavin feels give slightly more mid-range than the original 34mm instruments. However, exhaust modifications rather than expensive hardware have brought the biggest rewards. The engine was once very peaky and unresponsive, but by the simple expedient of replacing the megga's reverse cone with nine inches of big-bore parallel pipe, a whole new world of tractability was awakened.

The engine has also sported a big-valve conversion since its last rebuild which, contrary to expectations, gave slightly more top-end punch but did little for the mid-range. Still, as the unit carries most of its estimated 82bhp almost anywhere you want it, mid-range is not exactly high on the shopping list. Nourish knows of similar engines putting out as much as 94bhp; this winter Gavin intends looking for some of the shortfall, beginning with the compression ratio and his local source of Avgas high-octane fuel.

After the worrying episode at Gerards, which partly went to show that it's folly to chase Suzuki GSX-R750s until you know *exactly* you're doing, Gavin reflected on his bike's handling characteristics. It used to patter badly at both ends, but since Norman Miles supplied Girling gas shocks with lighter springs – 88lb as against 110lb – and each fork leg was filled with 200cc of a Dee medium fork oil, things are much improved.



Hard man Gavin Hunter has herded the bike to the Fair Spares classic championship despite handling problems

Gavin agrees that changing direction through Mallory's Esses requires masses of body language and sheer hard work, but says it was even harder with the longer swinging-arm which was tried. After my wobble he restored the rear shock pre-load to its usual hard position, pronounced the head races sound, gave the bike a talking-to and assured me everything would be OK. I told him I'd believe it when I saw it. Out he went.

With the owner aboard, the bike looked smooth and sounded good and beefy with the off-beat 180-degree crankshaft, a Nourish development to give smoother, quicker response than the 360-degree shafts favoured for motocross. He came back, gave a 'seems all right to me' sort of look, and sent me out again. I decided to concentrate on the engine for a while.

When thoroughly sorted, this motor must surely rank as the ultimate realisation of the British parallel twin, with most of the virtues enhanced, particularly the sheer fathomless driveability. With the '180' crank, which is balanced to 85 per cent, and even in this state of tune and with worn engine plates, vibration isn't too intrusive, at least in the heat of battle. Unfortunately, as evidenced by a blackened rear number plate, carburation isn't all it might be. The Amals have defied all attempts to make them meter cleanly on part openings, resulting in a hesitant response out of slow corners. This tends to make for either an over-prudent or a devil-may-care riding style: judging by Gavin's results, his is the latter.

Pre-loading the rear springing had firmed the rear end, but still not convincingly. The front end was better behaved entering Gerards – partly because I was using a different line – but wagged half-

way round on an unavoidable change of tarmac. As for the notoriously vicious exit, extreme care had to be taken in threading the one line that misses the worst of the bumps. Whilst, given the bike's accurate steering, this is feasible on an underpopulated practice day, it's a well-nigh impossible quest faced with thirty-odd other riders wanting the same sliver of tarmac when racing for real.

Even with the luxury of space, on the exit from Gerards the chassis seemed able to handle far less power than the engine was able to throw at it. The major culprit for the front-end wobbles appears to be rear suspension settings which are wildly underdamped or oversprung. Pre-loading the spring does little more than paralyse the shocks, and is no more a solution than to hardtail the bike.

This flaw might be acceptable in a quick-silver chassis set up to make ground on the tighter sections. Sadly, the reluctance of the bike, even in shortened form, to change direction does it no compensatory credit. Through the medium-speed Esses it proved positively cumbersome, and through the slow hairpin and chicane merely average.

My only previous experience of a Miles-framed bike, with a Norton Commando engine, revealed no such limitations. Norton expert Mick Hemmings, who'd owned that Miles Commando and happened to be watching the Nourish's progress, thought the behaviour untypical of the breed. On paper the chassis' combination of a 57in wheelbase, 28-degree rake and an engine carried fairly high, might be expected to require some effort to drop it into corners and pick it up again; on the other hand stability should be its middle name. Certainly the pedigree of the Rob North-

designed frame belies the antics of the Nourish in its present form.

What Gavin's bike represents is competitive racing on a shoestring. The machine may look a bit ratty, but all the important bits are sound. Because he lives some way from London, he has had to set it up without the benefit of attention from the Miles Engineering shop – and therein may lie the reason for the handling quirks. The fact that he has made the bike a championship winner reflects even more on his forceful riding ability.

In 1987 Gavin will extend his racing to CRMC events, using wire wheels, Triumph disc brakes and Lockheed calipers to make the bike eligible. The handling will also have received some attention by then, so it will continue to be a machine worth watching.

Specification

Engine	ohv twin
Bore x stroke	77.8 x 88.5mm
Capacity	842cc
Compression ratio	9.8:1
Output	82bhp @ 6,800rpm (est)
Carburation	2 x 38mm Amal Concentric
Ignition	Lucas Rita electronic
Gearbox	4 speed
Frame	tubular
Clutch	multi-plate, dry
Suspension (front)	telescopic
(rear)	swinging arm
Brakes (front)	2 x 10in discs
(rear)	10in disc
Tyres	3.50 x 18/5.00 x 18
Weight	320lb (without fuel)
Top speed	140mph (est)
Year	1982 (built)
Owner	Gavin Hunter, Worcs