

PANTAH POWER

TTF1/F2 DUCATI HAD THE ANSWERS

People tend to forget that Ducati's dominance of World four-stroke competition began way before the 888/926/916. Back in the early to mid-eighties their desmo vee-twins were just as competitive in TTF1 and F2

 It's no exaggeration to say that the performance of the works Ducati team in the 1984 World Championship events they contested was a bitter disappointment to the thousands of fans of the Italian marque the world over.

But didn't Tony Rutter win the world TT F2 title for an amazing fourth year in succession on a Ducati in 1984, and perhaps even more meritoriously, place third in the World F1 series ahead of the works Suzukis?

Sure he did, but though the bikes he achieved excellent results on – at the tender age of 42 – were supplied by the Bologna factory, they were basically updated versions of the cantilever rear suspension Verlicchi-framed bike which first appeared in 1981, and which Tony ran himself with the assistance of that deft 'Ducatisti', Pat Slinn.

Meanwhile, Franco Farne and his small band of men in the factory 'Experimental Department' (Ducati had no race shop as such back then) were developing a new machine built around the 750cc version of the belt-driven ohc desmo Pantah engine, with which at the start of the season they seemed to have an excellent chance of success in the World Endurance championship in the first year of the 750 TTF1 class.

Sadly, though, it didn't quite work out like that, as mechanical problems coupled with a pair of crashes sidelined the team in all

but one race, when they finished fourth in the German round at the Nurburgring. It was left to a pair of Frenchmen on an updated '83 bike entered by the local importer to wave the Bologna flag with a series of well-placed finishes leading to fifth place in the final championship positions.

This seemed rather a let-down after pre-season hopes that the reduction in the TTF1 capacity limit would enable the Italian vee-twins to be competitive against the Japanese fours. Yet as I discovered on a trip to Imola in mid-November, 1984, in company with Tony Rutter to test the 1985 version of the works Ducati racer, Franco Farne and his leading rider, former 250/350 World Champion Walter Villa, never expected much more from the season. It was only the rest of us who did.

"We spent most of '84 developing what was essentially a completely new bike," explained Farne.

"Though I must admit it took us much longer than I'd hoped, in the end the results were satisfactory."

Sure, Franco – that's what you were supposed to tell us pen-pushers from page 94 of the PR handbook! "No, really, I can assure you we met our objectives. But we had to constantly experiment with so many variables: wheelbase, ride height, offset, springing, damping rate, trail and so on simply to sort out the entirely new suspension we had on the bike. Even though it looked quite similar, the 1985 TTF1 bike was all new. To prove how well we succeeded, you need only look back to the penul-

timated race of the World Championship at Mugello, where we led the race ahead of the works Hondas until a piston broke up."

With those confident words ringing in the air, and remembering that the Mugello race was begun on a damp track on which the intermediate-tyred Ducati had a distinct advantage over the rest of the field who started on full wets, I recall Tony Rutter setting off for his first laps on the bike, before I turned back to quizzing Farne.

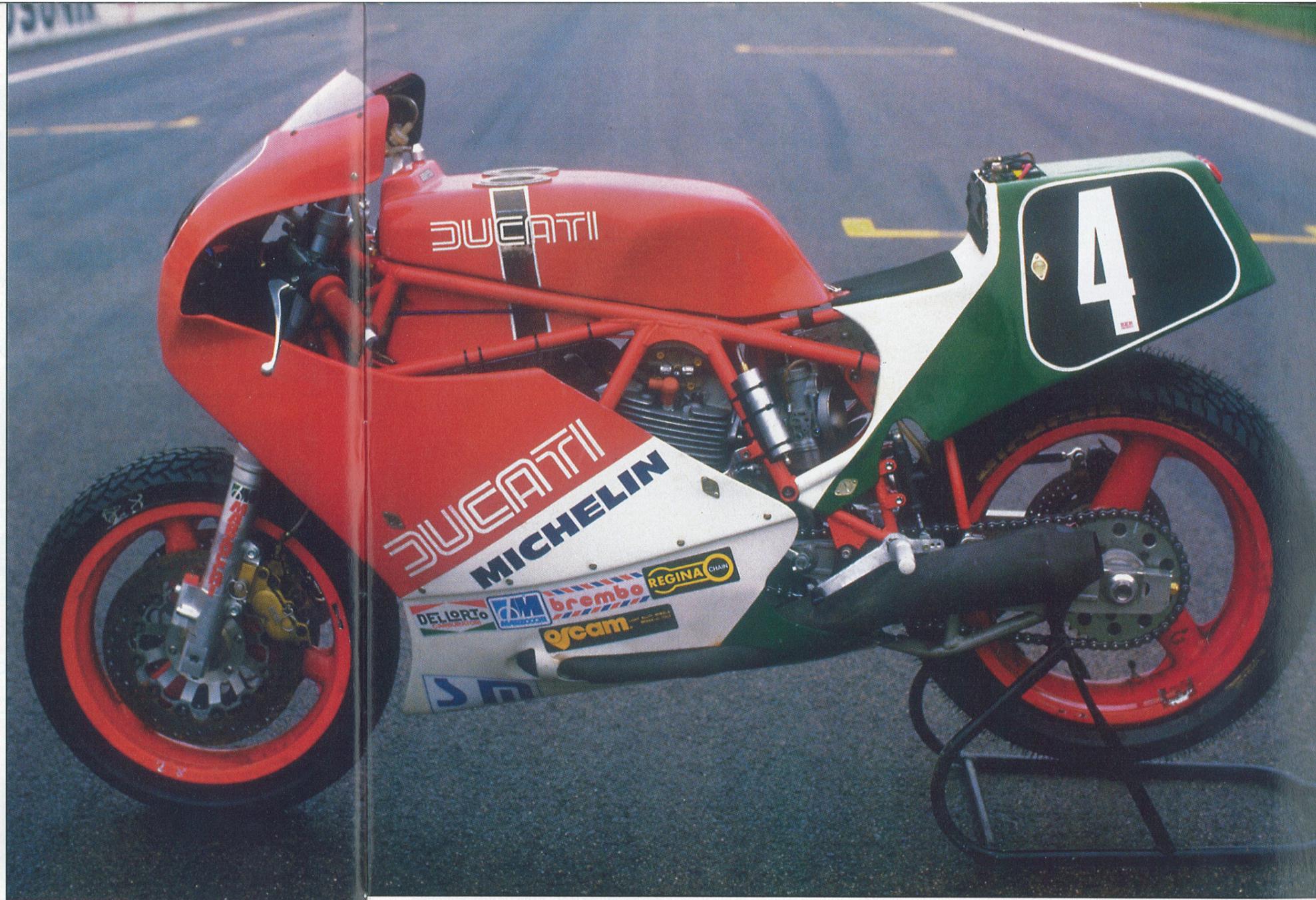
Why build a new bike at all, given their reasonable chances of success in the first year of the new formula, as evidenced by Tony's third place in the TTF1 series? "We needed a new frame to take advantage of the advances in tyre and suspension technology since 1981 when the first spaceframe bike was designed. This was especially necessary because of the new Michelin radials. In 1984 we had 18" tyres

that were 14 cm. (5.5") wide, but this year the radials were 17" in diameter and 18 cm. (over 7") wide, on 5.5" rims. We also wanted to reduce the weight still further, and improve suspension response, especially at the rear. This meant modifying the chassis to fit a vertical rear unit with rising-rate linkage offering greater progression and a wider degree of adjustment."

The result was a bike that at a casual glance looked very similar to the older machine apart from the swoopy, high-fronted fairing with its vestigial screen, but which in reality was, as Farne claimed, a member of the younger generation of motorcycle design.

Instead of the TTF2's 35mm Marzocchi front forks, the new bike was fitted with 41.7mm Kayabas off an RG500, with hydraulic anti-dive. Marzocchi produced a copy of these (funny: 20 years previous it had been fash-

**The 1985
Ducati 750cc
TTF1 racer.
Compact
chassis with
106 bhp power
unit and
weighing under
120 kilos**



RPM track test

1985 DUCATI 750F1

ionable to decry the Japanese for copying us), the prototypes of which were fitted to the bike set up for Tony to test. At the rear, both Marzocchi and White Power units had been used in the rocker arm system with alloy swingarm, but on the 1985 prototype, a one-off air-damped Double System unit, hand-made by an engineer from Rome, was being tried out with impressive results.

The chrome-moly chassis was made by Ducati themselves in Columbus tube, and while the front end was almost identical to the previous bike, obviously the

rear was altered for the revised suspension layout; also the triangulation above the rear cylinder was widened to permit ease of access to it. Wheelbase was the same as before at a compact 1370mm – about the same as most 500 racers.

Originally both wheels were of 16" diameter, but then Michelin came out with their 17" rear radial, which had the same rolling radius as a normal 16" cover. Twin 300mm Brembo discs with four-pot calipers were fitted up front, mated to a 230mm rear; originally the bike had only a single front disc, in which form it

scaled an incredible 122 kg. dry, but including the Nippondenso starter motor, the externally-mounted generator (for speed of changing in an endurance race) and lights. But early testing showed the Ducati, which had been timed down the Mistrale Straight in the Bol at 255 kph, to be badly underbraked, so a second disc and caliper were added which together with the heavier 17" rear wheel – Marvics front and rear, by the way – brought the weight up to a still anorexic 125.5 kg. Deduct six kilos plus for the starter and other unnecessary electrical equipment, and you have a 750cc four-stroke racer weighing under 120 kg without the use of flimsy alloy frames or exotic chassis material, yet produced 92 bhp at the rear wheel at 10,000 rpm, with power from 4,500 revs upwards: that's around 106 bhp at the crank. Amazing.

I remember mulling over the

figures and trying to work out the power to weight ratio in my head when Tony Rutter arrived back at the pits after his first handful of laps on the bike. Like most Brummies, Tony was never much given to excesses of emotion, but I thought for a moment he was going to forget Queen and Country and embrace Farne on the cheeks.

He recovered in time though: "Bloody fantastic: this bike's worth 40 seconds a lap round the Isle of Man" was all Franco got, so with Rutter almost speechless with delight, I remember being shoehorned aboard and set off to find out what all the fuss was about.

I had a bit of experience of Pantah-engined Ducati racers, having ridden Rutter's '82 World title winner in the Macau GP that year, and various other similar bikes with the old-style frame, including Trevor Nation's British-built Sports Racing replica