

DUCATI'S 900SS

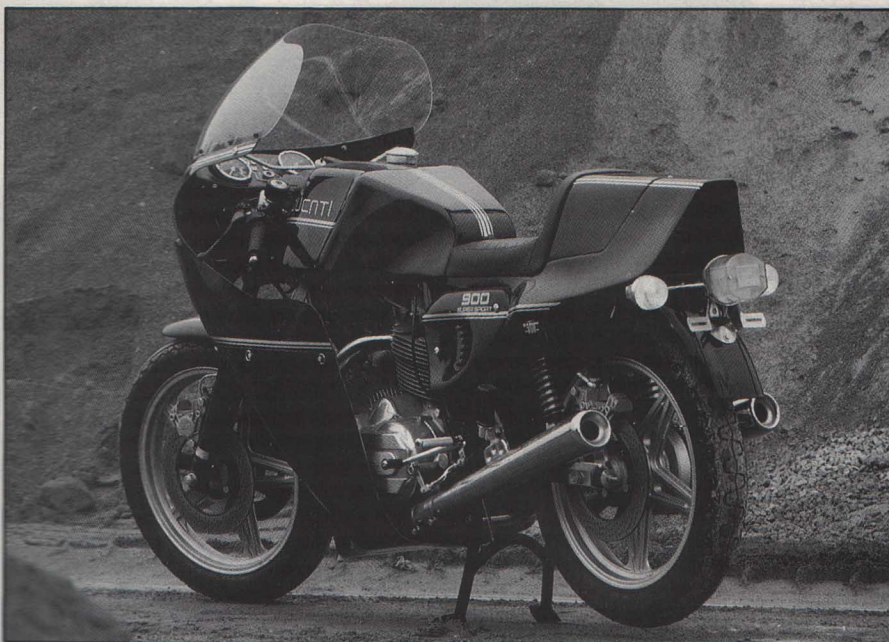
Ducati's 900SS Mike Hailwood Replica, and Darmah. Bikes of the '70s, which a couple of Sundays a year make worthwhile/David Lancaster.

There are very few bikes that have aroused passions like Ducati's 863.9cc bevel drive V-twins. A look at a well-kept 900SS will, if you're that way inclined, explain why. They were bikes built to go fast, look the part, and out-handle anything else on the road – which, in the last decade, they did. As usual bikes that are now becoming dangerously 'collectable' you will find the die-hard bore who tells you that *nothing* handles as well as a 900 Duke. Nonsense. With a wheelbase around the 60in mark, and relatively slim profile, large wheels, they handle well, but essentially are slow lumbering beasts which stay on line come hell or high water – or rider input.

The engine all these bikes are based on has derived its own mythology, perhaps with more claim today than the chassis can realistically expect to hold. The famous desmo valve gear is a serious plus for an engine, easing as it does pressure on the valve train in the case of over-revving. And there is nothing that emits such a crisp, beautiful exhaust note as a healthily compressing large Ducati, nor perhaps such a pleasurable delivery of power. But do not think that a large Ducati is going to be fast by today's standards. Top speeds of approaching 140mph were, and probably are, possible, but traditionally high gearing has always been a part of the large Ducati, as has an always nagging doubt about the method of travel home that evening.

Beyond all this however is a genuine addiction which talking to any owner of a bevel-drive Ducati will almost have you convinced of. If you like, when they're bad, they're very bad, but when they're good they're bloody good and the good thrash on a Sunday will make it all worthwhile.

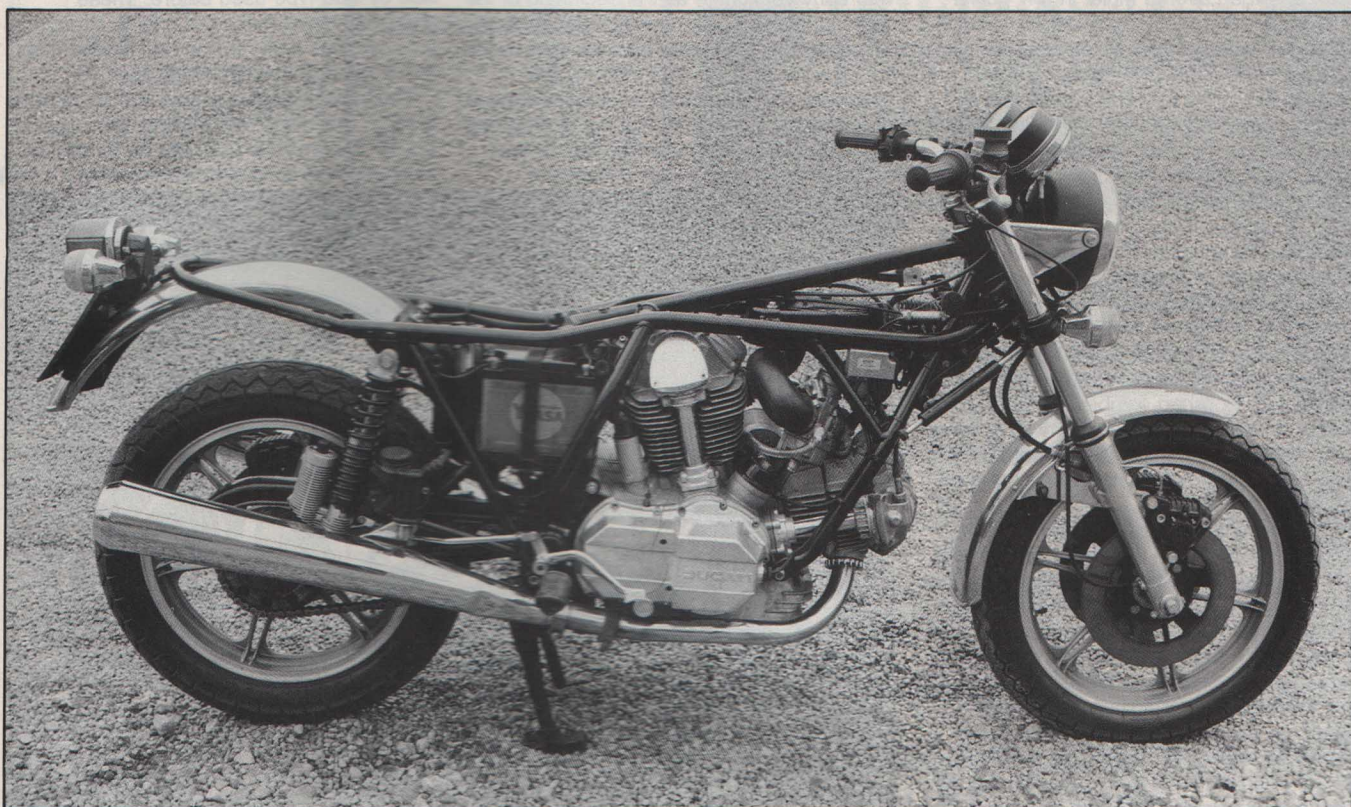
So what is it that makes a motorcycle such



The large Dukes always looked good, as this late example amply illustrates

a bag of emotions and contradictions? As was often the case at Ducati Meccanica, the 900SS came about through management incompetence, and other model failure. After the success, both in racing and sales terms, of the 750 line (the fast SS and more sedate but still worshipped Sport), the factory went ahead with the 860cc line of bikes: the GT and the GTS. These were not met with open-armed praise by the press nor public, and it became apparent to many that what the Ducati customer wanted was a fast road bike, not a styled tourer – that was what BMWs were for.

An uprated 750 desmo headed bike was the factory's plan to continue Ducati's name in factory cafe-racers and it was this model, called from the first the 900SS, that kept the racing and development departments busy. The year was 1975 and these early 900SS bear a striking, and attractive, resemblance to the 750SS of the time, with their silver tank, blue fairing and deep blue and black decals. These are too the most sought after 900SS model, with prices going as high as £6000 for a good one. The unit was the same as fitted to 860GTS of the time, but with addition of desmo heads making it safe to rev ►



Stripped of its clothes, the Darmah is as spare as any. Note the steering damper – the first on a Ducati



The Mike Hailwood Replica in its natural mode – flying along quiet roads

to 8000 although power peaked at 7200rpm with a little under 70hp at the back wheel. But what caught the imagination of all who tried the 900SS was the flat torque curve, pulling the same at 4800rpm as at 6900. It was also the fastest production motorcycle on sale (if you could get one) with its 140mph top speed putting it ahead of the Kawasaki Z1 of the time and the Laverda triple, in any guise.

Compared to these multi-cylinder beasts the 900 Duke was elegance made metal (© LJK Setright). Only 27in wide, 427lb light and fuel figures in the low 40s – betraying its endurance racing genesis – the first 900SS engine used had been around form some time in the form of the prototype 860 which came out at the 1973 Milan Show, called the GTI. Bored out to the aforementioned 863.9cc by the time it fell into the 900SS, the stroke stayed as was at 74.4mm. Compression ratio became 9.5:1, it ran through a five-speed box and breathed through 40mm carbs and the attention to engine detail showed its race-shop parentage. Polished webbed con-rods each having a separate cadge with two hardened steel rollers are just an example of the fine engineering that went into Ducatis at this time.

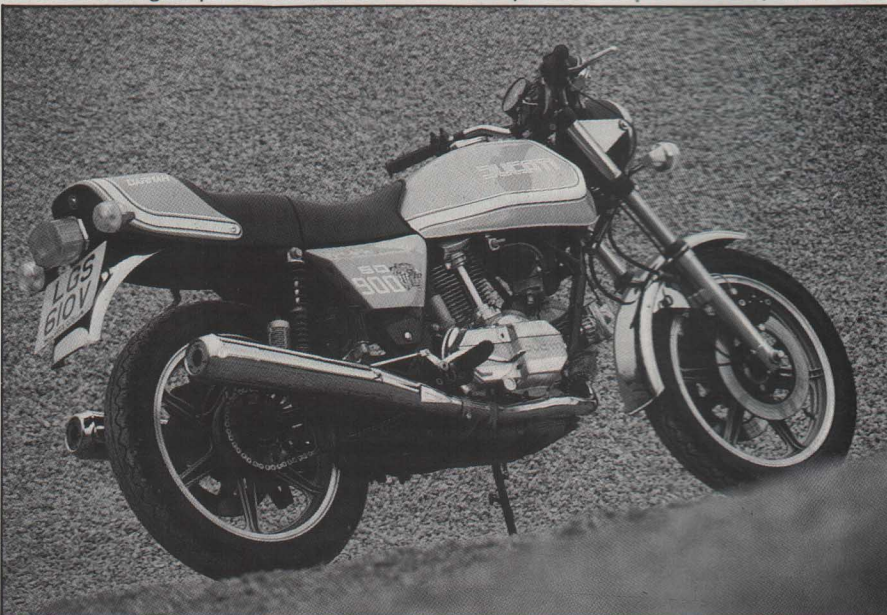
These early models – frame numbers 086001 to 086250 – had problems with the clutch in the form of snatch in the cold, particularly just as the drive is taken. The problem was the fault of a thrust washer between the support bearings in the actual clutch housing. As Mick Walker chronicles in his *Ducati Twins*: 'Originally these two bearings were identical 25×47mm items which sandwiched a circlip and a 1.9mm thrust washer. In mid-1975 this was changed to the front bearing receiving its own built-in

circlip and the rear bearing being increased to 25×52×15 with no thrust washer.' A moddied clutch housing, drum and smaller parts eventually cured the problem.

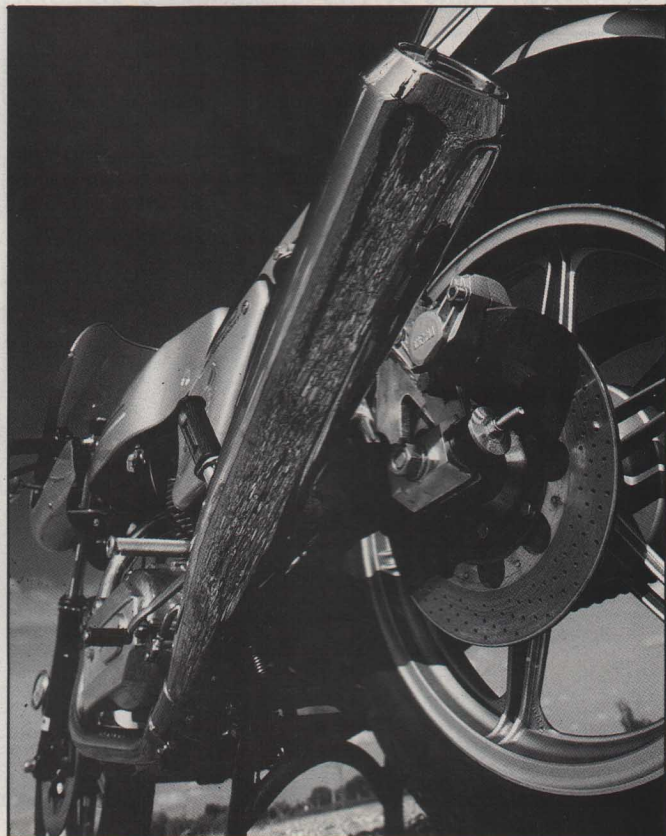
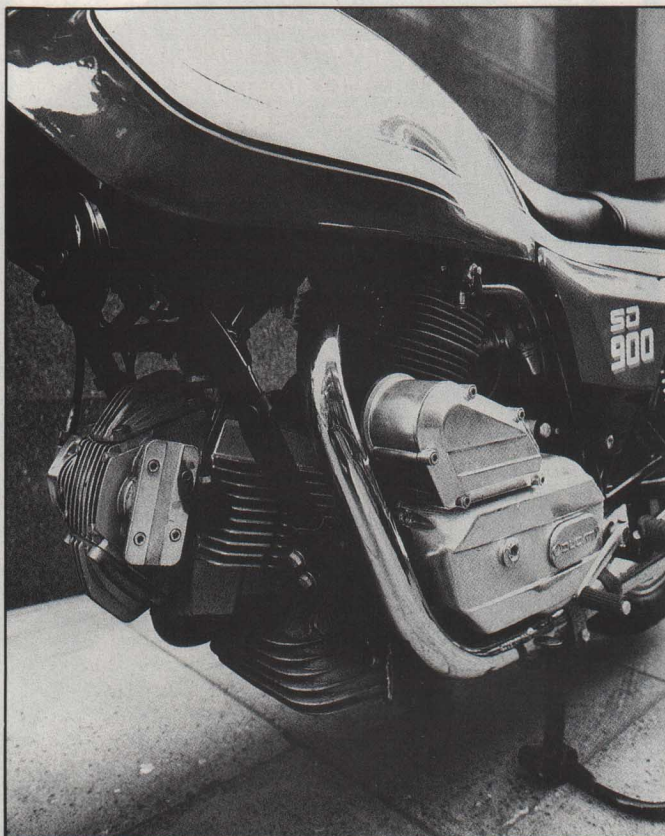
Changes soon descended on the 900SS with steel petrol tanks as standard, and Brembos with 'drilled discs coming along. In 1976 came what some see – mostly those with early versions – as the beginning of the 'watering down of the original racer concept'. The gear-change moved from the right, to the left. The move did in fact mean worse selection, as it's bound to on a unit designed round a right-hand shift. A lining system and rod was fitted putting another step in the transition from gear pedal selection to

gearbox. After this the factory produced a 900 with restrictive Lafranconi silencers, large air filters and 32mm carbs. Again, it wasn't well met and didn't last long. This was also the year of another important change; the introduction of a stepped 36/38mm crankpin. Accompanying this were new single straight across rollers instead of the side-by-side type used before. These changes helped make the engine stronger, but sustained high revving has always taken its toll on large bevel-drive Dukes.

The tasteful black and gold 900SS came in in 1978, one of the best looking bikes, period. But by this time the 900 was no longer the most powerful lump on the road, even if it still ►



The styling of the Darmahs was met with approval at the time and they don't look bad today – except for that Tiger



Left: the powerhouse for the SD was basically a de-tuned 900 lump, but still fast nonetheless. Right: well, with such a bike we should be allowed one arty shot, and this is it – gold wheels, Contis and all

held it better than most. Other changes were the introduction of a dual seat with fibreglass lump, the electrics were uprated in line with Darmah and names like Bosch, Nippondenso and Lucas started appearing. So, in various stages of development the 900SS continued until 1982, to be replaced by the much maligned 900S2.

This model was not well received. Walker calls it 'A mere shadow of a once truly great motorcycle' and although the Pantah-type styling, which / at least like even if no one else does, was a departure from the 900SS, Ducati could not rest on their laurels because the Japanese were by now making as fast, and as good handling motorbikes. More painful perhaps than the styling however was the fact that the only remaining part not culled from Pantahs and Darmahs was the SS swingarm and gearing sitting uncomfortably with a newly restricted engine. The bike was very overgeared. The riding position was criticised and the quality of parts – the seat for example – heralded new lows even for Ducati. The clutch was improved however, as until that point owners of 900SSs had sometimes had to fit stronger springs from 450 singles and the like. One consequence of all this disdain is that the S2, although there are few of them in the country, is more reasonably priced than the 900SS.

Alongside the 900SS from 1977 onwards sat the Darmah in its various forms, SD, Sport and SS. It was a serious and successful attempt by the factory to gain ground beyond the pure sports market. Simply, the Darmah is the desmo engine in a set of cycle parts demanding less from the rider ergonomically. The name derives from a children's tale about a tiger, and the resultant transfers are some of the most

tacky the Italians have ever produced. Still, it was the mid-70s and if The Who could get away with, and even be taken seriously, a rock opera, Ducati could build a bike with a tiger on the side for grown-ups.

The concept was well executed however, and the Darmah filled a niche in the range similar to the Paso today – a sporting V-twin that didn't break your back. The main improvements were in the electrics – handlebar equipment was by Nippondenso, Bosch provided the new electronic ignition pick-ups and lighting and HT leads came from Nippondenso and starter solenoid from Lucas.

The bike was heavier than the 900SS at 475lb and this, along with the softer tuning, held maximum revs down to 7800rpm and top speed down to something like 120mph on a good day. The gearbox was the same as on other V-twins, but a new gear selector mechanism was needed for the now standard left hand change. The styling was by Leo Tartarini, earlier responsible for the 500 parallel twins, and once round a decent bike the result was fresh and new for the time. The swingarm was altered to take a rear disc for the Darmah, and 38mm either Ceriani or Marzocchi forks were used up front. Another first was a standard steering damper, the first on a Ducati at least, pointing to the slight but undoubted loss in handling finesse compared to the 900SS.

The main problem with the Darmah that became soon evident was the electric start sprag clutch, an item made to lock in one direction, but rotate in the opposite. This little beastie *could* break up and the contents spread into the engine with the circulating oil. Other than this weakness, the fittings and finish were above previous Ducati standards,

and about time too. The standard Darmah SD had 32mm Dellortos and Lafranconi silencers, while the Sport – introduced a year later in 1978 – had 40mm carbs of the same make and less restrictive Conti silencers. A year after that the Darmah SS came about, which was basically a 900SS spec engine slotted in.

But while the Sport's sporting pretensions remained mostly that due to failing to open the inlet tract to take advantage of the bigger carbs et al, the SS version had wider inlet ducts for the 40mm carbs, and the same gearing as the SS. With such a unit, the bike lost some of its softer nature, and lost the softer looks too. Clip-ons were in, a small fairing and rear-sets – all graced what was now only a small fairing and rear-sets – all graced what was now only a small step below the 900SS itself. The Darmah wasn't to last that long however, with the SS going out of production in 1980 and the last trickle of them coming into the UK in 1983. Briefly, the Darmah did and still does, supply a gap for those wanting a large desmo Ducati, but can't stretch to a 900SS.

One thing people did stretch to in large numbers was the Mike Hailwood Replica. After Hailwood's remarkable win in the Isle of Man in 1978, aboard a privately entered and tuned 900SS from Sports Motorcycles, the factory for once saw a marketing opportunity and took advantage of it. So, in 1979 the Mike Hailwood Replica was born. Basically a 900SS in all but name and fairing, it stood out from the crowd as owners wanted with its Sports Motorcycles green and red colours and, like many before, was intended to be a limited run of 200 machines. These early machines with a certificate to that effect can be distinguished by their fibreglass cover

over a steel tank. These machines are worth the most to investors as well.

Model changes here were mostly cosmetic, with side panels coming on stream early on – the very first exposed the battery one side and carb the other – and the fairing soon changing to a vertically split affair to ease maintenance, the original being one-piece. Wheels, like the 900SSs, were from different sources; some FPS the best ones, others Speedline and some Campagnolo. From '79 all of the MHRs used the Darmah SS engine and all through the MHR used Darmah derived Nippondenso switchgear and instruments too. Of all the large desmo bevel-drive twins, the MHR is perhaps the most simple to buy with an unusual absence of suspect parts and a still recognisable style of its own. As if to emphasise the market-led nature of the Hailwood look-a-like bike, top speed was in fact down on the standard 900SS by a few mph. But lots of buyers didn't care about such minor details in an age when Ducatis were fast losing pace against the Japanese in the performance stakes anyway.

When it comes to buying a large bevel-drive desmo V-twin there are many who'll say simply, don't. It'll end in tears they say, and cost a fortune to keep going. All of this is true, so be prepared. But if you are really determined, it's a bike – like any Ducati in fact – that can afford the rare pleasure of sound, motion and feeling all coming together.

Sometimes.

But purchase is in the lap of the gods. The bikes are mechanically noisy as a matter of course, so hearing a problem will be difficult. Similarly, you're relying more than usual on the good will and mechanical competence and sympathy of the previous owner. They need fresh oil and filter every 1000 miles for a start, so question the seller how often this has been done and what sort of oil was used. (It should be a straight 40 or 50.) The most evident sign of health or ill-health is the compression in the engine room. 900SS owner Steve at Moto Vecchia suggests a 12-stone person should be supported on the kick-start at the top of a stroke if compression is about right. If it doesn't move at all, then steer clear too. Riding one, the engine should respond sharply, but don't expect snap acceleration – it's not that sort of power. The handling should be a bit like a train, with a line seeming to be cut away for it.

On the Darmahs make sure there is no sign of jumping out of first or second gear as this is a sign that the dogs on the gears are slipping and usually means a new box. Performance parts: avoid them. The unit is a large two-valve per-head twin, and making it go faster is not an easy course to chart although Steve Wynne's Sports Motorcycles' gas flowed head, using cast iron rather than bronze seats is a possible exception worth making, but the standard ones will hold their value more.

The electrics should all work, even if they haven't always. If someone tells you the electrics have been no problem, cast a suspicious eye over this one. The Darmahs in particular are, as said, susceptible here in starting. The whole plot however will never be as tidy as the equipment on bikes today or even ten years ago, so bear this in mind. As for the different models, you have to take care and look for what you want. If £2000 is as far as you can go, a Pantah is a better alternative to a troublesome Darmah, a good one of which is unlikely to go for less than £2500. The 900SSs are reaching very high proportions, with £3000 being the lowest for a reasonable one, and while a Darmah for £2000 might seem a cheap way to getting a 900SS of sorts, it'll cost the same to keep going and still be a Darmah.

The Mike Hailwood Replicas start high as well. £3500 is a low figure, and usually more. More than most bikes, Ducatis are worth taking someone along who knows their stuff, but they can still let you down without warning. Two-into-one systems do not reward much on large Dukes either, mostly just spoiling the firing impulses on such a large motor.

But take heart. Most people who've got one now, and have it a while, will have looked after it because you have to. They're the sort of bokes that leave you the rest of the week to change the oil after the once-a-week thrash.

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DATA

900SS, MHR and Darmah SS

Oil type	Straight mono-grade 40/50
Oil capacity	4.75 litres (all models)
Tappets (inlet)	closing: 0mm opening: 0.13mm
Tappets (exhaust)	closing: 0mm opening: 0.15mm
Spark plug	Nippondenso W22 FS2U
Front tyre	3.50x18
Rear tyre	120/90x18
Ignition	electronic
Wheelbase	59in (61in Darmah SS0)
Dry weight	414lbs (MHR 445lbs)

Darmah SD and Sport

Oil type	Straight mono-grade 40/50
Oil capacity	4.75 litres
Tappets (inlet)	closing: 0mm opening: 0.8mm
Tappets (exhaust)	closing: 0mm opening: 0.12mm (SD) opening: 0.08mm (Sport)
Front tyre	3.50x18
Rear tyre	120/90x18
Ignition	electronic
Wheelbase	61in
Dry weight	476lbs

SERVICE CHART

Every week

Check oil levels
Check lights and connections
Check brake cables and lever play
Adjust chain if necessary (note: Darmah chain should be adjusted with person on bike loading wheels)

Every 1000 miles

Change oil and filter
Check all electrical connections
Check pistons in brake calipers

Every 2500 miles

Check and adjust shims if needed (note shim wear on valve seats)

DUCATI'S 900SS

The Darmah had every right to proclaim its desmodromic drive as much as any other model – even if it doesn't need it as much. Campagnolo wheels; not as good as the FPS items, but they still maintained the Ducati's reputation for fine handling, even in the wet

