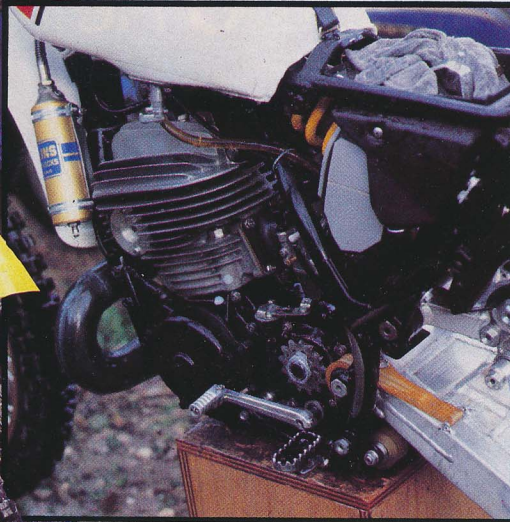




Brad Lackey's works Suzuki appeared at the French 500 Grand Prix season opener sporting these 'upside-down' Simons forks. The units, which by reversing the traditional arrangement and having the sliders on the bottom substantially decreases the unsprung weight, have been under development in the USA for some time and a version of this latest model should be available soon. Several other factory riders have expressed interest in the forks and it could be that Lackey may not be the only GP rider using the Simons by the end of the year.



RIGHT: Husqvarna have suffered from a definite shortage of power as the Japanese bikes have moved upwards towards a full 500ccs. Now the Swedish factory has launched a counter-attack. The engine, which at around 498 is nearly 70ccs bigger than its predecessor, should have appeared in production guise in this country by now. It has a four-speed gearbox - two ratios less than the old 430 - and a hefty 44mm Mikuni carb breathes its exceptionally torquey long stroke motor.



Neil Hudson's seat-less, chain-less Yamaha stripped and ready for blast cleaning. Note the new-style 'I' bar which connects the swinging arm to the 'L' piece of the suspension linkage. There are strong rumours that Yamaha may be about to depart from the Mono-shock style suspension which utilises an under-tank shock in favour of a completely new system. Their new works road racer features a system with an across-the-frame damper but width consideration make its use unlikely in moto cross.

"After years of asking for lighter bikes we've finally got what we wanted," said Graham Noyce at the French GP. Now if anything the works 500 Honda is a little too close for comfort to the 101 kg weight limit and some heavier parts had to be fitted to bring the bike up to the permitted minimum. The 'little' Honda is generally reckoned to be one of the neatest bikes on the GP scene. World champion Andre Malherbe has a five-speed gearbox in his mount but Noyce has decided to stick with the same four-speeder he used last year.



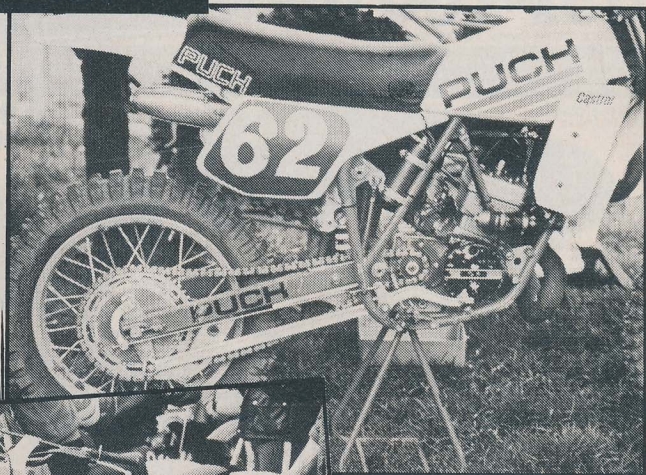
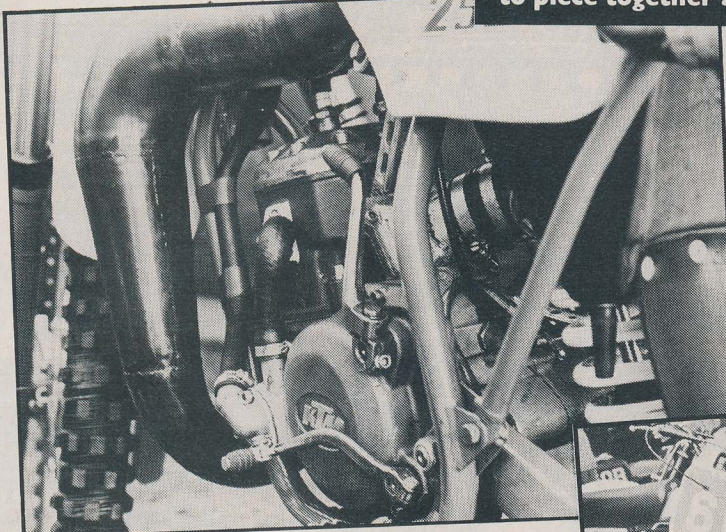
GP 250 and 500cc

Secret weapons

As we went to Press KTM works 250 ace Kees van der Ven had yet to give the Austrian factory's new secret weapon its GP debut. The watercooled machine was finished in time for the French 250 but van der Ven opted to stick with the aircooled works bike for that event. The all-new machine - a prototype for next year's production machine - features a radiator-mounted behind the front number plate à la Yamaha, left side mounted waterpump and reed valve induction.

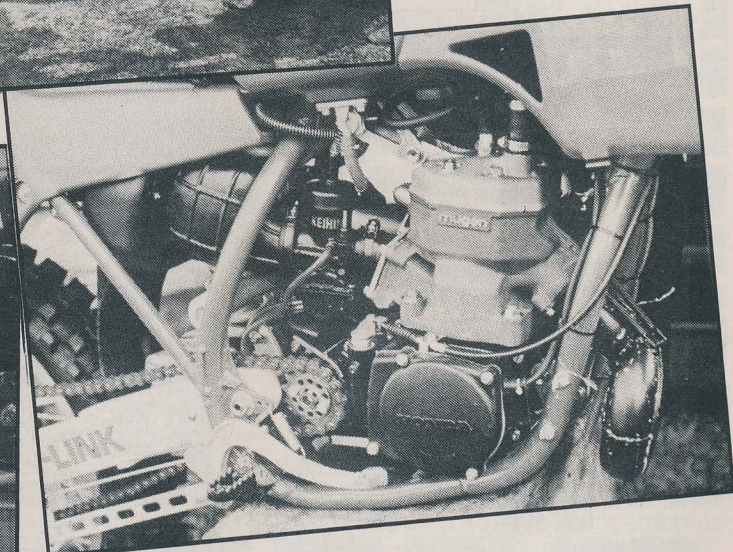
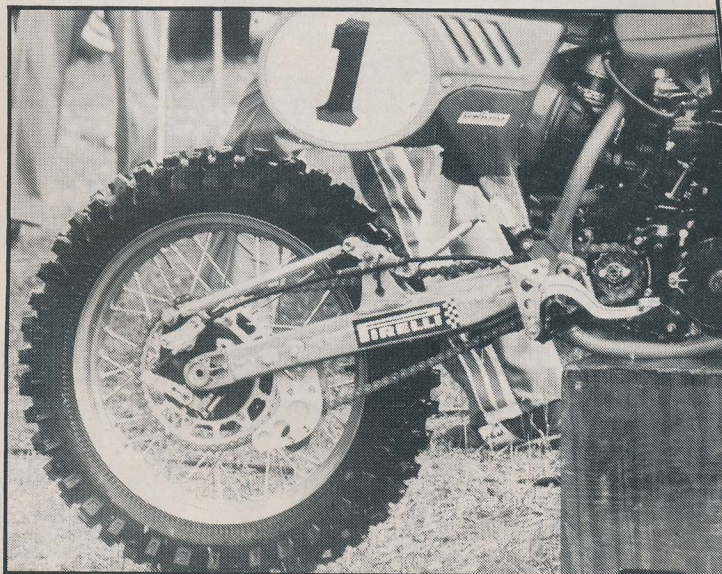
Staff photographer John Noble's roving camera was at the first 250 and 500 grands prix of the season to seek out the technical advances in GP moto cross. The factories as usual were less than forthcoming on the secrets of their grand prix babies but our spies have managed to piece together a few facts . . .

BELOW: The Austrian Puch factory were covering all their options at the opening 250 GP. They had three different works bikes ready. As well as the latest square-barrelled watercooler, which features an electric water-pump bolted alongside the cylinder, there was last year's watercooled bike which features the same suspension and frame but a less highly developed motor, and a 1981 aircooled version was also ready for action.



LEFT: Despite CZ's attempt to forge their way into the 'eighties with a single shock rising rate suspension system and reed valve induction on their works 250s for 1982, the Czechoslovakian-built machines are still the slowest works bikes around. The linkage of the rear suspension, which uses an Ohlin shock, appears to be a rough copy of Honda's Pro Link.

Honda brought out a new rear brake system at the Austrian GP in May. Andre Malherbe and Graham Noyce both used the new set-up (below) which features a cable-operated twin leading shoe stopper and a two-part torque arm. In the middle of the two parts is a bell crank mounted on the swinging arm. One end of the arrangement is attached to the brake plate and the other to the frame. This provides an upside-down torque arm which will remain at a constant length no matter what the position of the swinging arm. Honda, who are said to have spent around £10,000 so far in development, say the device helps stop rear wheel hop under heavy braking.



German Honda riders Rolf Dieffenbach and Arno Drechsel have secured a curious works Honda contract which gives them bikes direct from the Japanese Mugen factory. While Belgians Jean Claude Lacquaye and Gaston Rahier were supplied with standard Hondas fitted with Mugen tuning parts, the Germans got the bikes complete from Mugen. The Mugen is an all new motor for this year developed by works riders in the 1981 Japanese championships. The top end of the motor is quite different from the standard production Hondas though certain bottom end components as well as the frame, are basically production items.