

1973 WORKS BULTACO PURSANG 400



The 400 Pursang is one of the great "if only" stories of motorcycling.

It was the right bike, at the right time and could have been the saviour of the Bultaco factory - except, as so often happens, for internal politics.

In 1972/73, the factory desperately needed a competitive 500cc class bike. Remember, at this time the 250cc class was seen as subsidiary event to the 500s which represented the blue riband of motocross. Bultaco had already had a go at producing a 500 category bike in the form of the 360cc Bandido, a heavy ill-handling bike which was a commercial disaster. With this history of failure, they were less than confident about big bikes.

Bultaco's solution to the 500 dilemma was to produce a series of over-bored 250s which first arrived on the scene as 252cc machines and then later, when other teams began to demand strict enforcement of the 351cc minimum rule for the 500 class, 352s and, last of all, a full 360cc in 1974.

The other factor in the demise of the 400 Pursang was that the factory's leading rider was American Jimmy Lee Pomeroy. Not only did Senor Bulto feel that the sun shone out of the usual orifice in the American's bottom -

but every other opening too. Pomeroy had won the Spanish GP for Bultaco and from that moment, anything he said was gospel. And Pomeroy didn't like 500s!

Very few of the 400s were built and two of them landed in the laps of British riders. One, the bike in this test, went to Malcolm Davis who was contracted directly to the factory and the other to Vic Allan who rode for Comerfords, the British Bultaco importer.

It must be remembered that at this time the European factories spent very little on their supported riders who were expected to make a living from riding two classes - the Grand Prix class they were contracted to ride in and the other. Thus, in the case of Davis and Allan, who were 250 GP riders, both desperately needed a competitive 500 to increase their start and prize money, especially in the lucrative international meetings on the continent.

Both riders loved the 400 and in fact Davis frequently rode it in preference to his 250. Recently, Vic Allan said that the bike was one of the best he had ever ridden and remembers beating regular 500cc class stars at early season internationals in 1973.

Vic says: "The bike was tremendous - very fast and very easy to ride. It had loads of power everywhere and was as good as anything

around. In the 250 Pursang chassis it was light too, weighing in at around 220lb. The problem was that if Pomeroy said it was heavy, it was heavy - and no-one else's opinion counted for anything.

"I was going so well on it at the start of the 1973 season that I wanted to ride the 500 GPs but nothing happened so I ended up doing the 250s on a standard production Pursang with the barrel tuned by Tony Dowe who is now Director of Racing at the Arrows Formula One car racing team.

"When Pomeroy broke one of the light weight chrome-moly frames I was given it and had it welded up. You could see who was in charge at Bultaco!

"The 400's only fault was that it had the selector drum underneath the gear cluster so if any rubbish worked its way down it used to jam the 'box in one gear. But this really wasn't a problem - it was just a simple development job.

"The rest of the bike was fantastic with good handling and brakes. The engine never gave any trouble. It really was the bike which could have saved Bultaco."

As things turned out, the 400 never went into production and Bultaco were slow reacting to the long travel suspension revolution which began in 1974. When Bultaco did finally produce a "full" 500 it was in the form of the light and nimble 360 Pursang, developed directly from the 250cc engine. This was a lovely little bike and achieved some remarkable results in the hands of works riders. However, it did not flatter a clubman's riding ability and was not a patch on the 400 which had preceded it and is tested here.

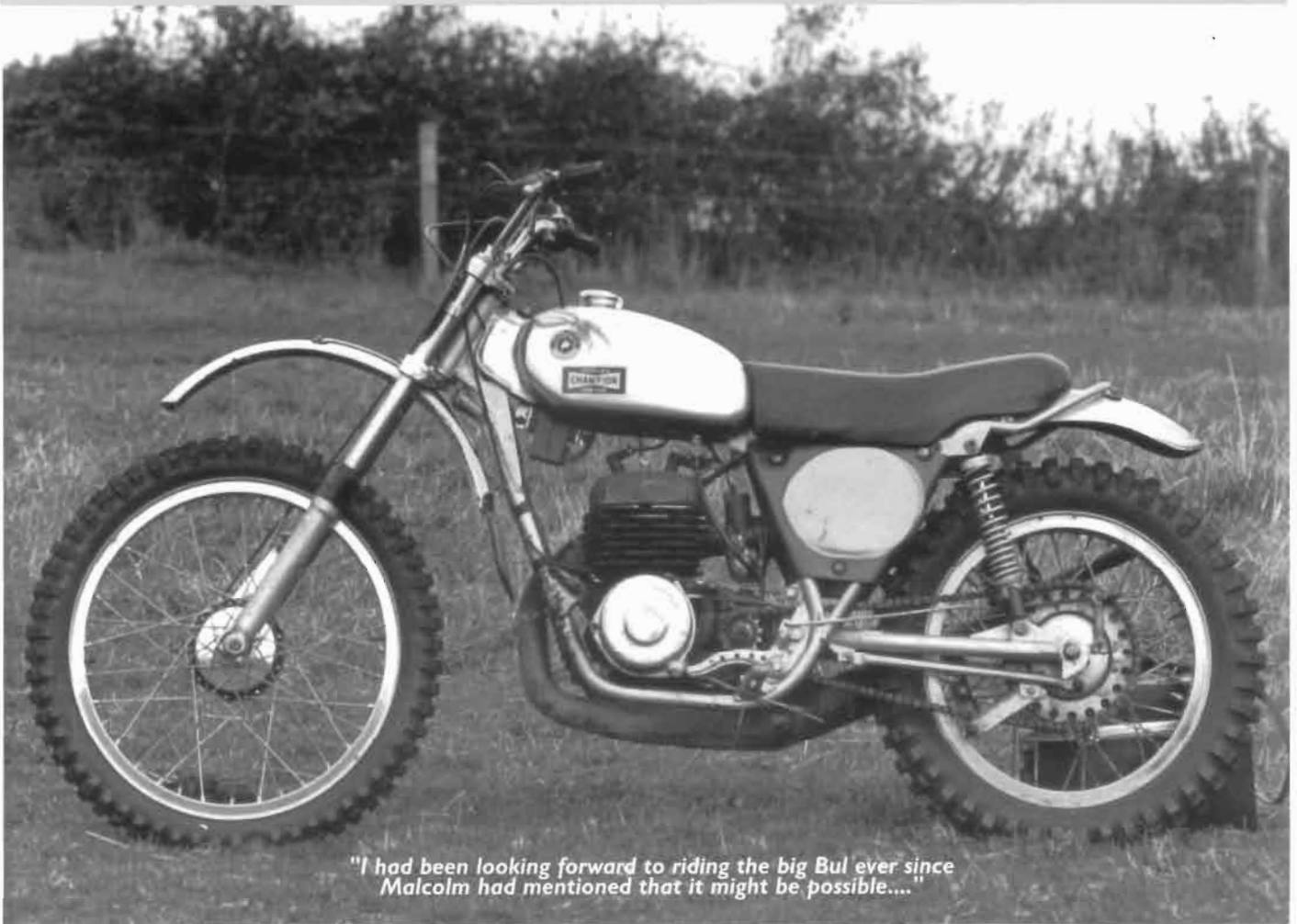
At a time when tyre technology was just beginning to develop rapidly in motocross the timing was perfect for a powerful 400cc motor. A year later, tyres had got so much better that riding the 400 Pursang would have been well within the limits of many decent riders.

Failure to capitalise on the potential of the 400 Pursang played a noteworthy and, arguably, pivotal role in the demise of the factory in 1983 - a sad end to one of the most charismatic motorcycle marques.

As for this test, I am still happy with my assessment of the bike. With the tyres of the day, a good 500 was just too much for even a competent amateur pilot - that's why most weekend racers loved the 250 Pursang so much. However, the soft, torquey power of the 400 Bul was similar to the 400 Maico which went on to be one of the sales successes of the era. The Pursang had even more potential and would have become extremely popular amongst the ordinary blokes who actually purchased motorcycles, as distinct from being given them. It was this solid gold sales opportunity which Bultaco missed.

The Pursang 400 story isn't quite at an end - Vic Allan still has the two original works motors ready to be built into chassis so we just might see these bikes in action again one day.

Frank Melling January 2000



"I had been looking forward to riding the big Bul ever since Malcolm had mentioned that it might be possible...."

When rumours of a 400cc motocross machine first began to drift out of the Bultaco factory, the whole competition world began buzzing with interest.

The Spanish factory was already well known for producing the fastest 250cc production scrambles machines in the world, even though the bikes didn't enjoy the reputation of having the best of bottom end power. Then there was the ferociously fast 360cc Bandido, dogged by atrocious handling and grossly overweight, but still a straight line jet. So what could a factory with this background do with a full 400cc? The world of motorcycles waited.

Soon, stories were heard of frames being twisted inside out and gearbox internals being shredded by the new power-plant. Test riders at the factory gave up trying to tame the beast and the designers went back to their drawing boards.

Development continued and one or two hack motors were released for riders to assess. These engines were not very reliable and more rethinking was done. The result of all this work was the prototype 400 (and I stress that the bike I rode was only a prototype) we track tested for a couple of glorious autumn hours in the depths of rural England.

We are privileged at Cycle Illustrated to have the opportunity of being the first magazine in the world to carry out a track test of a genuine full 400 Bultaco, and we owe a special debt of thanks to the Bultaco factory and Malcolm Davis, its number one works

rider, for allowing us to use a machine which is still under development.

It is unlikely that the 400 Bultaco will be on



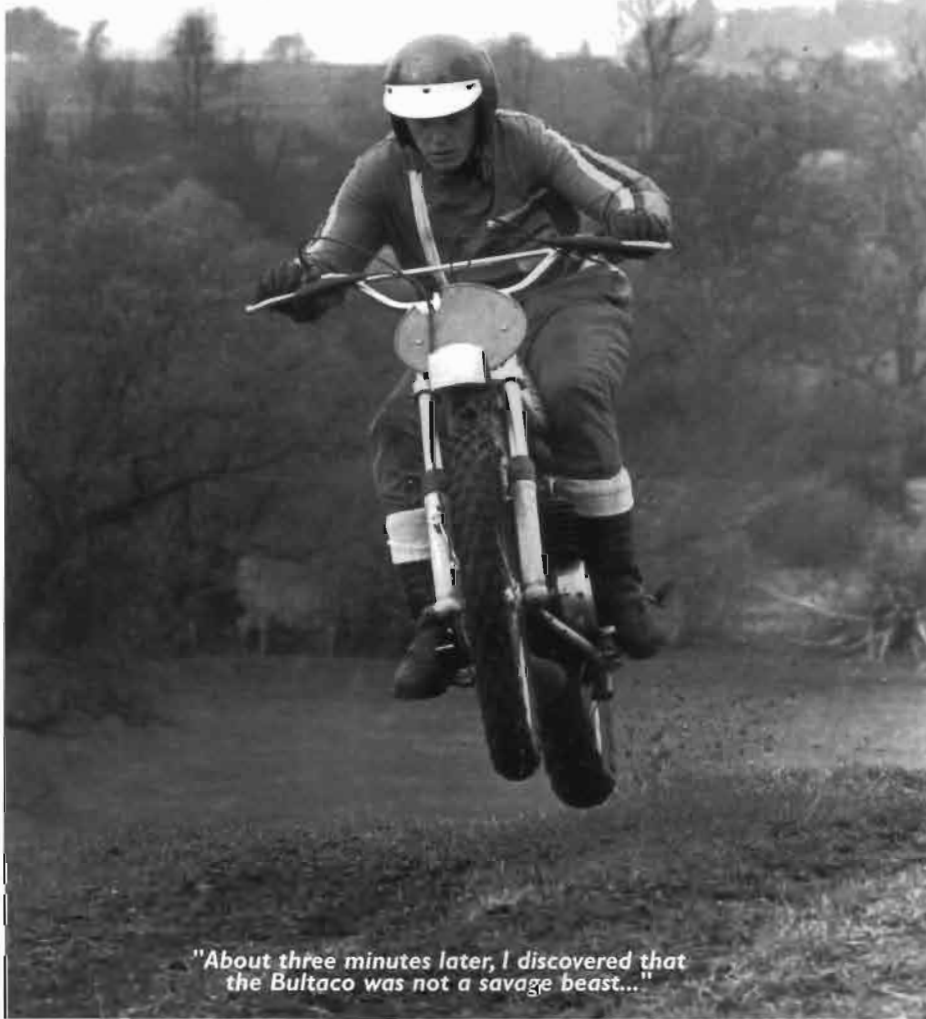
sale before Spring of 1974, so you can guess that there is still a considerable amount of work to be done on the bike. Even so I was able to gain some idea of its potential, and believe me, this bike really has potential.

I had been looking forward to riding the big Bul ever since Malcolm had mentioned that it might be possible for me to ride the bike, but when the time arrived, I wished I was somewhere far away and some other rider, braver and with more ability than I, was going to have the privilege of being the first journalist to ride Bultaco's latest challenger.

The motor, unpolished and rough, looked menacing as it crouched low down in the frame. Its peeling, black, heat dispersant paint created the impression of a combat Ranger ready to go out on night patrol, and the unfinished castings seemed to add a scarcely concealed air of unsophisticated brutality. The Bul had me really worried and I hadn't even got the thing running yet.

Malcolm did this for me by swinging down on the forward mounted kick start. The 400 crackled into life. In an unsilenced state Bultacos are always noisy, but this one was positively deafening. I guarantee that there isn't a noise meter made that could even record how much racket this machine makes; it is too much by far. Needless to say, Bultaco engineers are working on this problem.

When I summoned sufficient courage to actually sit on the bike, I was somewhat reassured. It felt much the same as my own Pursang, which is hardly surprising since the cycle parts are almost identical to those of the present production 250. This meant that everything fitted me nicely; or, in other words,



"About three minutes later, I discovered that the Bultaco was not a savage beast..."

I could reach both brakes comfortably. And at this stage of the game, brakes were what interested me most.

Malcolm promised me that the power was not uncontrollable, although he stressed that there were an awful lot of big, strong horses inside those rough-cast crankcases. Caution, he advised, was necessary, and I am not one to shun advice from a rider of Davis' calibre.

I could delay no longer. One can hardly bring the whole British Bultaco team and photographer together, merely to stand watching a quaking wretch blipping the throttle of the bike he felt sure was going to kill him. So, in with the clutch, a few revs and off we went. Not, as I had thought, in a death defying, arm wrenching lurch, but quite sedately, by competition standards.

About three minutes later, I discovered that the Bultaco was not a savage beast, but rather an obedient but immensely powerful creature. If you want to drive the big Bul around at 600 revs in first gear, the bike is quite happy to do this. Should you want to go a little faster, you open the throttle just a fraction.

But give a big pull at the "go-wire", and the Bul will simply and unashamedly take off in an explosion of wheelies, slides, drifts and anything else that can conceivably happen to a motocross machine.

There is no use waiting for a time lag or even

the most minuscule breathing space between hitting the gas and the response of the bike.



You just have to be ready and in control because once the 400 is given its head, things happen awfully quickly.

I found this out after only two laps of our test track, when I sat too far back on the saddle for a very simple jump and landed with just a

shade too much throttle. On a normal top class machine, this would have meant that the front wheel would have landed a trifle too high, but certainly no more. The Bul blasted off in a heart stopping, near vertical wheelie, which took me about thirty yards to sort out. After that I treated the bike with special respect on jumps.

It would have been to my advantage to have extended this ultra-respect to other parts of the course, but a little too much enthusiasm led to the supreme embarrassment of dropping a works bike. I like fast, sweeping bends and I had really settled down to drifting the big Bul through a quick but bumpy right hander at the bottom of the course. After a couple of hours of riding, I had reached a point where I could press the bike fairly quickly through this corner in a controlled slide. At least, it was intended that the slide was controlled. I clipped the corner of a large, deeply embedded rock while moving with just a little too much throttle, and Cycle Illustrated's English Editor was sitting on his bottom looking at a recumbent works Bultaco.

This incident served to illustrate the bike's immense potential and also the essence of its character. Nowhere on any motocross circuit I have ever seen will the big Bultaco fail to unhesitatingly accelerate, and accelerate very fast. But, and this is a big but, to get the Bul to perform at anywhere near its limit, it takes a rider of the calibre of Malcolm Davis.

Unlike some works machines that I have tried, the 400 was not difficult to ride. For example, the power didn't come on with a nerve shattering surge at any particular point on the rev band. On the contrary, as I said earlier, if you want to go slow, you keep the throttle closed and the faster you want to travel the more you open the throttle. It is as simple as that. But racing the thing is another matter.

It is all very well to test a bike as I did, with no one else on the track to disturb my concentration and no reason to press my riding ability to its limits, but in the heat of battle things would be quite different.

Malcolm was the first to admit that the bike is almost a new concept in riding, simply because even works riders have not had the sort of power available that the 400 offers.

One has to rethink every racing line and acceleration point to make allowances and, if the rider has the ability, make use of the immense reserves of power.

The motor that produces this gentle but vast amount of surge is quite different from that of any Bultaco either past or present. To begin with, it is by far the biggest engine the Spanish factory has ever produced, and it is also quite a different departure from the Pursang/Sherpa/Matador/Alpina range which has won so much acclaim.

The most obvious departure from convention is the forward-mounted kick-start, something of a rarity in the motorcycle world, but a design proven in the world's most reliable cross-country bikes, the ISDT Jawas. You may rest assured that if forward-mounted kick-starts appear in a Czech Trophy team, they are a guaranteed success. The most obvious advantage of this mode of starting the engine is that when the pedal is not in use it points forward, folding well out of the rider's way.

In practice the system worked well. Starting is



"It is, to the best of my knowledge, the fastest motocross machine I have ever ridden..."

easy. Pull in the decompression lever and take a hefty swing with the right boot. Once the engine was nicely spinning (approximately halfway through the pedal's travel) the decompressor is disengaged and the engine usually fired. The kick-start then rested well out of harm's way in a forward position.

Although no specific details were available regarding the engine (even Bultaco isn't going to open up its secret engines for Cycle Illustrated) Malcolm was able to give us some superficial information. The engine is under 400cc, and at the time of the test, gives 42 bhp at 6,000 revs. The early motors gave as much as 48bhp, but even works riders can have too much of a good thing.

Although this is pure guesswork, I think that the engine is a long-stroke design, because the cylinder head is very similar in size to my 250cc Pursang, and if the 400 were a really big bore configuration, it would seem that a noticeably bigger casting would be needed for the head. But, as I said, this is pure speculation. Without guessing, I can tell you that the 400 inhales through a 38mm Amal Concentric carb. At present a 480 main jet is used and the engine still runs weak, so the breathing must be exceptionally good.

The finishing follows current Bultaco fashion in that it is squarish in appearance with anti-distortion bays machined in at staggered intervals. Again, very much after the Pursang design, only more fins. In the head live two Champion N3G plugs, which are fired simultaneously by a Femsatronic electronic ignition system, the reliability of which will be testified to by thousands of Bultaco owners.

Moving to the bottom half of the unit, one finds a lot of new and exciting goodies. To begin with we have the striking starting mechanism I mentioned earlier, but in the cases there also lives a gear primary drive, rather than normal Bultaco duplex chain, and multi plate clutch which uses bonded clutch plates - similar to those found on British superbikes - instead of the more usual metal items. The clutch action is worthy of mention

because it was so incredibly light, especially when one considers the amount of power it is handling. When I rode the bike it neither slipped nor dragged, but there were dark murmurings on the team about "work" having



to be done on some aspects of the design. These boys are absolute perfectionists.

The gearbox was pleasing. Changing from first to second was excellent, regardless of whether one was coming up or down the box, but there was a long, long movement to engage third gear, and this took some getting used to.

The new gearbox has only four ratios, but this is more than ample. I was too cowardly to use top, and bottom would produce enough torque to pull down the Statue of Liberty.

So for the vast number of riders, the big Bul will be a two speed racer. Those two gears, for

the doubters in our midst, will take you from a standing start to 50mph in less time than it takes to say "Bultaco". And 99.999% of all motocross racing is done in this speed range.

The power-plant has proved to be generally very reliable except for some minor problems with gear selection. Because the selector mechanism is below the transmission, it picks up any debris generated during the heat of battle, when missed gears are all too common. The end result is that the 'box locks in the gear which was engaged when the irritant arrived.

I have deliberately avoided mentioning the bike's cycle parts, because the paint was hardly dry on them when I rode the bike and there was obviously a lot of development work to be done. In a case such as this, it is merely fatuous to proffer criticism, since things are being changed by the minute. The chassis, with the exception of the engine mountings, is pure Pursang and hence it is hardly surprising that both Malcolm and I found the suspension far too soft. But such things are mere trivia; in view of the early stage of development the bike was in, it handled extremely well. Much in the fashion of a super powered 250, which is what it is at present.

There were two items of interest which are worthy of mention since they will be fitted to production models in 1973. First was the new front, which featured both an alloy brake plate and a tapered alloy hub. The brake was still a

good one, and the latest slimming exercise must make it one of the lightest in existence.

Also there were the forged alloy fork yokes which are designed to eliminate the oft criticised twisting of the fork legs, which Betor forks are rather prone to do. The new yokes look nice as well, and should give the polishing enthusiast another little challenge. I don't know whether they will be any better, but the idea seems sound and they look pretty, so one can't really ask for more.

To come to any firm conclusions about the 400 Bul is rather difficult, because it lacks comparison. It is, to the best of my knowledge, the fastest motocross machine I have ever ridden. I say "to the best of my knowledge" because memories fade with time and once concrete beliefs begin to waver. Even so, I am fairly sure that of all the top class machines I have straddled, none were faster than this bike.

More than being the fastest machine on the track, the 400 has great sales potential since it can be ridden by an average rider, which is not the case with a number of current works machines.

Whether you want to risk your neck on a bike with such potency is another matter, but as Malcolm says, "It feels good when you know that you've got the quickest bike in the race and all you have to do is ride it." It is this attitude which will sell the 400 Bultacos. Only a superman will find this bike too slow.

*Frank Melling
for Cycle Illustrated June 1973.*

1973 WORKS BULTACO PURSANG 400



The 400 Pursang is one of the great "if only" stories of motorcycling.

It was the right bike, at the right time and could have been the saviour of the Bultaco factory - except, as so often happens, for internal politics.

In 1972/73, the factory desperately needed a competitive 500cc class bike. Remember, at this time the 250cc class was seen as subsidiary event to the 500s which represented the blue riband of motocross. Bultaco had already had a go at producing a 500 category bike in the form of the 360cc Bandido, a heavy ill-handling bike which was a commercial disaster. With this history of failure, they were less than confident about big bikes.

Bultaco's solution to the 500 dilemma was to produce a series of over-bored 250s which first arrived on the scene as 252cc machines and then later, when other teams began to demand strict enforcement of the 351cc minimum rule for the 500 class, 352s and, last of all, a full 360cc in 1974.

The other factor in the demise of the 400 Pursang was that the factory's leading rider was American Jimmy Lee Pomeroy. Not only did Senor Bulto feel that the sun shone out of the usual orifice in the American's bottom -

but every other opening too. Pomeroy had won the Spanish GP for Bultaco and from that moment, anything he said was gospel. And Pomeroy didn't like 500s!

Very few of the 400s were built and two of them landed in the laps of British riders. One, the bike in this test, went to Malcolm Davis who was contracted directly to the factory and the other to Vic Allan who rode for Comerfords, the British Bultaco importer.

It must be remembered that at this time the European factories spent very little on their supported riders who were expected to make a living from riding two classes - the Grand Prix class they were contracted to ride in and the other. Thus, in the case of Davis and Allan, who were 250 GP riders, both desperately needed a competitive 500 to increase their start and prize money, especially in the lucrative international meetings on the continent.

Both riders loved the 400 and in fact Davis frequently rode it in preference to his 250. Recently, Vic Allan said that the bike was one of the best he had ever ridden and remembers beating regular 500cc class stars at early season internationals in 1973.

Vic says: "The bike was tremendous - very fast and very easy to ride. It had loads of power everywhere and was as good as anything

around. In the 250 Pursang chassis it was light too, weighing in at around 220lb. The problem was that if Pomeroy said it was heavy, it was heavy - and no-one else's opinion counted for anything.

"I was going so well on it at the start of the 1973 season that I wanted to ride the 500 GPs but nothing happened so I ended up doing the 250s on a standard production Pursang with the barrel tuned by Tony Dowe who is now Director of Racing at the Arrows Formula One car racing team.

"When Pomeroy broke one of the light weight chrome-moly frames I was given it and had it welded up. You could see who was in charge at Bultaco!

"The 400's only fault was that it had the selector drum underneath the gear cluster so if any rubbish worked its way down it used to jam the 'box in one gear. But this really wasn't a problem - it was just a simple development job.

"The rest of the bike was fantastic with good handling and brakes. The engine never gave any trouble. It really was the bike which could have saved Bultaco."

As things turned out, the 400 never went into production and Bultaco were slow reacting to the long travel suspension revolution which began in 1974. When Bultaco did finally produce a "full" 500 it was in the form of the light and nimble 360 Pursang, developed directly from the 250cc engine. This was a lovely little bike and achieved some remarkable results in the hands of works riders. However, it did not flatter a clubman's riding ability and was not a patch on the 400 which had preceded it and is tested here.

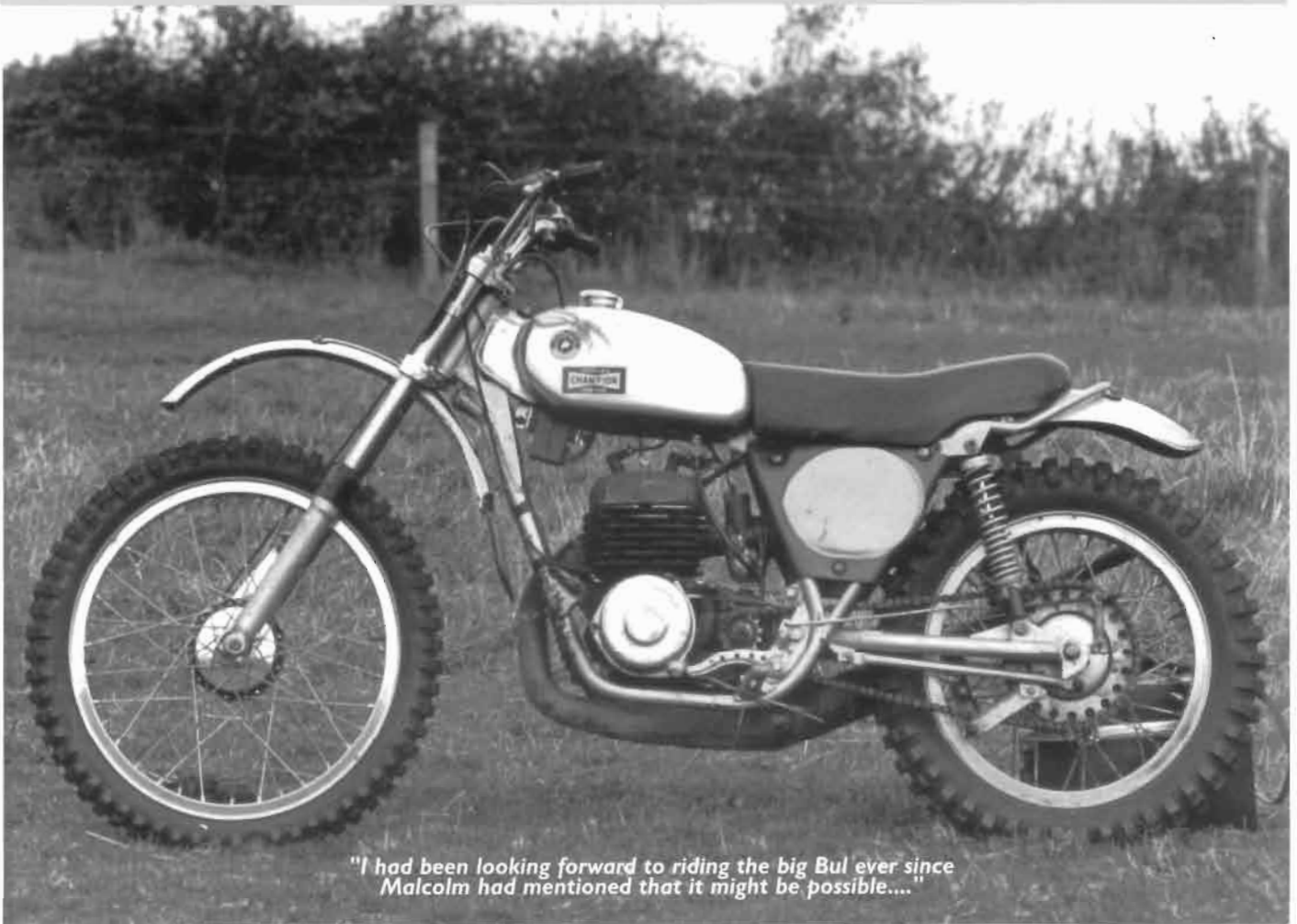
At a time when tyre technology was just beginning to develop rapidly in motocross the timing was perfect for a powerful 400cc motor. A year later, tyres had got so much better that riding the 400 Pursang would have been well within the limits of many decent riders.

Failure to capitalise on the potential of the 400 Pursang played a noteworthy and, arguably, pivotal role in the demise of the factory in 1983 - a sad end to one of the most charismatic motorcycle marques.

As for this test, I am still happy with my assessment of the bike. With the tyres of the day, a good 500 was just too much for even a competent amateur pilot - that's why most weekend racers loved the 250 Pursang so much. However, the soft, torquey power of the 400 Bul was similar to the 400 Maico which went on to be one of the sales successes of the era. The Pursang had even more potential and would have become extremely popular amongst the ordinary blokes who actually purchased motorcycles, as distinct from being given them. It was this solid gold sales opportunity which Bultaco missed.

The Pursang 400 story isn't quite at an end - Vic Allan still has the two original works motors ready to be built into chassis so we just might see these bikes in action again one day.

Frank Melling January 2000



"I had been looking forward to riding the big Bul ever since Malcolm had mentioned that it might be possible...."

When rumours of a 400cc motocross machine first began to drift out of the Bultaco factory, the whole competition world began buzzing with interest.

The Spanish factory was already well known for producing the fastest 250cc production scrambles machines in the world, even though the bikes didn't enjoy the reputation of having the best of bottom end power. Then there was the ferociously fast 360cc Bandido, dogged by atrocious handling and grossly overweight, but still a straight line jet. So what could a factory with this background do with a full 400cc? The world of motorcycles waited.

Soon, stories were heard of frames being twisted inside out and gearbox internals being shredded by the new power-plant. Test riders at the factory gave up trying to tame the beast and the designers went back to their drawing boards.

Development continued and one or two hack motors were released for riders to assess. These engines were not very reliable and more rethinking was done. The result of all this work was the prototype 400 (and I stress that the bike I rode was only a prototype) we track tested for a couple of glorious autumn hours in the depths of rural England.

We are privileged at Cycle Illustrated to have the opportunity of being the first magazine in the world to carry out a track test of a genuine full 400 Bultaco, and we owe a special debt of thanks to the Bultaco factory and Malcolm Davis, its number one works

rider, for allowing us to use a machine which is still under development.

It is unlikely that the 400 Bultaco will be on



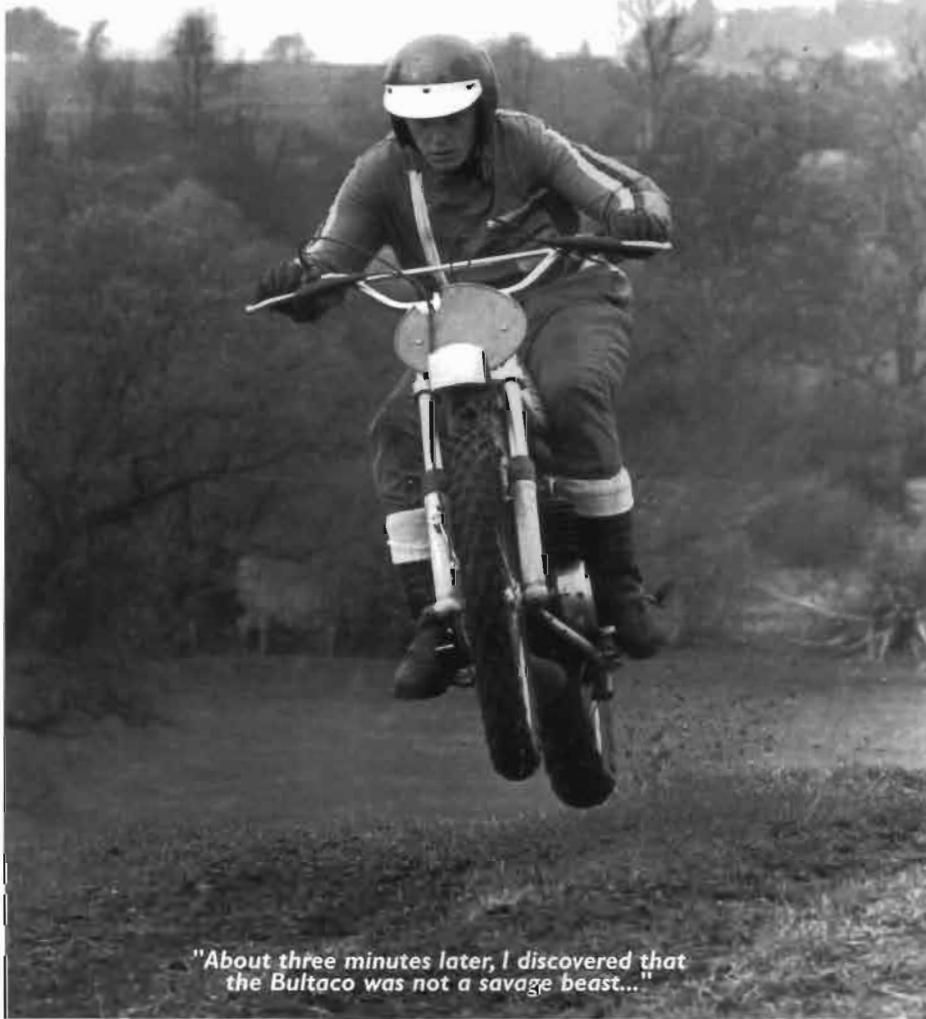
sale before Spring of 1974, so you can guess that there is still a considerable amount of work to be done on the bike. Even so I was able to gain some idea of its potential, and believe me, this bike really has potential.

I had been looking forward to riding the big Bul ever since Malcolm had mentioned that it might be possible for me to ride the bike, but when the time arrived, I wished I was somewhere far away and some other rider, braver and with more ability than I, was going to have the privilege of being the first journalist to ride Bultaco's latest challenger.

The motor, unpolished and rough, looked menacing as it crouched low down in the frame. Its peeling, black, heat dispersant paint created the impression of a combat Ranger ready to go out on night patrol, and the unfinished castings seemed to add a scarcely concealed air of unsophisticated brutality. The Bul had me really worried and I hadn't even got the thing running yet.

Malcolm did this for me by swinging down on the forward mounted kick start. The 400 crackled into life. In an unsilenced state Bultacos are always noisy, but this one was positively deafening. I guarantee that there isn't a noise meter made that could even record how much racket this machine makes; it is too much by far. Needless to say, Bultaco engineers are working on this problem.

When I summoned sufficient courage to actually sit on the bike, I was somewhat reassured. It felt much the same as my own Pursang, which is hardly surprising since the cycle parts are almost identical to those of the present production 250. This meant that everything fitted me nicely; or, in other words,



"About three minutes later, I discovered that the Bultaco was not a savage beast..."

I could reach both brakes comfortably. And at this stage of the game, brakes were what interested me most.

Malcolm promised me that the power was not uncontrollable, although he stressed that there were an awful lot of big, strong horses inside those rough-cast crankcases. Caution, he advised, was necessary, and I am not one to shun advice from a rider of Davis' calibre.

I could delay no longer. One can hardly bring the whole British Bultaco team and photographer together, merely to stand watching a quaking wretch blipping the throttle of the bike he felt sure was going to kill him. So, in with the clutch, a few revs and off we went. Not, as I had thought, in a death defying, arm wrenching lurch, but quite sedately, by competition standards.

About three minutes later, I discovered that the Bultaco was not a savage beast, but rather an obedient but immensely powerful creature. If you want to drive the big Bul around at 600 revs in first gear, the bike is quite happy to do this. Should you want to go a little faster, you open the throttle just a fraction.

But give a big pull at the "go-wire", and the Bul will simply and unashamedly take off in an explosion of wheelies, slides, drifts and anything else that can conceivably happen to a motocross machine.

There is no use waiting for a time lag or even

the most minuscule breathing space between hitting the gas and the response of the bike.



You just have to be ready and in control because once the 400 is given its head, things happen awfully quickly.

I found this out after only two laps of our test track, when I sat too far back on the saddle for a very simple jump and landed with just a

shade too much throttle. On a normal top class machine, this would have meant that the front wheel would have landed a trifle too high, but certainly no more. The Bul blasted off in a heart stopping, near vertical wheelie, which took me about thirty yards to sort out. After that I treated the bike with special respect on jumps.

It would have been to my advantage to have extended this ultra-respect to other parts of the course, but a little too much enthusiasm led to the supreme embarrassment of dropping a works bike. I like fast, sweeping bends and I had really settled down to drifting the big Bul through a quick but bumpy right hander at the bottom of the course. After a couple of hours of riding, I had reached a point where I could press the bike fairly quickly through this corner in a controlled slide. At least, it was intended that the slide was controlled. I clipped the corner of a large, deeply embedded rock while moving with just a little too much throttle, and Cycle Illustrated's English Editor was sitting on his bottom looking at a recumbent works Bultaco.

This incident served to illustrate the bike's immense potential and also the essence of its character. Nowhere on any motocross circuit I have ever seen will the big Bultaco fail to unhesitatingly accelerate, and accelerate very fast. But, and this is a big but, to get the Bul to perform at anywhere near its limit, it takes a rider of the calibre of Malcolm Davis.

Unlike some works machines that I have tried, the 400 was not difficult to ride. For example, the power didn't come on with a nerve shattering surge at any particular point on the rev band. On the contrary, as I said earlier, if you want to go slow, you keep the throttle closed and the faster you want to travel the more you open the throttle. It is as simple as that. But racing the thing is another matter.

It is all very well to test a bike as I did, with no one else on the track to disturb my concentration and no reason to press my riding ability to its limits, but in the heat of battle things would be quite different.

Malcolm was the first to admit that the bike is almost a new concept in riding, simply because even works riders have not had the sort of power available that the 400 offers.

One has to rethink every racing line and acceleration point to make allowances and, if the rider has the ability, make use of the immense reserves of power.

The motor that produces this gentle but vast amount of surge is quite different from that of any Bultaco either past or present. To begin with, it is by far the biggest engine the Spanish factory has ever produced, and it is also quite a different departure from the Pursang/Sherpa/Matador/Alpina range which has won so much acclaim.

The most obvious departure from convention is the forward-mounted kick-start, something of a rarity in the motorcycle world, but a design proven in the world's most reliable cross-country bikes, the ISDT Jawas. You may rest assured that if forward-mounted kick-starts appear in a Czech Trophy team, they are a guaranteed success. The most obvious advantage of this mode of starting the engine is that when the pedal is not in use it points forward, folding well out of the rider's way.

In practice the system worked well. Starting is



"It is, to the best of my knowledge, the fastest motocross machine I have ever ridden..."

easy. Pull in the decompression lever and take a hefty swing with the right boot. Once the engine was nicely spinning (approximately halfway through the pedal's travel) the decompressor is disengaged and the engine usually fired. The kick-start then rested well out of harm's way in a forward position.

Although no specific details were available regarding the engine (even Bultaco isn't going to open up its secret engines for Cycle Illustrated) Malcolm was able to give us some superficial information. The engine is under 400cc, and at the time of the test, gives 42 bhp at 6,000 revs. The early motors gave as much as 48bhp, but even works riders can have too much of a good thing.

Although this is pure guesswork, I think that the engine is a long-stroke design, because the cylinder head is very similar in size to my 250cc Pursang, and if the 400 were a really big bore configuration, it would seem that a noticeably bigger casting would be needed for the head. But, as I said, this is pure speculation. Without guessing, I can tell you that the 400 inhales through a 38mm Amal Concentric carb. At present a 480 main jet is used and the engine still runs weak, so the breathing must be exceptionally good.

The finishing follows current Bultaco fashion in that it is squarish in appearance with anti-distortion bays machined in at staggered intervals. Again, very much after the Pursang design, only more fins. In the head live two Champion N3G plugs, which are fired simultaneously by a Femsatronic electronic ignition system, the reliability of which will be testified to by thousands of Bultaco owners.

Moving to the bottom half of the unit, one finds a lot of new and exciting goodies. To begin with we have the striking starting mechanism I mentioned earlier, but in the cases there also lives a gear primary drive, rather than normal Bultaco duplex chain, and multi plate clutch which uses bonded clutch plates - similar to those found on British superbikes - instead of the more usual metal items. The clutch action is worthy of mention

because it was so incredibly light, especially when one considers the amount of power it is handling. When I rode the bike it neither slipped nor dragged, but there were dark murmurings on the team about "work" having



to be done on some aspects of the design. These boys are absolute perfectionists.

The gearbox was pleasing. Changing from first to second was excellent, regardless of whether one was coming up or down the box, but there was a long, long movement to engage third gear, and this took some getting used to.

The new gearbox has only four ratios, but this is more than ample. I was too cowardly to use top, and bottom would produce enough torque to pull down the Statue of Liberty.

So for the vast number of riders, the big Bul will be a two speed racer. Those two gears, for

the doubters in our midst, will take you from a standing start to 50mph in less time than it takes to say "Bultaco". And 99.999% of all motocross racing is done in this speed range.

The power-plant has proved to be generally very reliable except for some minor problems with gear selection. Because the selector mechanism is below the transmission, it picks up any debris generated during the heat of battle, when missed gears are all too common. The end result is that the 'box locks in the gear which was engaged when the irritant arrived.

I have deliberately avoided mentioning the bike's cycle parts, because the paint was hardly dry on them when I rode the bike and there was obviously a lot of development work to be done. In a case such as this, it is merely fatuous to proffer criticism, since things are being changed by the minute. The chassis, with the exception of the engine mountings, is pure Pursang and hence it is hardly surprising that both Malcolm and I found the suspension far too soft. But such things are mere trivia; in view of the early stage of development the bike was in, it handled extremely well. Much in the fashion of a super powered 250, which is what it is at present.

There were two items of interest which are worthy of mention since they will be fitted to production models in 1973. First was the new front, which featured both an alloy brake plate and a tapered alloy hub. The brake was still a

good one, and the latest slimming exercise must make it one of the lightest in existence.

Also there were the forged alloy fork yokes which are designed to eliminate the oft criticised twisting of the fork legs, which Betor forks are rather prone to do. The new yokes look nice as well, and should give the polishing enthusiast another little challenge. I don't know whether they will be any better, but the idea seems sound and they look pretty, so one can't really ask for more.

To come to any firm conclusions about the 400 Bul is rather difficult, because it lacks comparison. It is, to the best of my knowledge, the fastest motocross machine I have ever ridden. I say "to the best of my knowledge" because memories fade with time and once concrete beliefs begin to waver. Even so, I am fairly sure that of all the top class machines I have straddled, none were faster than this bike.

More than being the fastest machine on the track, the 400 has great sales potential since it can be ridden by an average rider, which is not the case with a number of current works machines.

Whether you want to risk your neck on a bike with such potency is another matter, but as Malcolm says, "It feels good when you know that you've got the quickest bike in the race and all you have to do is ride it." It is this attitude which will sell the 400 Bultacos. Only a superman will find this bike too slow.

*Frank Melling
for Cycle Illustrated June 1973.*