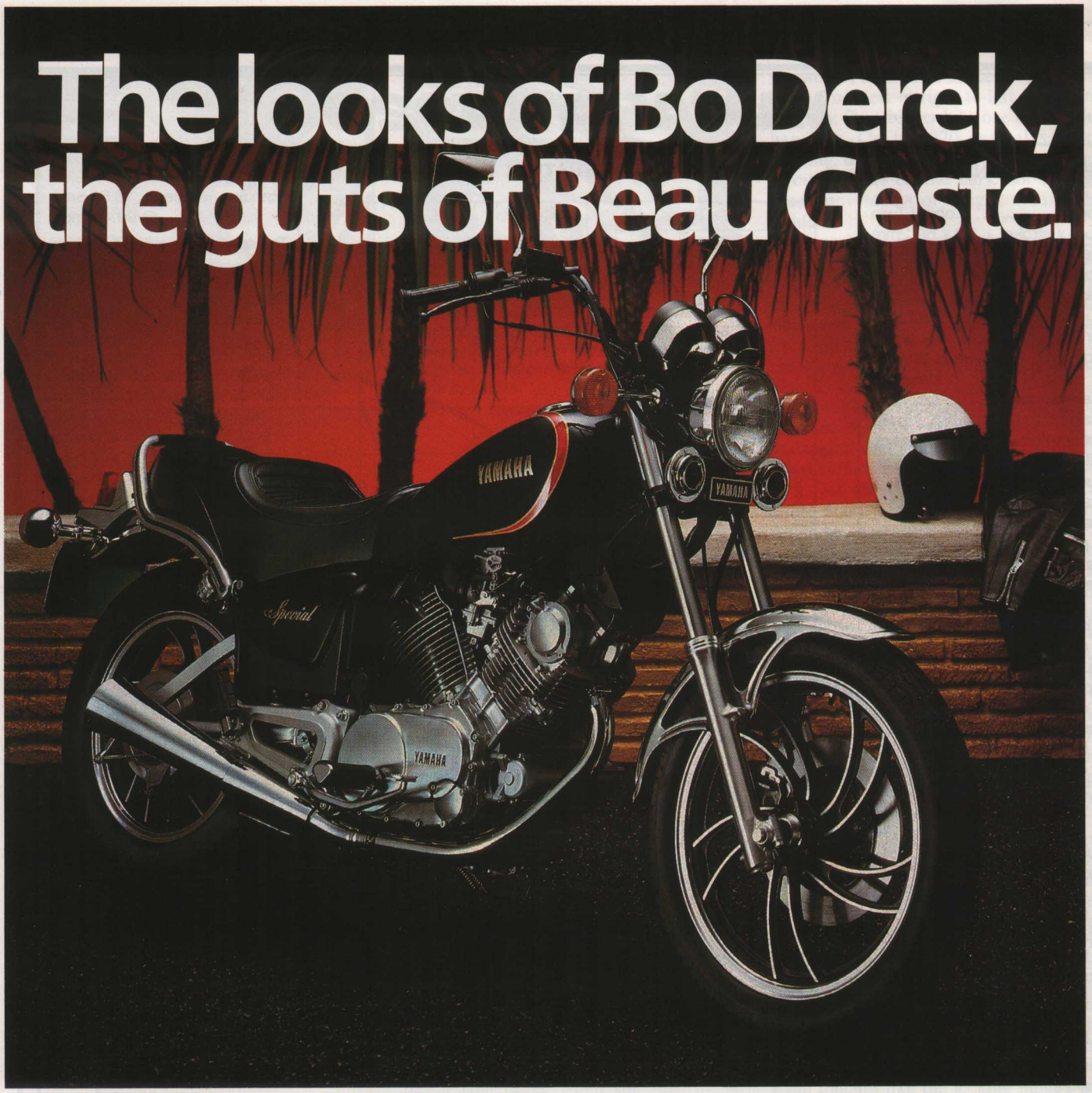
The looks of Bo Derek, the guts of Beau Geste.



The Yamaha XV 750 SE is the 'superstar' of the brand new Specials range. And, if looks are anything to go by, it's got the lot.

(A powerful, overhead cam. V-twin engine, slimline teardrop tank, upswept U.S. bars, stepped seat, a fat 16" rear tyre, shortcone megaphone silencers, twin horns and cast alloy Italic wheels.)

But we're the first to admit you don't get anywhere by looks alone.

The XV 750's got guts as well. (The guts of Yamaha's engineering.)

For instance, it's fitted with a transistorised ignition and Yamaha's unique mono-shock suspension system (in our eyes anyway, one suspension system is better than two).

It's even got shaft drive which more or less elbows all those 'tricky' maintenance problems.

All in all, the XV 750's simply something else.

Eat your heart out Bo.

YAMAHA

TRIPLE SHOTS

Yamaha left it to the privateer tuners to build three-cylinder road racers ..... who did so with incredible success !!!

Although Yamaha have never officially entered a works three-cylinder road racing machine, triples have featured strongly in the growth of the marque as a major power in the sport.

A triple in fact played a major role when Takazumi Katayama clinched the 350cc world championship for Yamaha in 1977.

Down to race the conventional water cooled twin cylinder Yamaha for the season, the Japanese rider switched to an experimental three for a selected number of title rounds where he thought the power characteristics of the three cylinders would give him an advantage.

The highly successful experimental Yamaha was the work of Trevor Tilbury plus former world 125cc champion, Kent Andersson and their small team based in Yamaha's European race shop at Uithoorn, near Amsterdam, Holland.

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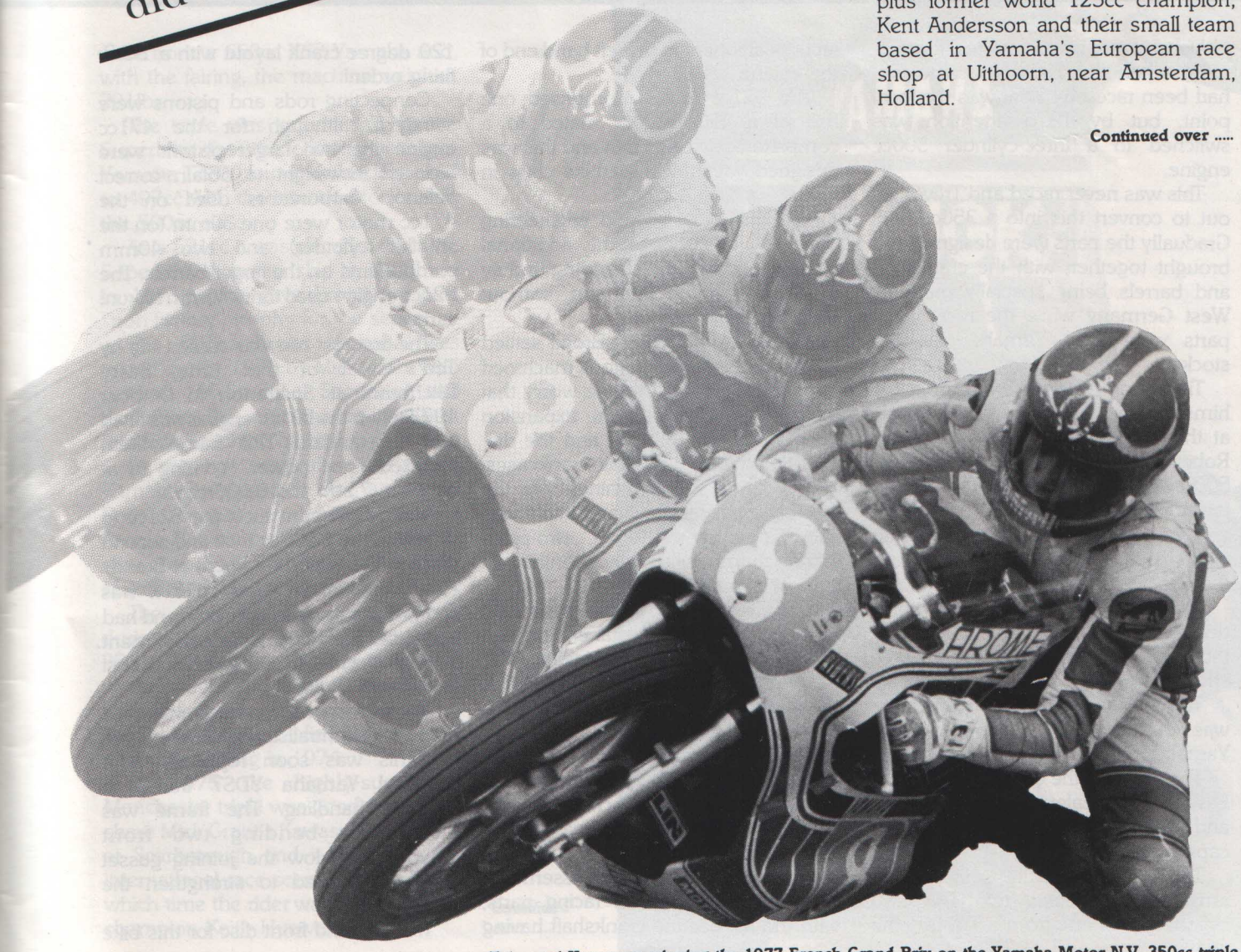
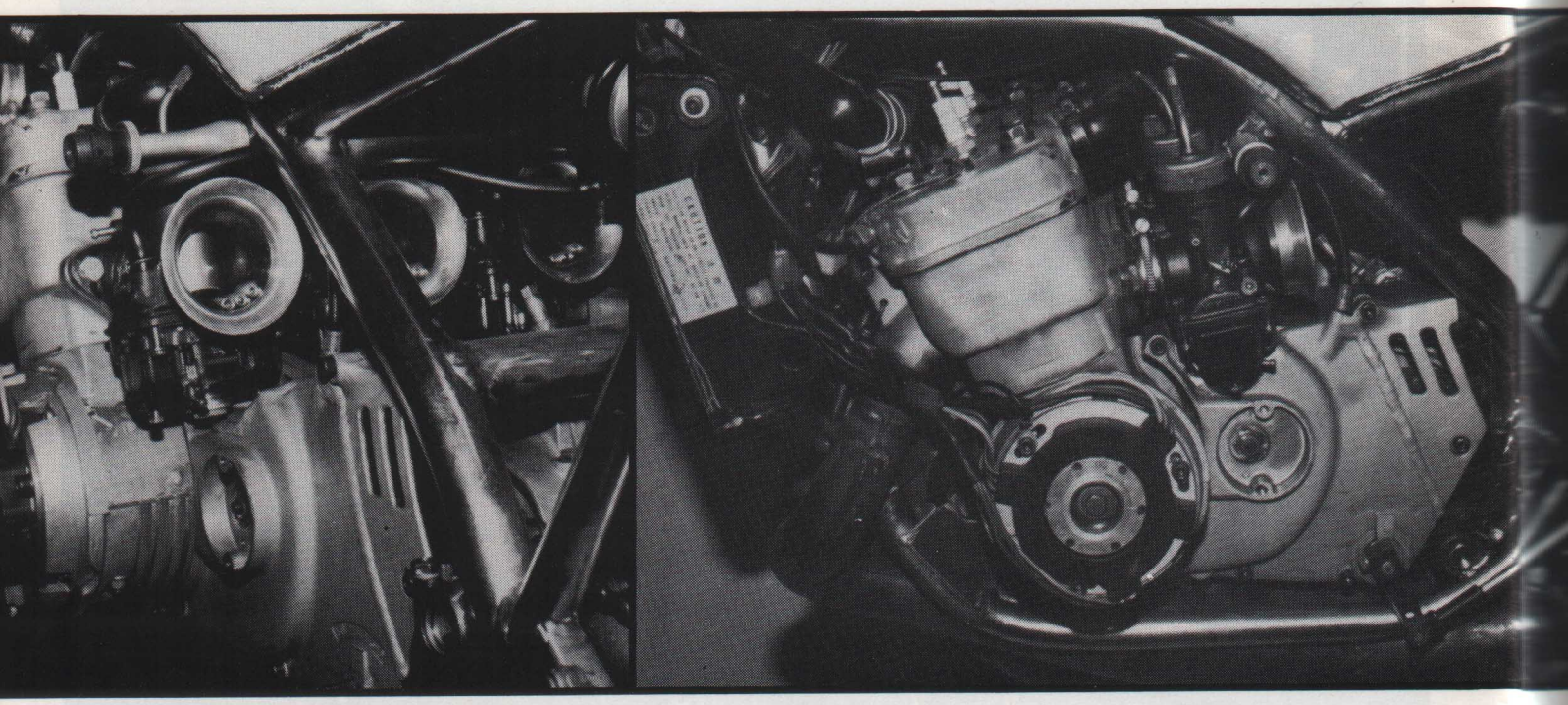


Takazumi Katayama winning the 1977 French Grand Prix on the Yamaha Motor N.V. 350cc triple.



Close-up look at the Yamaha 350 triple which helped Takazumi Katayama to the World 350cc Road Race Championship in 1977. The bike won three Grands Prix during the Championship year, in Germany, France and Finland.

Development work started there in 1974 when the 125cc machine that had been raced by Kent was the focal point, but by 1976 attention was switched to a three-cylinder 500cc engine.

This was never raced and Trevor set out to convert this into a 350cc unit. Gradually the parts were designed and brought together, with the crankshaft and barrels being specially made in West Germany while the rest of the parts were from Yamaha standard stock.

Tilbury did carry on with the three himself after Andersson left the project at the end of 1977 but when Kenny Roberts arrived in Europe for his 1978 500cc grand prix campaign, Trevor joined the team of works mechanics and was heavily involved with Roberts' four cylinder 500cc racer rather than the experimental triple.

Because of this, and Katayama's decision to move up to the 500cc class, the 350cc three-cylinder project was shelved.

This Yamaha NV experimental triple was not however the first three-cylinder Yamaha to grace the race tracks.

The first was the brainchild of Ilford, East London, dealer entrant, Ted Broad, and could be either of 471 or 521cc capacity.

The smaller-capacity engine was arrived at by using two TR3 250 cylinders plus one from a TD350 - the latter positioned on the left hand end of the engine.

The 521cc engine comprised one half of a TR3 engine mated to a complete 350cc TR3 unit and this was designed with the Superbike class in mind.

The major design and engineering task was to produce the additional crank chamber without adding unduly to weight and bulk and without sacrificing rigidity.

After a lot of thought Broad settled for a compact component machined from dural, having the one worry that there would be different expansion rates between the dural and the die-cast aluminium of the main crankcases.

A location was machined into the existing crankcase end and into it was fitted a partly-machined, two-piece crank chamber, split horizontally in normal Yamaha style.

Dowells and Allen screws were used for fixing to ensure permanent location and the best possible rigidity. The bearing houses were machined in line to a high degree of accuracy on a horizontal borer.

Additional machining on the centre cylinder fins helped to produce the final result of an engine four inches narrower than the Kawasaki H1R three cylinder racer of the same era.

The Broad engines were assembled from available Yamaha racing parts, with the six bearing crankshaft having 120 degree crank layout with a 1-3-2-firing order.

Connecting rods and pistons were standard, although for the 471cc engine the two larger pistons were reduced in weight to obtain correct balance. Carburettors used on the 471cc motor were one 30mm (on the smaller cylinder) and two 40mm components on the larger barrels. The 521cc engine used three 40mm Mikuni carbs.

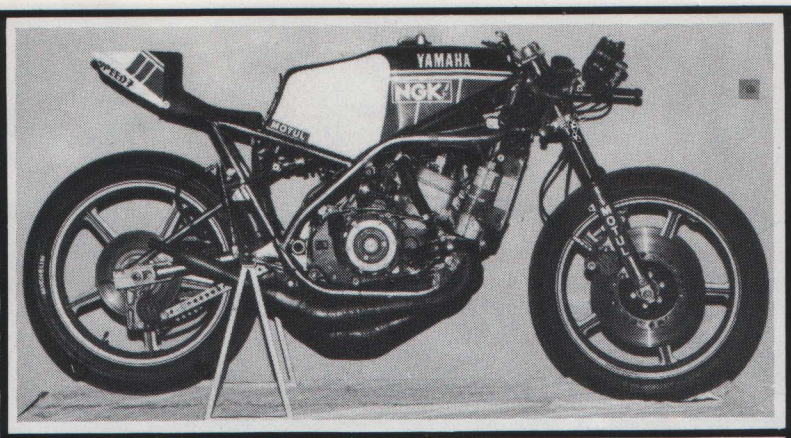
The first test run was carried out by Ted's rider of that time, Barry Ditchburn, at Snetterton in October 1972 when the 521cc engine was fitted into a standard TR3 frame. Ditch reported "real power" coming in at between 7,500 and 8,000rpm.

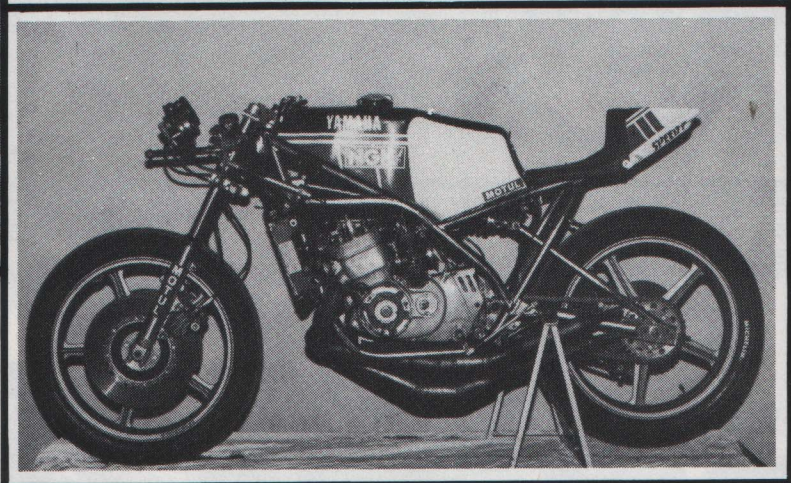
When Ditchburn took the 521cc to victory in the 1,000cc race and second place in the Superbike event at Brands Hatch on Good Friday 1973 it was sporting a monococque frame and had benefitted from a winter's development.

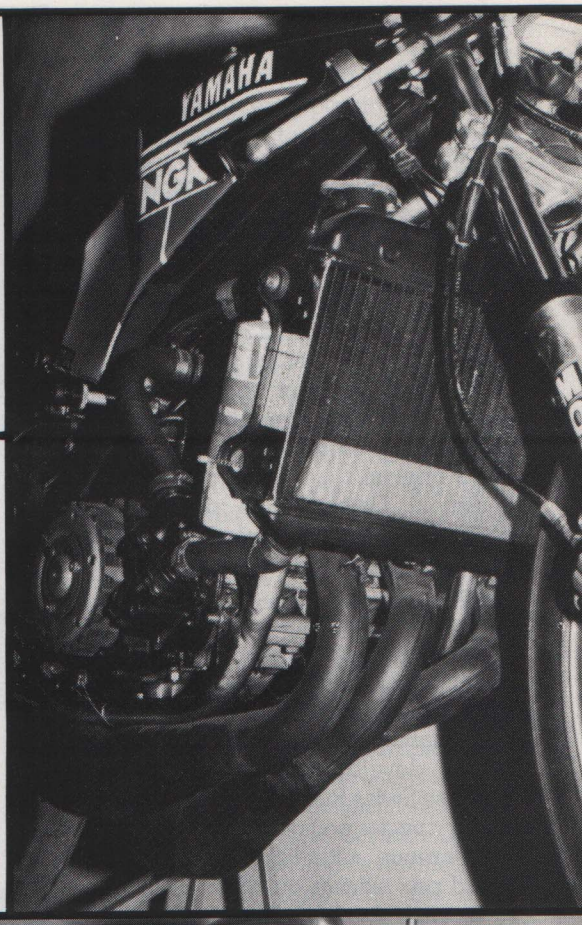
In all, the nine months work had cost Ted Broad £2,500.

The monococque chassis was used to try and centralise the offset engine but this was soon replaced by a modified Yamaha YDS7 frame to improve handling. The frame was altered by bending two front downtubes below the joining gusset which was used to strengthen the modification.

The fork and front disc for this bike







were from a 650cc XS2 Yamaha and, with the fairing, the machine weighed 291lbs.

The triple was superceded for the Superbike class the following year by a Yamaha TZ700 four and was destroked to 497cc with the intention to run it in the 500cc class.

As a 521cc it was placed sixth in the Superbike championship by Ditchburn in 1973 which gave Broad the best "non-factory" trophy for the series.

The 521cc Broad Yamaha was tested during 1973 by Mick Grant who clocked 150.5mph at Snetterton and described the machine as the best handling machine he had ever ridden.

It was not long after the Broad Yamaha-3 appeared that a second British entrant produced a triple - Arnold Fletcher from Melton Mowbray, who operates under the Len Manchester Motorcycles banner.

The basis of this machine built during the winter of 1973 was two 350cc TR3 units. In its completed state it rated 525cc and it turned out to be a winner first time out when raced by Steve Manship at the first Mallory Park national meeting in 1974.

In 1975 the highly-successful Manchester triple was good enough to share Mick Grant's Kawasaki lap record at Scarborough and it stayed in the international race scene until 1979, by which time the rider was former British champion Keith Huewen.

Continued over .....

At the end of 1979 the triple was taken over by Paul West who last season clocked over 60 victories at club race level!

The 525cc machine has now been repurchased by Arnold Fletcher and he says firmly "it is not for sale".

West will, however, continue to race a Len Manchester Yamaha-3 this year which is an improved replica of the 1973 original.

Arnold Fletcher also produced a 500cc version of the triple for the 1976 season and this too had an impressive history.

The 525cc was tested by Mick Grant at Snetterton and despite wind and rain went through the Norwich Straight speed trap at 144mph.

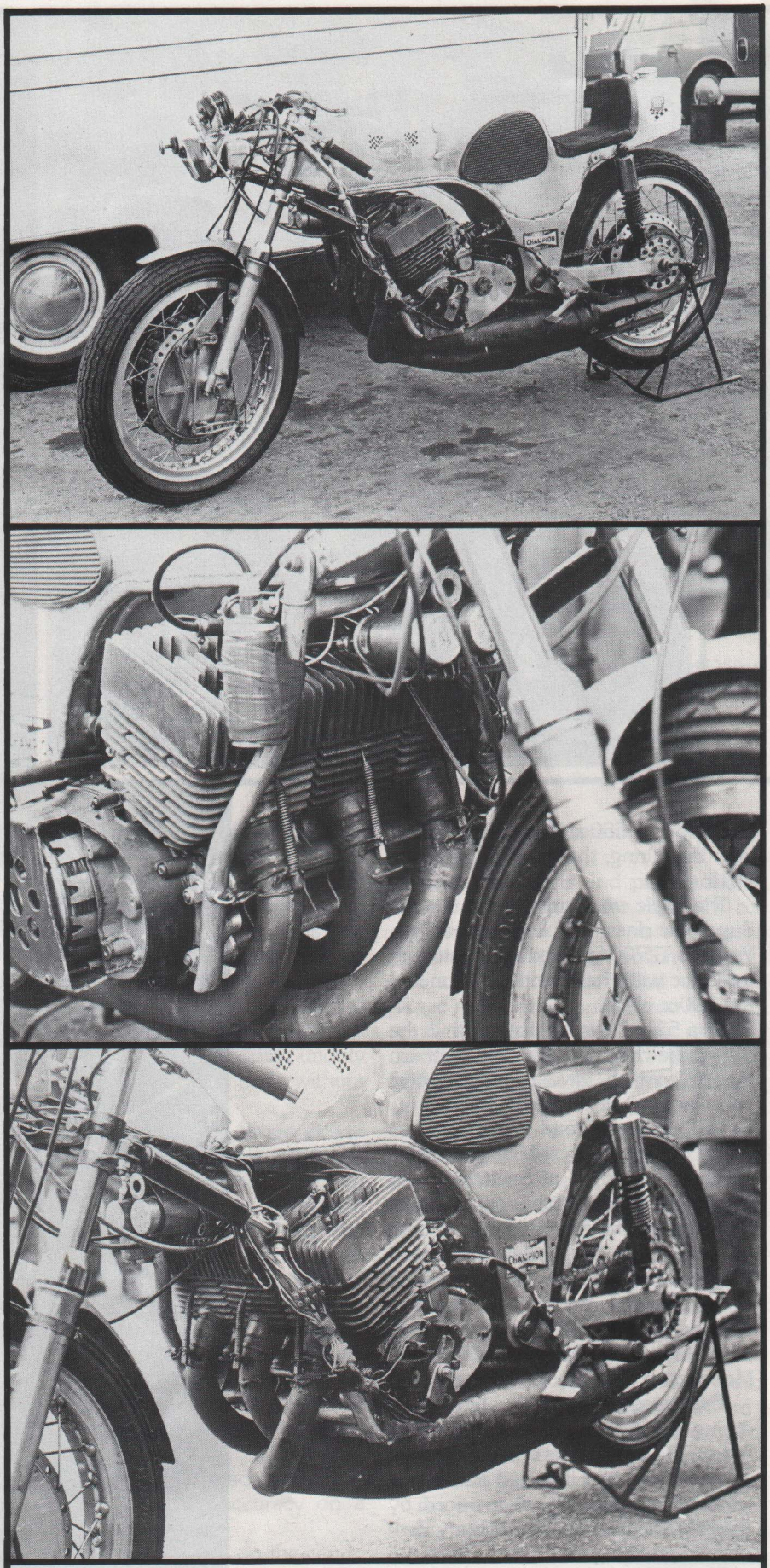
Yamaha threes have not been solely developed for solo racing because Swiss Rudi Kurth built his own rather special engine to power one of his famous ultra-light monococque grand prix sidecar outfits in 1975.

It was in fact some of Kurth's initiative that rubbed off on the semi-works effort of Yamaha NV.

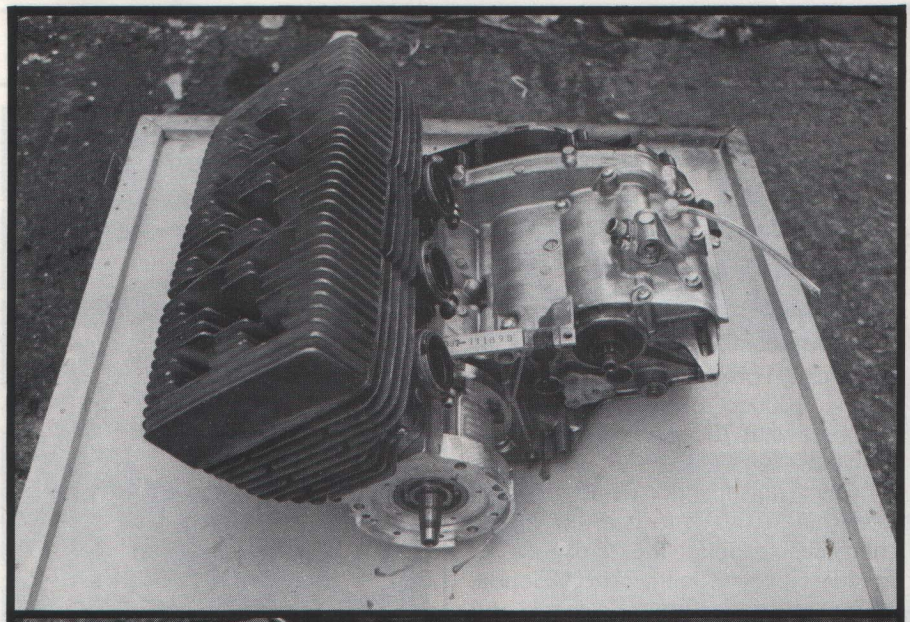
With the actual factory effort from Japan concentrating on Johnny Cecotto and Steve Baker in the 500cc and 750cc classes in 1977, Yamaha management in Amsterdam decided to try and topple Harley Davidson from the 350cc throne. Private Yamaha riders with their TZ350cc twin cylinder 'production' racers had beaten the Harley factory effort in several grand prixs during the previous two seasons but when it came to totalling up the Championship points, obviously a number of independent riders competing against one another as well as against the Harleys was no match for the intensive team effort by the Italian HD factory.

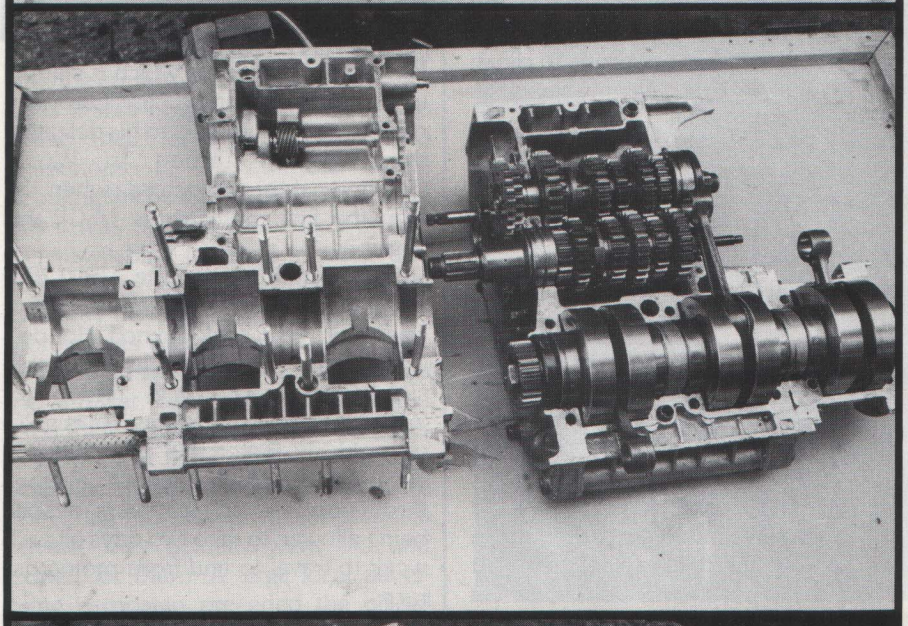
Therefore, Yamaha Motor NV decided to assist development of the novel Yamaha-based power unit that had first been made in 500cc form by Rudi Kurth. That assistance finally grew over the winter into a full scale development programme ready for a serious attack on the 1977 World 350cc Championship. Riders to pilot the new 350cc 'triples' were to be Katayama and 15-time World Champion Giacomo Agostini.

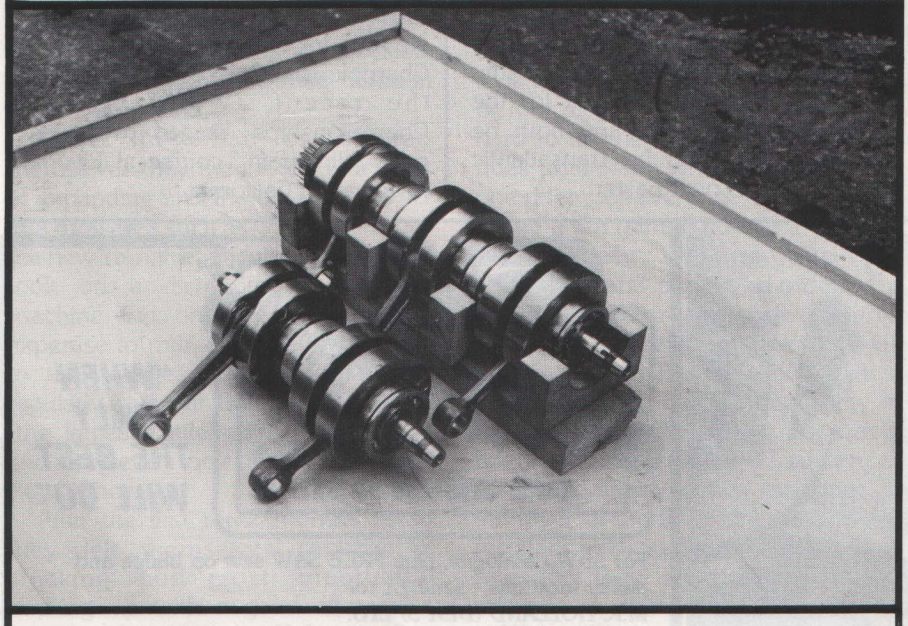
At the end of the season, Yamaha Motor NV were able to look back with great satisfaction on a competition effort that began with mixed fortunes on a rainy March weekend at Tilburg in Holland. That was when Katayama



Ted Broad's highly successful Yamaha triple was a major force in British racing in 1973. Barry Ditchburn road the bike in 521, 471 and 497cc form. As a 521, the bike battled the full 750cc factory opposition from Suzuki, Kawasaki, Norton and BSA/Triumph in the British Superbike Championship series. Barry finish sixth overall .... best non-factory rider and ahead of many of the actual works men. The Broad 'three' is shown here in its original, monococque chassis form, though Ted reverted to a tubular frame during the season.







The Ted Broad triple was a compact unit, as can be seen here from the shots of it as a completed unit and disassembled to show the crankshaft and transmission layout. The shot of the three-cylinder crankshaft alongside the normal Yamaha twin shows just how narrow the engine was.

wheeled out the triple for the first time and immediately set the fastest practice lap. However, race day dawned the next morning with pouring rain and Takazumi elected to use his TZ350 twin (he used it to win!) as his practice efforts with the triple had revealed some handling problems.

Next outing for the triple was at Mettet in Belgium on April 24th and it was sensational! There was no 350cc class, so Katayama ran the machine in the 500cc category. On the first lap it would not fire cleanly on all three cylinders and he came around in 18th place. Then the motor came on full song and by the end of the race Takazumi was in third place, passing numerous 500cc Suzuki fours and almost catching the leaders! The Belgium organisers were so astounded and thrilled at Katayama's crowd-pleasing effort that they gave him a special trophy for his performance.

The debut of the 350cc three-cylinder in the World Championship racing was even more sensational. Both Agostini and Katayama rode the triples in the fast West German Grand Prix at Hockenheim and devastated the opposition. Katayama won the race with Agostini behind him ... some Grand Prix djebut for a completely new machine! Agostini broke the lap record into the bargain!

Katayama's engine was at this stage fitted into a standard TZ350 frame. Despite the win, he felt that the weight of the standard frame, plus the added weight of the bulkier motor (as compared to the TZ350 twin) was detracting from even more potential performance.

For the French Grand Prix (another fast one over the Paul Ricard circuit near Marseilles) he tried a British Spondon frame but, although he won the race, he was not really satisfied with its handling. When that chassis was burned out in a fiery crash at Chimay in Belgium, Yamaha Motor NV commissioned a frame from Dutchman, Nico Bakker. He had earlier constructed the chassis which Agostini was using for his triple.

It was the Bakker monoshock chassis with which Katayama completed his World Championship season by winning the Finnish Grand Prix.

On his way to the title, the Japanese won five Grand Prix ... three of them on the triple and two on his regular TZ350 production twin. The TZ350 had proved better for tighter circuits as it had more power low down and consequently better acceleration out of slow turns.

TRIPLE SHOTS

Continued from Page 33

Technically, the Yamaha three cylinder used a conglomeration of standard Yamaha parts along with some specially-made components.

The crankcase was basically a TZ twin with an extra engine block welded to the left hand side. The motor was offset 10mm in the standard TZ350 chassis to line up the chain and sprockets.

The crankshaft is specially made by the Hoeckle company in Germany to take the standard Yamaha TZ connecting rods and big end bearings.

With the standard TZ250 cylinder barrels and pistons installed, the three cylinder engine utilised a 54mm bore with a 50.8mm stroke, giving an actual capacity of 349.9cc.

The TZ250 barrels and heads were welded together to form an integral block for the three cylinders and this welding operation gave trouble in the early stages. The high temperatures of alloy welding were resulting in distortion of the cylinder bores but Rudi Kurth finally overcame this by using 'trial and error' methods to arrive at a satisfactory welding temperature and correct piston clearances.

Later, specially made separate cylinders replaced the integral block.

The standard TZ350 six speed transmission and clutch were used as well as a TZ350 water pump. To allow more coolant to be carried, however, a TZ750 radiator replaced the TZ350 unit.

Horsepower of the triple was around 80bhp - over 10% more than a TZ350 twin.

Continued from Page 11

American Formula One road racing allows 1000cc four-stroke racers to compete with 750cc two-strokes. Dale Singleton (well-known to British fans for his Transatlantic Trophy efforts) used his trusty TZ to beat the bigger machines despite the presence of Freddie Spencer on the factory Honda, Eddie Lawson for Team Kawasaki and Wes Cooley on the Suzuki.

Dale returned from Europe to clinch the title at Pocono, Pennsylvania, in August with what he called his "suitcase special". He took his TZ750 apart, packed the bits in nine cardboard boxes and then he and his tuners, John Redding and Simon Thomas, checked it in as their luggage on the flight from London to New York!

FLYING FILICE

Jim Filice is still not old enough to ride a 750 in US Championship road racing, but when he is ... watch out! Diminutive Jim looks like a Kenny Roberts clone in his yellow and black leathers. At Pocono he put it over Eddie Lawson and the factory Kawasaki to end Eddie's string of eight consecutive Lightweight national championship wins. Filice rides a Yamaha for the Roberts/Lawwill team, and both he and Lawson should be Transatlantic Trophy starters next Easter.

GREAT GLOVER

Broc Glover is a name which is starting to mean something to European motocross fans, thanks to his defeating the biggest names in World Championship motocross when he won the first moto at the USGP this summer.

The former three-time US 125cc Champion moved up to the 500cc class this year and pushed Honda's Chuck Sun out of the Championship slot. Glover, who has ridden for Yamaha ever since he was 16, is a 20-year-old six footer and maintained a "straight A" high school average throughout his school years despite being allowed to take two days off each week to travel to and from motocross races!

He's a versatile rider, proving it by success in both 125 and 500cc US Championship classes and by winning the recent "World Off-Road Championships" staged over a five-mile "all terrain" course at Riverside Raceway in California.

DEALER OF THE MONTH

Hartwells of Banbury

Not many businesses have been hit harder by the current recession than the motor trade, and car showrooms all over the country are looking at ways of diversifying into a variety of related products. One major car dealer who seems to have found the ideal solution is Hartwells of Banbury, who just five months ago took on a Yamaha Solus dealership.

As part of the Hartwells group they hold the distributorship for BL cars, but with the current downward trend in car sales it was obvious that they had to utilise their large showrooms and workshops to the utmost. While debating the best possible way of doing this it was realised that many people were switching to small mopeds and motorcycles as a cheaper form of everyday transport ... and so Hartwells Motorcycles was formed.

To begin with they concentrated on the smaller capacity machines and used their long experience of car sales to help them build up the dealership. Unlike many smaller dealers they were not content to sit and wait for potential buyers, they actually went out and looked for them. A large local advertising campaign preceded the official opening and in the short time they have been in business everything possible has been done to keep their name in the public's mind.

Once they had established themselves they then looked for ways of expanding and the obvious answer in a rural area such as Oxfordshire was the new Yamaha agricultural bike. They took on a distributorship for this machine and, once again, used their expertise to market the latest addition to their range. Demonstration were regularly given at Banbury Stockyard (the largest cattle market in Europe) and they even took the AG100 to the Royal Show.

After the first three months or so they felt themselves capable of stocking, and most importantly backing up with a good after sales service, a larger range of bikes, and so they gradually expanded until they now hold a full range of Yamaha motorcycles. They carried on marketing the Company in a forceful way and the latest part of that marketing strategy saw a visit to

Hartwells of the Yamaha Road Show. During the day nearly a hundred riders took test rides, many of them on three or four different machines. It's usually hard to tell the response to these test rides until some while afterwards, but one rider took everyone by surprise by taking a ten minute ride on a TR1 and immediately walking into the showroom and placing an order!

Another recent example of large company marketing techniques was the opening in Banbury of the latest James Bond film 'For Your Eyes Only' in which several XT500s are used in a breathtaking 'chase' sequence. Hartwells displayed two machines in the foyer of the local cinema and the resultant publicity brought them three sales that they might otherwise have missed.

With all this talk of Company marketing, and advertising campaigns it would be easy to imagine Hartwells as a large, faceless organisation, lacking the personal service of smaller dealers, but nothing could be farther from the truth. With a showroom staff of just two every customer is assured of personal attention. The manager, Mr Mike Gibbins, has a long association with the motor trade in general, while the chief salesman Tony Bason backs him up with an intricate knowledge of motorcycles stretching back many years. Either of these two are always on hand to speak to potential buyers and they are backed up by a full service and spares department. The spares department also stock a variety of accessories including helmets, luggage and clothing. They can also boast an amazing back-up service on replacement tyres. In conjunction with a local depot of a major tyre company they can virtually guarantee immediate replacement of worn tyres, a service sadly lacking in many parts of the country.

The success of Hartwells demonstrates that in an area of motor sales often associated with small dealers, and usually equally small premises, there is a place for hard selling large organisations, backed up by personal service.

YAMAHA DIARY

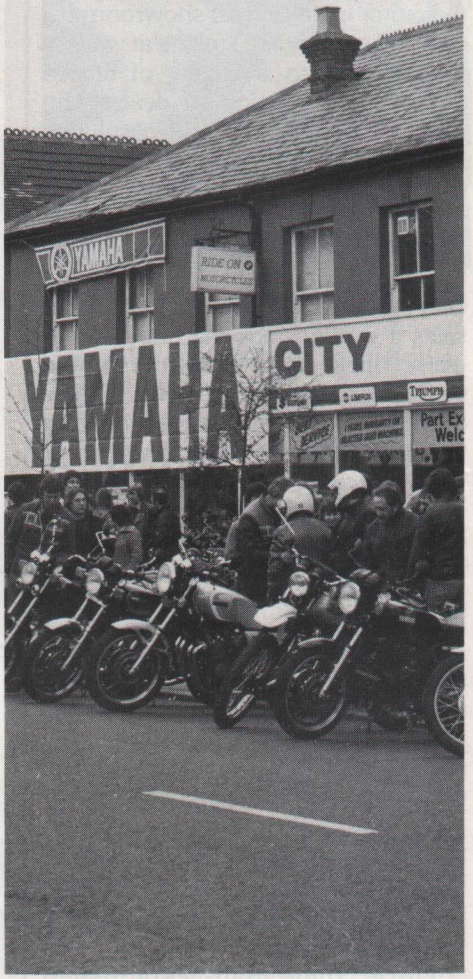
The Yamaha Road Show continues to travel all over the British Isles during the next month, visiting dealers to show off the latest production models.
Demonstration rides are available, but as these are subject to certain restrictions regarding age and experience, please check with your local dealer first.

SEPTEMBER:

Saturday 12th
Sunday 13th ..... R.G.Callow, Newport, Mon
Friday 18th ..... Ken Heanes Motorcycles, Fleet, Hants
Saturday 19th ..... Milton Motorcycles, Gravesend, Kent
Sunday 20th .... Harrison Whitehill, High Wycombe, Bucks
Saturday 26th ..... F.Lewis, Worcester
Sunday 27th ..... Motor Cycle Mart, Kidderminster, Worcs

OCTOBER

Saturday 3rd ..... Vin Duckett, Blackpool, Lancs
Sunday 4th ..... Arch Motorcycles, Warwick
Saturday 10th
Sunday 11th ..... Waldrons Motorcycles, Gateshead
Saturday 17th ..... Motorcycle City, Reading, Berks
Sunday 18th ..... Eleys of Dover
Saturday 24th
Sunday 25th ..... T.V.M. of Devon, Teignmouth



The Road Show visits Motorcycle City.

During the last two months of the Road Racing and Motocross seasons, Yamaha will be taking trade stands to all the major championship meetings. These include the finals of the Yamaha/Marlboro Clubmans Championship at Silverstone and all the remaining rounds of the extremely popular Yamaha Pro-Am Series.

Motocross enthusiasts can see the latest Yamaha machines at the remaining meetings in the British 500cc championship and at the A.M.C.A. meeting at Brownhills.

SEPTEMBER:

Sunday 20th ... Yamaha Pro-Am Series Mallory Park, Leics
Sunday 20th ..... 500cc British Championship MX, Preston
Saturday 26th . Yamaha/Marlboro Clubmans Championship Finals, Silverstone
Sunday 27th .. Yamaha/Marlboro Clubmans Championship Finals, Silverstone
Sunday 27th ... 500cc British Championship MX, Southend

OCTOBER:

Sunday 11th .... 500cc British Championship MX, Reading
Sunday 11th 125cc A.M.C.A. Championship, Brownhills, Staffs
Sunday 25th ..... Yamaha Pro-Am Series, Brands Hatch

Hartwells of Banbury, host the Yamaha Road Show.

A legend and a half.

XT 500 250

Hardened bikers have been known to burst into song at the mere mention of the XT 500.

A big, rugged single in the classic British tradition, the 500 is as at home on the range as it is on the road.

A large flywheel magneto lends its powerful 4-stroke engine a hefty jolt of low-speed torque. Guaranteed zip at the lights, grip in the mud.

The lightweight parts, high-level exhaust, braced bars, crankcase shield and long-travel suspension have all contributed to the legendary, 'anything goes' reputation of the 500.

Small wonder, then, that we've translated this legend into a 250cc machine.

The XT 250 boasts the same on/off road capability as its big brother.

An overhead-cam, 4-stroke engine generates formidable torque at low revs.

And long-travel Monoshock suspension, tough plastic mudguards, lightweight chassis and rubber-mounted indicators give it the grit to slip straight from High Street to dirt track at the drop of a gear.

There you have it. The hard facts behind the XT legend.

We bet you didn't know the half of it.

YAMAHA

New production method brings greater safety

"New discovery by DSM makes a breakthrough in helmet design"

With the development of a new type of ABS plastic, the DSM company's Research Institute at Geleen in Holland has found the solution to a problem which will confront the crash helmet industry if the safety standards for helmets are made even more severe - as for example is expected in the United Kingdom.

New, more stringent safety standards will forbid the sale of helmets made from materials so affected by petrol or paint solvents that brittle fractures can occur.

In practice it has been found that motorcycle and moped crash helmets are often held with hands which have been in contact with petrol. This frequently happens for example at self-service filling stations. As a result of the action of petrol, hairline cracks can appear in the material which may lead to brittle fractures. These hairline cracks occur in particular where there is a stress concentration, resulting either from the production process (injection moulding) or of finishing operations (drilling holes for example for fastening the chin strap).

Experts believe that polycarbonate, the material generally used for helmets at present, will not be able to satisfy the stricter safety standards. As far as is known, the new extremely high impact-resistant ABS - marketed by DSM under the brand name of RONFALIN MST 42 - is the first thermoplastic material to meet all European safety requirements presently in force. This includes the stricter British Standard now in preparation.

Experts agree that the new DSM discovery is a major breakthrough.

Dr Philip Marshall of the University of Manchester, one of Britain's leading experts in the field of helmet safety tests, has pleaded for other European countries to adopt the new British Standard requirements (Amendment No 5), thus to ensure the safety of helmet wearers. In anticipation, some important helmet manufacturers in the UK (Thetford Mouldings, Stadium, Kangol) recently switched over to the new Ronfalin MST 42. The first processor on the Continent is the Belgian firm of Cross.

Of course, safety standards for helmets may differ on essential points from one country to another, but Cross - in close cooperation with the DSM Research Institute - have developed a sporty, new aerodynamic integral helmet based on Ronfalin MST 42 which meets all requirements. This helmet is marketed under the name 'Lazer'.

DSM has developed a falling-dart tester in which the energy to initial fracture is measured with a flat-faced penetrating body. This permits the measurement of parameters that cannot be determined in a test with a spherical body, in which the contact surface increases continually during penetration. Another disadvantage of the spherical dart is that during penetration the test specimen will build up around the sphere, which requires energy. In the DSM flat drop test, the entire energy absorption takes place in the material between the falling dart and the support ring.

The Dutch Research Institute for Road Vehicles (TNO) has tested the 'Lazer' helmet and attached particular importance to the easy operation of the visor and the fact that the shell is approximately 10% lighter thanks to the use of Ronfalin.

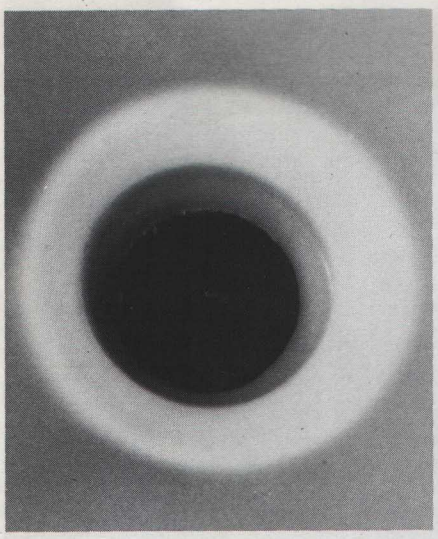
Helmets may also be weakened by paints containing solvents as also occur in petrol. Ronfalin MST 42 has improved resistance to these agents.

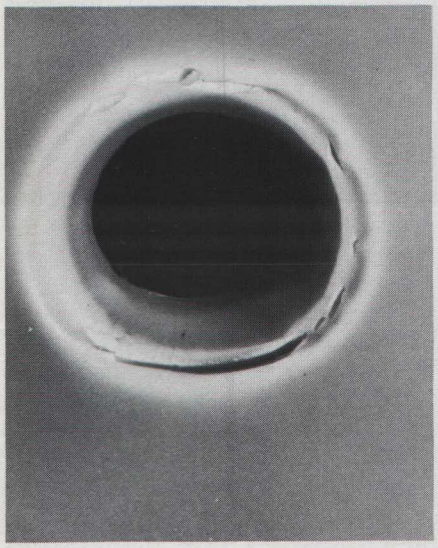
The trend in helmets is moving increasingly towards colours matching those of the particular make of motorcycle, or clothing, so that the production series are becoming shorter. The production of helmets from coloured plastics can, however, only economical in large series and then only in one colour per series. In future, manufacturers will produce helmets only in a limited range of colours (such as natural and white) and afterwards apply the colours asked for by the customers. Using Ronfalin MST 42 is therefore a very important step towards elimination of the problem of attack by paint solvents.

Experts' reactions to the properties of Ronfalin MST 42 are extremely positive. DSM is convinced that with this new type of ABS it has found the answer to Amendment No 5 of the British Standard.

To assist in the development of an ABS plastic that would satisfy the strict requirements for helmet material, DSM first built a special falling-dart impact testing apparatus. The instrumented impact tester uses a transducer mounted in a flat-faced dart to plot the force/time diagram and hence the energy absorbed during penetrating in a drop test which simulates a real collision as closely as possible. The geometry of the force transducer, also developed by DSM, is such that from the force/time diagram obtained the energy to initial fracture can be derived fully automatically.

By making use of this equipment DSM has succeeded in developing a material with near-ideal energy absorption characteristics. The result of this development work - Ronfalin MST 42 - stands out from other types of ABS





More plastic deformation occurs in a tough fracture (a) than in a brittle fracture (b).

by virtue of its exceptionally high impact resistance at ambient temperature and the fact that in the 'flat-drop' test at reduced temperatures down to -20°C this impact resistance hardly decreases.

This is achieved by a very carefully controlled particle size and very uniform distribution of the rubber phase in the ABS. The electron microscope pictures clearly show the difference in structure between a standard ABS and the Ronfalin MST 42 from DSM.

The impact resistance resulting from this structure, combined with high rigidity and good gloss, make Ronfalin eminently suitable for helmets, since solvents normally occuring in petrol and paints do not result in hairline cracks, even is there is stress in the material.

The 'flat-drop' testing machine also played a role in answering the questioin as to what effect ageing of the material has on the quality of the helmet. Generally speaking, the mechanical property of helmets deteriorate under the influence of ultraviolet light or thermal ageing.

The Lazer helmet made by Cross, the first helmet manufacturer on the continent of Europe to use Ronfalin.

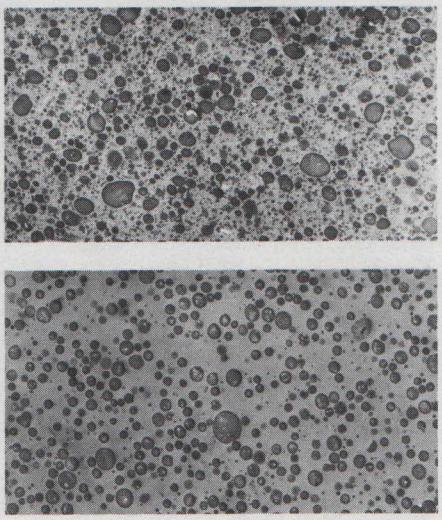
Tests with the 'flat-drop' machine, however, have shown that there is an initial decline in the mechanical properties and that the residual value is achieved after approximately 200 hours in the Xenon weathering cabinet. After that, no further decline in mechanical properties takes place. The residual value of Ronfalin MST 42 has been found to be high enough to satisfy all European standards for helmets with regard to impact resistance and penetration with an ample safety margin.

Test standards which are satisfied by Ronfalin helmets include:-

ECE 22(Belgium, The Netherlands, Sweden, Spain.
DIN 4848 West Germany.
BS 5631 Great Britain.
BS2495 Great Britain, competition helmets.
NF S 72 France.
CSA Canada
SIS 88 24 32 Sweden, Denmark, Norway.
DOT U.S.A.

DSM is a group of internationally operating industrial companies whose head office is at Heerlen, The Netherlands. The numerous companies have been grouped into seven divisions according to the nature of their activities. The DSM Group members and the companies in which DSM holds interests are for the greater part based in Western Europe, though a number of them are based alsewhere, for instance in the USA.

The Group's principal activity in terms of both turnover and manpower is in chemicals; fertilisers, yarn and fibre feedstocks, hydrocarbons, plastics,



The difference in composition between standard ABS 'left' and Ronfalin MTS 42.

rubbers, a growing range of synthetic resins and chemicals for special industrial applications. The Group further includes a number of plastics.processing industries which produce packaging materials, technical articles and articles for household use.

DSM was founded shortly after the turn of the century, its initial objective being the production of coal, an activity which has: since been discontinued. In the field of energy the accent now is on DSM'S participation in the extraction and exploitation of the Dutch natural gas.

An area of growing interest to DSM is the production of building materials.

The Group's aggregate turnover is now almost $6.5 billion and its total manpower worldwide amounts to 35,000 people.

The RD 350LC. Fast enough to get you into trouble. Safe enough to keep you out of it.

As anyone who's ridden a new, liquid-cooled 350 will tell you, 'RD' means 'race developed'. Which, in layman's terms, means it goes like the clappers.

Cruising sedately around town, the RD 350 is subdued, law-abiding and respectable enough to charm the stripes off a station sergeant.

Hit the open road, zap up the revs to the 7000 mark ("Motor Cycling" called it 'the warp factor' in their ecstatic report) and suddenly you're in the big league.

Once embedded in the power band, the RD will show a clean pair of wheels to many four-strokes of twice its size.

And, if the law allowed, would cruise happily at 90 mph.

In fact, the bike is already the hero of its own race series. This season, big name riders will be battling it out in 'Pro-Am' events, mounted upon undoctored, straight-from-the-crate machines.

Go on, say it. Your average rider will wind up in serious trouble on an RD 350.

Not so. The liquid cooling system keeps the two-stroke engine supremely safe and reliable.

The double front brake discs are actually bigger than those fitted to many cars.

And the unique Monoshock suspension keeps the rear tyre in touch with the road, however rough the ride.

So if the RD 350 has effectively opened up our racing stable to the general public, it has also set a new standard in the design of road-going motorcycles.

An exacting standard which, in the true spirit of the machine, had its roots in the split-second discipline of the race track.

YAMAHA

RD350 PRO-AM SERIES