

EARLYSTOCKS YAMAHA XJ550

The final CHAPTER

Remember the XJ550 Yamaha donated to us by AP Motorcycles way back in 1998? Our intention was to race it with the Earlystocks club. But the best laid plans... However, the bike was rescued by 'Team Donkey' and is now a title holder. Chris Pearson takes a ride and wife Stevie takes the pictures.

LONG TERM readers may well remember the start of a Mechanics Yamaha XJ550 race bike project from way back in 1998. Originally donated to the mag by AP Motorcycles, the plan was for contributor Alastair Rosie to prepare the bike for competition in the Earlystocks championship.

Unfortunately, this went a little awry when Alastair took up long-distance lorry driving and the whole lot changed hands, making its way from Alastair's home in Oxford into the grasp of 'Team Donkey', aka Shaun Philpot and rider Karl Scott.

Much work had already been completed by Alastair - lightening of the engine internals and

other such efforts to gain extra horses and grunt but it was the move to Spilsby in Lincolnshire that really kicked the XJ project back into gear.

The XJ550 may seem like a strange choice, as the original machine was outclassed performance wise by most of the middleweight opposition of the day. The ability to easily fit later parts from the FZ600 would appear to be the key to the type's quantum leap in performance.

The frame was strengthened by welding small gussets in crucial areas and then sent off for painting to C&J Powder Coatings of Grimsby. The resulting azure blue finish that was applied is still a smooth and shiny testimony, a couple of years

on, of their workmanship and competence at the painting game.

The swingarm and yokes also came in for the azure treatment, as indeed have been the tank and wheels to suit. The swingarm bushes were modified and up-rated to cope with the extra forces and new bearings fitted to both the steering head and the wheels.

Finishing off the bodywork nicely is a fibreglass seat unit that, although borrowed from a thoroughbred Yamaha TZ race machine, doesn't look out of place on this early Eighties sports tourer.

A pair of Ohlins damper units are responsible for keeping the rear end in check while, in keeping with the Earlystocks rule book, the front end is completely standard, although the internals have been modified to perform better.

The actual geometry of the frame is also exactly as factory supplied, once again another club ruling, but anyone who rode the original machine can testify that the in-line four was quite a nimble little machine if a little under-powered compared to its opposition.

In the stopping department the rear drum is still intact but a pair of Suzuki 600 Bandit calipers, held in place by special mounting plates, now grab the Yamaha front discs. Stainless steel braided hoses complete the package as they link

Exiting the bus stop at Mallory and heading for Devil's Elbow where... "all of the 70 horses could be let out for a gallop."





Later FZ600 Yamaha parts have been fitted including the cylinder head.

LEFT: The frame has been strengthened according to the rules and seat and tail unit is from a TZ racing Yamaha. Looks the business all right.

admit to having polished them a little.

The original and troublesome 550 cylinder head has long gone to be replaced by a later FZ600 item. This in turn has been heavily modded to allow a greater compression ratio as well as the fitting of improved valves and springs.

The FZ cams have also been re-profiled to give more power and the carburettors are now 29mm Keihin CR units allowing a whole load more fuel and air through into the combustion chambers than the standard Yam instruments.

The barrels have been machined down to raise the compression and the cylinders rebored to the maximum allowable, once again all of this work has been skilfully carried out by Wildmans of Spilsby. Shaun points out that without their help the whole project would not have been possible, either mechanically or financially.

On the other side of the engine a Micron FZ600 exhaust system has been cut and re-welded to fit the 550 chassis. The lengthening of the down pipes also allows a better gas flow, greatly improving the low down power.

The large end can has been swept up and out of the way mainly because the shortness of the 550 chassis resulted in the can sticking out from the rear, which is illegal for racing purposes. Thankfully, with most race tracks running in a clockwise direction, the steep rake also increases the ground clearance on the right hand side.

BACKUP SAT ON THE SHELF

A MIX of the standard ignition and Dyna coils handle the sparks, although a complete aftermarket system is sat on the shelf ready and waiting should it ever be required.

The bike now outputs in excess of 70 bhp at 9000 revs with an impressive 42 ft/lbs of torque occurring around the seven thou mark. These figures are doubly impressive when a recent dyno run was made and the Mechanics bike was compared with one of its other Earlstocks combatants, 2001 champion Nigel Lawrence's XJ550.

The blue XJ was taken to the Dynomax UK dyno right next door to the Mortons HQ in Horncastle. Shaun's baby produced a clear ten bhp more and

a similar gain in the all-important torque curve over the rival machine.

The dyno sheet is strong indicator of superb carburation, ignition and engine tuning and by the look of this one it doesn't get any better than on this XJ.

With all of this extra grunt over the original 50 bhp, one would imagine there would be serious deficiencies in the drive train but this super XJ still runs the original clutch and gearbox. In fact the bike has only ever failed to finish on one occasion and that was down to an electrical fault rather than a mechanical one.

With Karl on board the XJ was the bike to beat throughout the 2002 season convincingly winning the Earlstocks championship along with several similar titles run by other clubs. Having ridden with Karl on a number of occasions I for one can state he is no slouch but every rider has to have a fine steed upon which to work his wonders. So just how good is the old Yam?

PREPARED SUPERBLY

WE met up with Karl, Shaun and the XJ at a sunny Mallory Park practice day to finally put a full stop behind the Mechanics XJ 550 project. The bike looked superbly prepared as we pulled into the paddock, not a single spot of dirt to be found anywhere.

Shaun has fabricated every fastener, bracket and spacer while virtually every nut and bolt on the bike has also come under his scrutiny in the lathe, kindly supplied by Paul Allis of East Lincs Motorsports. This kind of top notch preparation would not look out of place at the very highest of racing levels.

I had elected to go out in the fast group as the intention was not to hang about! With the static photography out of the way first (always a good idea for obvious reasons) it was soon time to rube up and get out there.

The heat was stifling and it was some relief to start circulating and get the many helmet and leather vents opened up and working in my favour.

From the outset those impressive power and torque curves were in evidence and the 550 was

easy to ride around with the rest of the pack, pulling well from mid range and with a fairly linear throttle response.

Good power was available almost anywhere in the rev range with the engine finally suggesting a gearchange around the 10,000 mark. A useful over-rev is there should it be required, but the power certainly starts to head south quite rapidly once into double figures.

Every modification works well with no one point on the bike standing out above the others in performance. It just gels together and gets on with the job. The bike is well balanced and certainly a lot lighter than the 420 lb quoted for the road-going version.

The engine pulls strongly and cleanly, while the Bandit brakes grab and stop as well as anything, with no perceptible fade even in the excessive heat of the day.

Once the speed has been scrubbed off, the bike can be laid on its ear and the gas applied again to get it around the fast approaching corner. This job was handled well, the forks and rear shocks making light work of the information being relayed to them via the tyres, allowing the rider to assess every single bump and imperfection on his way to a fast lap.

The chassis breeds confidence and begs to be ridden harder all the way. It may have come as some surprise to a few of the modern bike riders at Mallory that day when the little Yam not only held its own but gained on a few around the daunting Gerrard's bend.

It was also particularly impressive on the exit from the bus stop and into the Devils Elbow where all of the 70 horses could be let out for a gallop with out fear of a high-side.

After several fast laps the 22 year-old aircooled engine did start to suffer from the heat that I had been struggling with from the outset and reduced power was felt.

The enlarged, ten row, oil cooler situated just below the headstock was doing its best but without cool air running through it was facing an uphill task. Even the tyres were starting to overheat and a couple of times I got a bit out of shape on the fast exit of Gerrard's.

Chris aboard the Spilsby-built machine. "The bike ran superbly all afternoon and I didn't want to get off it by the end of the session."



Not a real problem as, in its normal environment, the rest of the field would also be aircooled and Avon shod, similarly suffering and probably more than a few yards behind at that point in a race anyway!

The bike ran superbly all afternoon and I didn't want to get off it by the end of the session. The little four pot Yam lapped consistently quicker and quicker. In the second session we started working well together, getting very near the sort of race winning times she is used to when Karl rides her.

When quizzed about the actual cost of the project so far, no one had a figure in mind, suggesting it has all been worth it no matter what the cost.

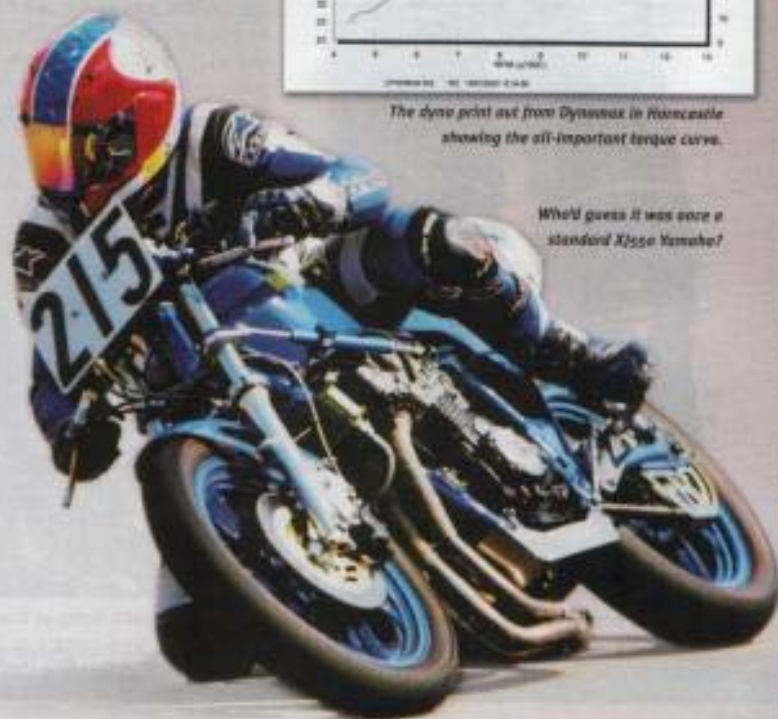
The XJ550 has been transformed from its unsuccessful middleweight origins into a real race machine capable of putting in some serious lap times as well as rewarding the lucky rider with as positive and satisfying a jaunt as any modern day machine.

Shaun and Karl, along with the many trade suppliers and supporters involved with the XJ project, have every right to sit back and feel satisfied with their joint efforts.

Words: Chris Pearson
Pictures: Stevie Pearson



The dyno print out from Dynamax in Horncastle showing the all-important torque curve.



Who'd guess it was once a standard XJ550 Yamaha?



USEFUL CONTACTS

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the Suzuki master cylinder to the twin pot floating brake calipers.

Other touches applied to the front end include an adjustable steering damper, TZR mudguard and a hefty fork brace clamped to the top of the sliders to stop the tubes twisting under load.

All-in-all the XJ is a very businesslike piece of machinery and not in any way suggesting the roots from which it first came from.

Once again, thanks to the rule book, the tyres have to be something like what was fitted originally but thankfully Avon continue to produce some of the finest crossply race tyres ever in the form of their superb AM22/23 rubber. The front tyre in particular is the equal of most modern day radial rubber, it is simply is that good.

CHANGES REVERSED

WITH the chassis sorted Shaun and Karl then turned their attentions to the engine and several aspects that had already been attended to were reversed.

The crankshaft had been excessively machined away and the result was virtually no low-down torque and power. A swift return to a standard item, expertly balanced and re-shelled by John Wildman Motorcycles of Spilsby, soon had the horsepower and torque figures looking good again.

So far it has proved nothing less than 100 per cent reliable throughout two seasons of intense competition. The conrods are, once again, the standard Yamaha items although Shaun does



The bike's builder Shaun Philpot.