

Husqvarna 390 Enduro Automatic

ALTHOUGH I ALWAYS strive for objectivity, I must admit that I hold certain marques and personalities with particular affection. Amongst these is Husqvarna, the meticulous, free-thinking and eminently successful Swedish competition factory.

Husqvarna engineers are skilled, thoughtful and determined and have their own ways of tackling problems. I like the Husky people very much, and as a friend of the factory I was probably one of the first journalists to see the prototype Automatics in their three-speed, 250cc form. In truth, they weren't very inspiring, but they were the first steps on the road to a very lucrative army contract.

The army contract was the key to the Husky Automatic, for it provided a guaranteed reward for the factory's research and development effort. This produced a most elegantly simple solution to the problem of automatic transmission on a motorcycle with a gearbox which is actually smaller and neater than a conventional unit.

In parallel to the army work the factory developed the bike for use in competition. It never really succeeded in this guise.

I get slightly irritated when I hear pundits condemn the failings of the Husky Auto when most of them have never ridden the bike. The lack of engine braking is no detriment whatsoever, no more is the fact that the rider cannot make his own gear selection. The Auto's one and only failing is that it isn't fast enough!

I look forward to the day when the Auto is linked to a 450 motor or, better still, a four-stroke. Neither of these options is as far fetched as it sounds, and when that day comes I might well return to the Auto fold. Biased I may be, but I would love to see my Swedish friends prove



A sight familiar to all Husky Auto riders. The small lever on the left releases the drive and gets the bike in action.

wrong all those cynics who have always been so quick to condemn the Auto.

Although the Husqvarna Automatic has been with us, in various guises, for three years now, it is only in its latest form that it has come to fruition as a serious challenger in off-road sport.

The 390 Enduro with the automatic gearbox has many virtues which are desirable in a long-distance racer, a few which are really outstanding and one or two weak spots which the rider has to tolerate.

Unlike the clumsy efforts of many of the big manufacturers, the Husqvarna's automatic gearbox is beautifully neat. The power is transmitted just like a conventional gearbox in that it has pinions, large and strong ones, too, the



The Auto motor consists of a 390 motocross barrel and bottom half with the Husqvarna automatic gearbox housed in place of the conventional gearbox. By far the neatest arrangement of any automatic.

difference being that changes are made automatically. First of all, when the drive is engaged by releasing the little handlebar-mounted lever, a centrifugal clutch takes up the drive like a manually operated normal clutch. This take-up can either be very quick, permitting racing starts, or extremely gentle, so that the Auto can be inched along off-cambered banks or sheep tracks.

First gear is engaged initially and this stays in use until the engine reaches the optimum point for maximum acceleration, and then a series of dogs spins out and locks in the next gear, until eventually the bike is in fourth, which is top gear for an auto.

When the throttle is closed the gearbox changes into 'neutral', that is the drive disengages, and the bike freewheels until the throttle is opened again. At this point the gearbox selects the correct gear commensurate with the bike's road speed and drive is available again. All this happens so quickly that, effectively, it cannot be felt. I have ridden several Husky Autos in the last four years and I am beginning to get the knack of sensing the gearchanges, but for all practical purposes they are so fast they cannot be felt.

Our test bike was supplied by northern Husqvarna distributor Colin Shutt, and as well as providing us with the personal bike of his rider, Graham Foster, Colin also laid out a 10-mile test track consisting of bogs, ruts, rocks, motocross tracks and some 80mph shale roads. All in all, the most complete test course I could hope for.

In all this going the Husky never faltered. In fact, I would happily take the Auto to any National enduro and be confident of winning a medal. Therefore the criticisms I make must be taken in the context of comparing the Auto with the best ISDT bikes, such as the 400 KTM.

In crossing ditches the Auto was slightly hesitant and this made lifting the front wheel marginally more difficult than on a conventional bike, and, similarly, fast, rutted going was not so easy since absolutely instant acceleration and braking was not to hand.

However, the Auto scored heavily on acceleration over very rough ground, where it could simply be screwed or powered through really bad terrain where I would not have risked a gearchange on a conventional bike. It was also better on boggy sections, where the motor would constantly adjust to the amount of drive the rear wheel was finding and compensate accordingly.

Finally, it was better downhill, which is contrary to all accepted thought, but true nevertheless. With the drive disengaged, the rider could really clap on the two truly superb Husqvarna brakes without fear of stalling the engine. This meant that the wheel could be kept almost to the point of locking without any fear of this ever happening and descents were therefore faster, and smoother,





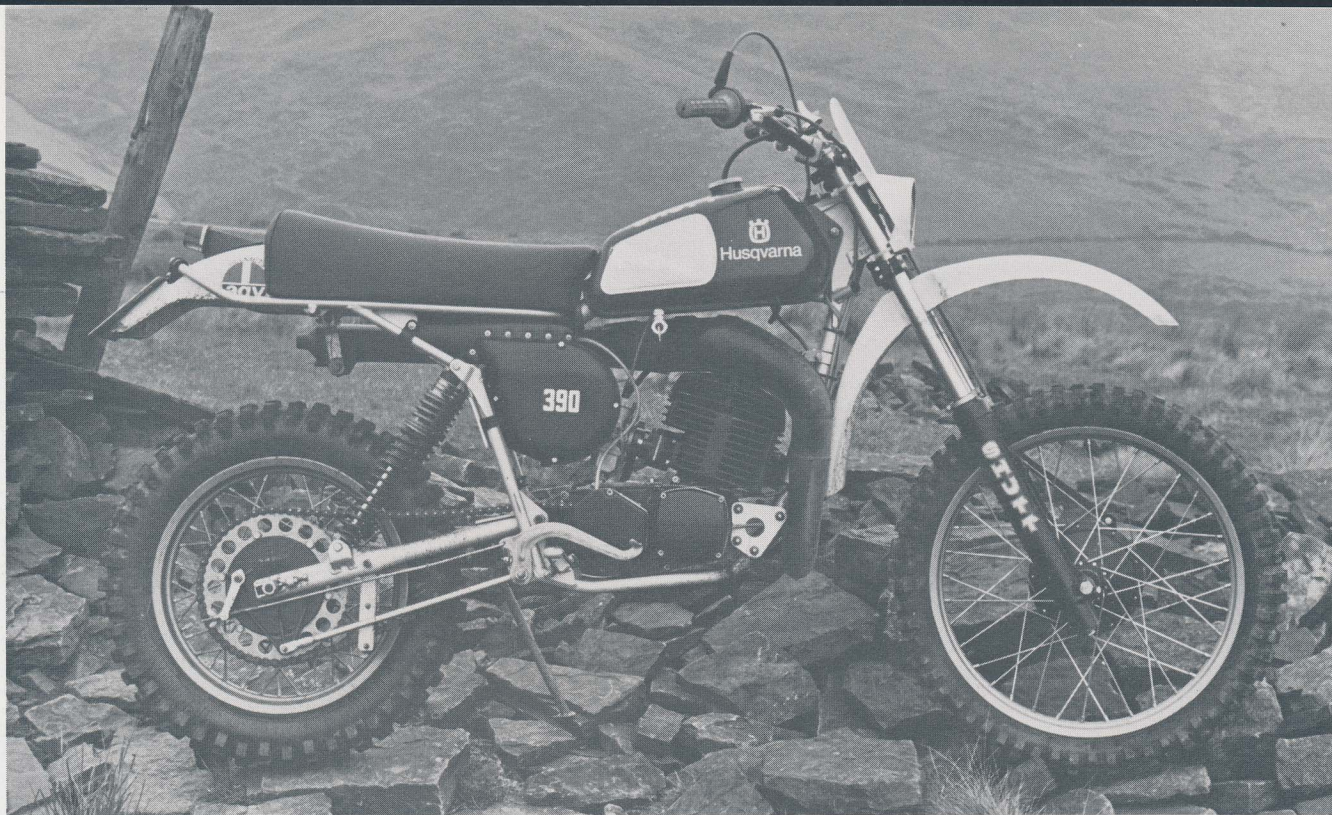
The Auto could find drive in conditions which would defeat a conventional motorcycle – and there was never fear of being in the wrong gear! The 390 Auto is still the best bike for bog-bashing the author has ever ridden.

than normal. I came down an off-cambered 40° slope without any difficulty whatsoever.

On all other going there was very little to choose between the two systems, except that the rider could concentrate more on racing, and less on making gearchanges, than ever before. Also, once above 50mph, there is so little engine braking available from a two-stroke single that one might as well have an Auto and be relieved of the need to change gear.

Mention should be made of Husqvarna's latest chassis, which is excellent, regardless of whether it is housing an automatic or not. The front forks are superb and the ride is taut and safe under all conditions as well as being more forgiving than the previous Husqvarnas. Certainly it is as good as anything available today.

The Auto will be of most value to experienced riders who are something less than ISDT Gold



Medal winners. A beginner will find the need to brake hard all the time and the power of the 390 more trouble than advantage, and a top-line rider will probably be able to do all that the Auto can manage and overcome its failings as well. However, for those competent riders who wish to start winning Gold medals at National level, the Auto has tempting potential. As one of those riders myself, it has given me very serious food for thought.

Husqvarna 390 Enduro Automatic

Engine: Single-cylinder two-stroke
 Displacement: 354cc
 Bore and Stroke: 82 × 67mm
 Compression ratio: 10:5
 Power transmission: 4-speed automatic gearbox
 Chain: $\frac{5}{8}$ × $\frac{1}{4}$ in
 Ratios: 1 - 16.0; 2 - 11.9; 3 - 9.5; 4 - 7.9
 Fuel system: Gas/oil mixture 1:25 (4%)
 Fuel capacity: 3 US gal
 Tank colour: Green or maroon
 Carburettor: Bing 36mm central float chamber
 Electrical: Motoplatt CDI with 6V 35W lighting coil
 Frame: Swedish chrome-moly tubing
 Rear suspension: G.P. type heat-treated swinging arm in rubber bushings. Girling gas-filled shocks

Clean lines almost to the point of austerity typify all Huskies, which are racing machines first and foremost.

Travel: 7.5in
 Front fork: Husqvarna telescopic with G.P. damping system
 Travel: 7.5in
 Wheels: 3.00 × 21in front; 4.75 × 18in rear. Rims: Akront light alloy
 Brakes: 140mm front; 160mm rear
 Tyres: Trelleborg
 Length: 83in
 Height: 44in
 Width across handlebars: 35in
 Height at saddle: 31in
 Ground clearance: 10in
 Wheelbase: 56in
 Weight: Approx. 216lb dry