

CLOCKWORK

THIRTEEN hundred miles in a day. Thirteen hundred miles stopping only for fuel and to replace tyres in twenty-four hours spattered with rain and fog, run on a continually wet track at Snetterton's race circuit. And at the end, having used up two sets of tyres and over 40 gallons of fuel, Kawasaki's Z650 was running slightly but noticeably better than it had at the start.

Our test was devised as something a little different for the new four-cylinder sportster and its performance on nearly all counts left it as a highly commendable machine. Although the distance covered was not set as a target, it is roughly the same as the mileage involved in our normal road tests — squeezed into 24 hours. The object was an endurance test — to run the 650 as hard as we could for a full day and night and see what happened. A solid 24 hours is long enough to give all the components a chance to wear or break and running a machine to a deadline schedule is likely to produce more drama than if it were run one hour a day for twenty-four days.

On a fast enough circuit it's possible to clock up astronomical mileages — taken to its extreme, a banked oval or a German autobahn allows any machine to be run flat in top all the time. But that kind of test doesn't tell anybody much about the qualities which are important to the rider who is likely to buy the bike — important things like handling, braking, acceleration and comfort. The short circuit at Snetterton offers a good blend of straights, bends and bumps which are a fair test of the machine as a whole. One

An evil track surface, but Dave Walker and the Z650 press on.

straight is long enough to reach a realistic top speed, but not so long that an over-gearred bike can reach an artificially high speed. There are three places where the brakes can be (have to be!) used to the maximum, places where the bike is braked as it banks over, slow chicanes, a fast chicane and curves ranging from 20 mph at the tightest to 80 to 90 mph at the fastest.

The new Z650, described in our October issue, is offered as a performance package

without the price or formidability of the Z900. At about the time of its introduction we were looking for a suitable bike to run at Snetterton — it looked to be the ideal machine.

Kawasaki UK were reluctant: the only bikes they had were US-spec models which had been used at the press launch. They'd been thrashed by one and all and had not been run in properly. Spares hadn't then arrived and even Kawasaki's own service



Bob Goddard cranks the ever-willing Z400 through the Esses

Towards the end the track started to dry. John Robinson tags Colin Mayo on the Z400.



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MCM 24 HOUR TRACK TEST

KAWASAKI Z650 AND Z400

staff hadn't had a chance to find out much about them. If a bike in this state was to stand up to a 24-hour test with no vast spares back-up, it would have to be reliable. So when we asked for two, John Norman of Kawasaki UK paired, twice!

The reasoning behind the request for two was simple enough — if one bike expired at least the whole effort wouldn't be wasted. We had another reason, too. Two bikes would inspire enough of a competitive element to keep everyone on their toes. 24 hours of gloomy weather is long enough for the most ardent to get sick and tired of the whole thing and one more bike would double up on the action. We thought it would be a safety measure, as well, for the rider to have some company out on the track — people fall off when they are tired, cold and bored.

Kawasaki came back with the suggestion that we run a KZ400 with one 650. We accepted on the grounds that it was better than nothing at all, but thought it a bit of a joke using the highly domesticated commuter's twin under such conditions. We were wrong.

In the end Kawasaki did provide two 650s, the first was a hack which we used at Snet-

terton in a practice session to check fuel consumption, see what adjustments we needed to make and get some idea of the general problems. For the test itself this machine stood by as the only source of spares.

Meanwhile service manager Dave Hill and Chris Trainer were busy preparing the 650 and the 400, servicing them, making changes we asked for and generally trying to find out as much as possible about the new four.

We like to test our test methods and arranged for Mick Grant and Barry Ditchburn to do a stint each in the 24-hour run. Their lap times, compared to ours, would let us know how hard we were pushing the bikes and whether the machines were near their limits or just being hampered by riding ability.

Colin Mayo and I took the hack 650 to Snetterton and ran it for a couple of hours. The motor was revvy enough, didn't rattle and would sing on past the 9000 red line quite happily. Without trying desperately hard we could get 9000 in top along the back straight at an indicated 105-110 mph. It was all a bit disappointing. The speed felt like the speed was about right — certainly not reading slow — yet the machine was reputed

to be a good 10 mph quicker. The bike had tall handlebars, the tyres were a few pounds soft and the handling was terrible. I was getting wallows and weaves through Riches which felt like a following rider would see daylight between my wheels. Colin was getting a violent wobble halfway through Corams. We reckoned that a lot of improvement could be made at the tyres and that a better riding position would make some difference, too, but the rear dampers still left a lot to be desired. Between softest and hardest pre-load settings we could either have wallows or rapid hopping and it was obvious that the dampers weren't keeping control of the springs.

The motor was a surprise. Instead of the irresistible thrust which you immediately associate with the Z600, it was buzzy, coming on the cam at 7000 and depending on its rpm rather than any underlying torque. It felt like one of those four-strokes made accidentally by a firm specialising in two-strokes. The more so because we'd expected it to be a sort of grown-up son of Z1. If you intend to stop reading now, don't go away with the impression that the 650 is a gutless wonder with the handling properties of a large mattress. It's much better than the ride on the hack bike led us to believe.

The quick and the not so quick! Robinson chases Mayo into Russells.



Sun shining, track drying, bike going like a bird... life's sweet aint it?



Frenzied activity in the pits as first the 650 rolls in and then the 400.



Quick spitter in action: Dave Hill (left) gets ready to run for cover!



In the final stages as Mick Grant blasts up the pit straight on the Z650.



The cut and welded bars created by Dave Walker. The right bar was damaged in a minor incident early on in the test.



Despite the big bars and the soft tyres I got the 650 round in 1m 30. Jim Wells won a production race there on his Le Mans Guzzi with laps at 1m 20 and apart from anything else the Guzzi has got to be 15-20 mph quicker along the straights.

We related the problems to Dave Hill who, even though he works for Kawasaki, remains calm about big K's bikes and never tries to whitewash anything. He said that "our" bike was a whole lot better than the hack and that he'd check its rear suspension as there was a good chance that the dampers had never been primed. We also asked for a few changes — Kawasaki wanted the bike completely stock — which we justified on the grounds that we wanted to test the bike, and not the riders. Comfort at high speed was the main thing and a roadster is just not set up to be ridden flat out hour after hour.

The first point was dropped bars so the riders could get out of the wind (they would be crouched along the straights anyway so there was no likely gain in speed) and a hump on the seat. If you don't believe the difference this makes, try strapping a bundle on to the pillion seat, its surprising what this extra support can do.

The Z900's weak point was its lighting, and as standard the 650 carries a 45/40 watt headlamp. Whether or not this is sufficient for road use is not the point — we needed to be able to see at 100 mph or more with no assistance from white lines or cat's eyes and without even hedgerows to show where track stopped and countryside started. Dave Hill agreed to fit 75/50 watt Lucas car units. They are cheaper than equivalent powerful motorcycle replacement lights and had proved to be reliable in 900s, but were an unknown quantity in the 650. As Dave put it: "The 650 is smooth running but if the motor happens to have a Lucas-destructive frequency, you've got a problem."

We suggested that the side and centre stands be removed as they would be the first things to ground, although practice day had shown the 650 to have pretty good clearance. Finally we asked Dave Hill to raise the gearing by a couple of teeth at the back wheel because the hack motor had redlined in top and, if it should rain, the higher overall gearing would take the buzzy edge off the motor, making it easier to get away from slow corners without wheelspin.

Dave fitted fitting Ace bars but found they were too wide to be comfortable when they take the lever and throttle drum were allowed for. He fitted straight bars, but having doubts about these we got Dave Walker to weld up some dropped bars to carry the brake and clutch levers inboard of the U-piece.

Apart from having the optional twin disc front brake (same as the 900) the Z650 was completely stock. We'd told Dave that the brakes were fine but he was more interested in minimising wear than getting better braking. The bike had covered 740 miles, mostly being belted at the press launch. There hadn't been time to do anything to the Z400 and Dave phoned to say that the only way we could have it was stock. Dave Walker immediately rushed off to weld up another set of bars.

The industry which surrounds motorcycling is an enthusiastic one with people doing what they do because they enjoy it. So when Keith Callow of Shell and David Lamb of Dunlop heard about the exercise they quickly arranged support with fuel, oil and tyres — and then came along on the day to lend a hand.

Les Brand supplied a new Regina chain, claiming that if it was lubed at each fuel stop it would last the full distance with no fuss

and minimal adjustment. We took that with a pinch of salt but decided to give it a try anyway. Brian Feltham, the circuit manager, left the marshal's room and press room open so we had somewhere to dry our clothing. Europa Caravans even loaned us a demonstrator which made a superb kitchen and rest room, instantly commandeered by Rod Sloane who appeared with several hundred-weight of bacon, sausages and baked beans to keep up a standard of service which would make any motorway cafe look as efficient as a Mallory Park abluition.

LET IT RAIN

We arrived at Snetterton at the crack of noon for a scheduled 5 pm start and the rain arrived about 20 minutes later. For two days before it had been fine and sunny. The day after the event, as I write this, the sun is glaring through the window. If I were religious I'd cancel my subscription. Statistics say that it only rains five days a month, we managed to get a fortnight's worth in 24 hours.

While we finished fitting the new bars and organised the refuelling stops the others went out for a few practice laps on the hack 650. Dave Hill had made up a neat hump for the 650 by using the foam from a damaged seat and we made up another one for the 400. I tried the new 650 and was amazed at the transformation. It felt smaller, lighter and much less top heavy. I was convinced that it handled better too, but in the rain I wasn't going into the bumpy corners fast enough to find out anything about the back suspension.

It was giving a portable, smooth ride and that's all I was bothered about. The motor, still revvy, seemed to have a bit more urge in the mid-rev range. It was pulling the higher gearing well enough, making upward changes up to a hundred yards later than the hack 650. As I was coming out of the corners more slowly I'd say that the motor had just enough extra power to let it pull a higher gear without being slower on acceleration than the hack bike. Along the back straight it was giving roughly the same speed — an indicated 105 — but at 8000 instead of close to 9000.

Barry Ditchburn turned up, did a few laps and seemed quite pleased with the bike and by 5.23 we were ready to go, Barry to do the first stint followed by Dave, myself and Peter Hughes who'd been delayed and hadn't arrived yet. Colin Mayo, Bob Goddard and Phil Grund were all to keep us company on the 400. Ad manager Peter Levesley, Lee Pullen, armed with pencils, paper and stop-watches were ready to keep score and an aroma of burnt bacon was beginning to rise from the caravan.

We'd arranged to run both the bikes until they went on to reserve, the rider signalling the pits to let them know he was coming in on the following lap. But for Ditchburn's stint we were going to bring the 650 in after one hour — long enough in those conditions for someone who was only doing it as a favour! It would also ensure the two bikes' stops were spaced far enough apart. Barry was lapping cautiously at 1m 48 when we signalled him in and despite the conditions seemed happy with the bike, remarking that it was very stable and easy to handle.

Dave Walker went out next as he'd only had a few laps of practice and wanted to make the most of the remaining daylight but make the most of the remaining daylight but on the first lap his visor misted so badly he stopped to clean it. Bob went past on the 400 and Dave tucked in behind but the misting was so bad Dave nearly rammed the 400 at Corams and decided to get back into the pits. In fact he decided so quickly that he took Bob

with him as he darted down the pit road, causing much alarm in the pits, not to mention in Bob.

I still had riding gear on and took the 650 to use up its fuel while Dave sorted out a new visor. It was nearly dark, still raining and after a few laps my visor steamed up, leaving a clear section down the right hand edge so that I could only see with my head cocked to one side. As I'd only just sprayed the thing there didn't seem to be much point in stopping. I guessed I'd just have to put up with it. It turned out later that we'd grabbed the wrong bottle when we sprayed the visors, the anti-mist stuff was still in the boot of the car!

As it got darker I was relying more on memory and the markers than what I could see of the road. Brian Feltham had put out some small posts with reflectors on them at the edges of the corners and slowly, corner by corner, I was finding that I could point the bike at one marker, wait until two others lined up and then brake, peel or whatever. The 650 was comfortable, handling very well and giving as much power as I wanted to use, remembering Barry's parting comment:

could take the pressure off and relax, not even on the long back straight. Accelerating out of Sear I'd get across to the right, watching the rev counter and what I could see of the kerb down to my right. I didn't look straight ahead, where the powerful light beam evaporated into a black nothingness because I just couldn't accelerate flat out into something I couldn't see. So I watched the rev counter. When it got to 8000 in top I started straining to see the 300 yard marker board, which always appeared on time, just as I'd convinced myself that it had fallen over and that I was about to plough into the Dunlop Bridge. Then the 200 yard board would show and a tiny twinkle of red further on that was the marker for the Esses. Already my arm and stomach muscles would be stiffening up, making the throttle stay open against a very large force that was trying to close it.

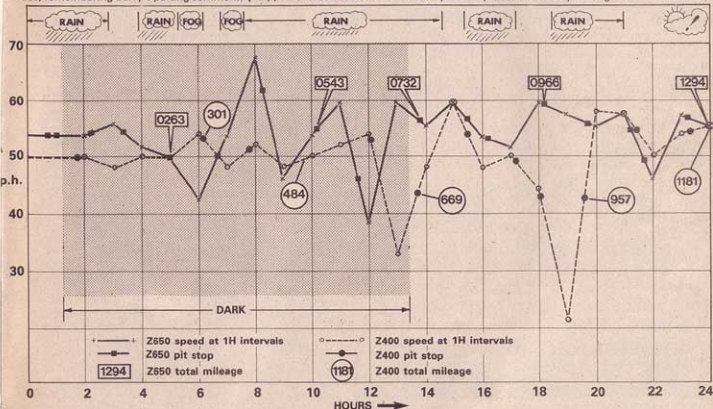
After the 200 yard marker there would be the longest second of the whole lap as I waited for the braking point. Then the beautifully powerful front brake loaded up my arms as weight went forward, the light beam dipped and contracted with the compressed

for. The brakes were superb; the double disc being unbelievably powerful yet light to use and so sensitive that we could brake really hard on the wet track and know that we were in control, that the wheel would only lock if we were foolish enough to want it to. The back, drum brake was just as sensitive and controllable — Dave often had the tyres howling and hopping without making the wheels lock or slide away.

The other nice feature was the bike's throttle response. At Sear and the Esses I'd be arriving cranked over on the overrun in second and a touch of throttle would have had most bikes jerking forward unpredictably. On the Kawasaki the throttle could be eased open gently and the motor would switch from overrun to power so smoothly that the bike could be steadied on the throttle getting power on early to accelerate hard out of the bend.

Physical discomfort was pushed aside by the concentration of finding the thin line between respectable lap times and a crash. I know I never felt cold. The bike itself was comfortable, smooth and easy to ride and about half way through each stint I'd start

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"I don't think I could've got my racer round any faster in these conditions."

I'd made up my mind to find a definite rhythm of braking, changing gear and taking the same line, doing everything in the same place on each lap so that I could still follow the pattern and keep up speed when visibility got worse. It wasn't as easy as it sounds. After I'd sorted out the markers and got everything into place it would work pretty well for a few laps. Then I'd lose concentration, chicken out or do something a little too fiercely, a wheel would slip, I'd get off line, the markers wouldn't line up and I'd literally be in the dark. Once the rhythm was broken it would take maybe three laps to get it back which would have been annoying if it hadn't been so frightening.

Snetterton is an easy circuit but the snag was that in the dark there was nowhere we

suspension and momentarily the precious markers would disappear from the beam. But the light would pick out the curving kerbstones as the track wound across to the left. As soon as I could see the corner, I heeled the bike over — forgetting how wet the track was — steadied it with a touch of throttle, clipped the left hand kerb and kept it banked over until the light picked up the two red markers on the apex of the right-hand, going much too quickly. There was just time to straighten up, dab the brakes and go down one more gear, into second, to straight-line this left-right switch before flicking it round the markers and easing power on again. That back straight, with a few seconds in top gear was about the only place we could just sit on the bike and do nothing.

In that first, dark stint the Kawasaki had two things which I was particularly grateful

going through the curves more and more quickly. Often it would slide but it didn't crash. I thought it was just my concentration dropping but in the pits they thought it was me getting mad at the weather. Apparently they're dead timing me at a steady 1m 52 as the rain was easing off; then it came on hard — I remember cursing because it was coming inside my visor and everywhere — and my lap times dropped to 1m 48.

The first stint, mainly in darkness, gave us 56 laps on a tankful of fuel — about 40 mpg



at an average speed in the mid-50s as we felt our way around. By the time Dave took over from me it was good and dark, the rain was still as bad but at least we'd found the anti-mist stuff.

On Dave's next stint his visor was still giving him problems and he ended up riding a lot of the time holding it open with his left hand. But after half an hour out on the track the lap times started to come down and, unknown to us, fuel consumption was getting worse. Peter Hughes arrived hoping for a few laps on the back bike, only to find that the wheels had been just taken out ready for a tyre change. So on learning that Dave wasn't expected in for another forty minutes he settled down to the delights of the Sloane haute cuisine. Right away the beeping of the 650's hooter let us all know it was on reserve and coming in next lap. Getting into leathers in a hurry is not easy when you're balancing a cup of scalding coffee and a plate of baked beans.

Dave Hill was getting the pitstop down to a fine art and despite the panic Peter was on the bike, fuelled up, chain lubed and away in 53 seconds. Not bad considering the "quick" filler had a restrictive hose to fit the K's filler



Tyre change time for the 650. The original Japanese Dunlop covers were replaced with Dunlop Red Arrows after 12 hours.

neck and took 40 seconds to dump its fuel. In the rush, though, no-one thought to tell Peter our sequence for running the machine on to reserve, warning the pits and then stopping. In the pits the rider stopped early and paddled slowly up to the fuel filler while the chain was sprayed and he had to remember to switch the fuel tap down to main tank position, otherwise if the outgoing rider stayed on reserve the bike would go on until the tank was good and empty. Nobody could remember Peter switching the tap down so the next panic was to get him a signal which he would (a) have time to read and (b) be able to understand. We settled for TAP DOWN. The result was that Peter started power-shifting at what sounded like 9500 and knocked four seconds off his lap times.

That took him to 1m 56, which wasn't bad considering that it was, at the time, raining, he never even saw the bike before, had been ridden at the circuit for over a year and Ditchburn had lapped in 1m 48 while it was still light . . .

The final irony came when Peter cruised in along the unlit pit road and mentally switched off a bit too soon, letting a wheel slip off the edge on to the soft, muddy verge.

The resulting melee pulled a muscle in Peter's shoulder and, we later discovered, chipped the bone, as well as bending bits of the Kawasaki. It cost us 16 minutes to disentangle the machine but Dave's face lit up when he saw that his handlebars, although a bit bent, had not broken. Someone produced a large piece of metal and straightened them enough to get full lock again. The only other damage was a broken indicator lens and scratches on the alternator cover and switchgear.

FOG, TOO

My next stint looked promising. The rain began to ease up, the bikes were splashing water off the racing line and it all started to get a bit grippy. Within a few laps I'd got the markers sorted out and was looking forward to getting the lap times down. Then on about the fifth lap I approached the tight right-hander at the Esses, concentrating on the red reflectors and nothing else. As I flicked the 650 round and eased on the power I looked up into a dense, blank grey wall. A patch of fog was reflecting the lamp's 75 watts straight back at me. I groped through it and eventually caught sight of the line along the edge of the track. For the next fifteen laps all I could do from the Esses through to Corams was follow the inside kerb.

They must have wondered in the pits why my times had slowed — along the pit straight it was bright and fine and the 650 was singing along as healthily as ever. In fact there were two patches of fog about a quarter of a mile apart, one at the Esses and one along the back straight, both slowly drifting up the straight. Each time round I ran into the fog slightly earlier and it was only a matter of time before the leading patch arrived at Sear and Russells.

The thing about fog is that it completely disorients you. Even when I could see the markers I could no longer remember which one to aim for and each corner was transformed into a series of straights and lurches with quick blasts of power where the fog was patchy and ragged jabs on the brakes as it closed in. If a bike had gone past me going the other way I wouldn't have been at all surprised.

PIT STOP

Then, half-way through the stint, the fog disappeared as suddenly as it had arrived. It stopped raining and the track was grippy enough to get the times down to 1m 47. The motor was starting to rattle a bit at the top end, mainly when power was rolled off going through Corams. Dave Hill thought the cam chain was due for adjustment and started to get ready for a long pit stop when the bike came in again. When Dave took over the overall average had dropped to 42 mph.

Light rain was coming and going, just enough to keep the track wet but the only real problem was a large puddle which formed right across the middle of the road at Russells chicane. We didn't know it at the time, except that the bike would usually slide violently, gripping as it came out the other side, each time we hit the puddle.

Dave quickly settled down to lap at a steady 1m 52 and thinking he might like to know how he was doing we held out a sign with the time written on it. Dave misread it for a go faster sign and promptly started going round at 1m 47.

By the end of his stint he'd brought the average up to 67 mph and things were looking pretty good for the Kawasaki. As the 650 came in Dave Hill and Chris got to work, adjusted and lubed the drive chain (which only needed a perceptible amount), adjusted the cam chain, put five turns on the back brake adjuster, added half a pint of oil, three gallons of fuel, checked the tyres, brake pads and lights. They had the bike on its way in 7 minutes 17 seconds.

Peter, obviously troubled by his shoulder and a bit detuned, went out with the intention of going very steadily but after a while his lap times were coming down and at the end of the hour he was only a couple of laps down on the average.

While Peter was circulating the rain kept coming and going never giving any of us a chance to dry out and making everything pretty miserable. I'd reached the stage where I just didn't want to go out any more. But each time, after two or three deliberately slow laps I found I was enjoying it, started to go a little quicker and by the end of my stint I was actually sorry when the Kawasaki ran on to reserve and I had to come in (which was particularly annoying if this happened just when the 400 was in sight. This was something all of us on the 650 looked forward to — about every ten laps we'd catch sight of the twin disappearing round the next corner and it would take another two or three laps to catch it).

SURPRISING

The little twin was surprising, it seemed to handle very well and pulled out of the slower corners as quickly as the 650 so that while it was easy to make up time along the straights it wasn't so easy to close on it from the Esses through to Russells.

Getting used to riding in the dark and wet was bad enough but once we'd sorted out a line at least the darkness stopped us from seeing the wet track and anything that we corner more confidently. Then we'd come up behind the 400, initially being able to go more quickly because we could see it but as we got closer the headlamp would pick out the spray being kicked up behind the twin and show the back wheel edging away on corners, quickly destroying the confidence we'd built up.

I took over from Peter for my last stint in darkness and, when the rain eased off and I could see more clearly I found I could go surprisingly quickly. The lap times don't altogether bear this out but 1m 49 certainly felt very fast. It was also aware that the Kawasaki was a bit more confident than behaved very well indeed, were due for changing. The right hand treads were down to 2.1 mm on the front and 2.5 mm on the rear and you can't expect a lot from that on wet roads.

Maybe I was trying too hard or just getting tired but in this stint I left the road about a dozen times. The problem was mainly that at Sear it always seemed to get power on too early and drift out on to the crumbling surface of the old runway. After the first time finding it didn't slide, this seemed like a legitimate way of increasing the track width. The result was a couple of other places where everyone seemed to overshoot occasionally — at Sear where the full circuit runs on to join the Norwich straight and at the end of the back straight where there is a hundred

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yard run-off. I don't count these overshoots as mistakes because we all knew the run-off was there and it made more sense to use it rather than go into the corner too quickly or risk locking the front wheel by braking too heavily.

One mistake I did make was at Corams, which is no place to even think about mistakes. My daylight line takes me around a big bump on the approach before feeding the bike into the corner. At night this didn't line up with any markers and I couldn't see the bump anyway, so I'd been experimenting with different lines. Finally I settled for going tight into the bend, following the kerb which, at the lower speeds, seemed all right. Then when the rain backed off and I started going faster I thought it would be interesting to see just how fast the 650 was going — and that's a completely fool idea. I went all the way round Corams watching the speedo and rev counter. As the speedo got up to 75, hovered and started to fall I was up against the inside kerb, feathering the throttle. Then it started to drift away using throttle to control the line. Predictably, by the time I looked up the bike had come out of the turn early and was pointing straight at the grass. Faced with a choice of laying it over hard to stay on the road or taking a short cut to Russells I straightened it up and let it go on to the grass praying that nobody had seen it to dig any trenches across there. The Kawasaki

Walker was a bit concerned about them. The pressure gauge in the pits showed pressures of 22 and 30, which seemed a bit odd, but as they had been set up by Dunlop we were loath to change them. Dave set off after the 22 minute pit stop, which brought the average down to 40 mph on the line, and did a few cautious laps. After they'd warmed up, Dave felt quite happy, which wasn't surprising because our gauge was playing up and the pressures were actually 28/32.

Dave commented that where he'd had the odd slip and slide before, the new tyres kept the bike firmly on line, though he did say that the stint was uneventful enough to get bored as Dave put it: "Just when I felt I was riding on automatic pilot, my concentration would go and I would change up instead of braking at Sear and blast up the slip road leading to the Norwich Straight. This must have happened seven or eight times, once after passing Phil Grundy on the 400, who must have been surprised to find a bike coming back up the road towards him."

DAYLIGHT

Peter went out for his first stint in daylight, circulating in the rain just behind the 400 and obviously in some discomfort from his shoulder. About halfway through the stint the rain eased off and I finally stopped altogether; then Peter signalled that he was coming in — we'd arranged that if his aches and pains got bad he would give us five or six laps warning and then pull in. The brighter weather brightened me up a bit, too, but as I was struggling into an oversuit the sky darkened over and the rain came down again.

That turned me off very rapidly, but again after three laps, once I'd got wet and discovered that I wasn't going to fall off, I started to enjoy it again. It says a lot for the Kawasaki that it could be fun in such conditions — and feel safe and stable at the same time. I was very impressed with the Red Arrows and was lapping more quickly than I had before, probably with less effort. But this was the first time I'd ridden in daylight and it's difficult to make a direct comparison.

There was some exhilaration at the time, when the 1m 40 bracket was the thing to get into. Looking back the lap times are less than impressive but with a top speed of 100 mph, a track streaming with water and frequent surface changes in mid-corner, it felt pretty quick. I was leaving wide margins, particularly at the places I tried different approaches to — braking about 100 yards early at Riches for instance. We were all having to slow a lot for Russells, because of the puddle — during the dark when we couldn't see it everyone had complained of slides, in daylight it was amazing how much slower we went! Peter, Dave and I tried different approaches to miss the puddle using third gear when we thought we were at our fastest or rolling it off in fourth when we were travelling sedately.

The strange thing was that the motor felt buzzy, with the bulk of the power happening above 7000 yet going through the chicane close and peak early in third gear. We were in fourth at the end of the start grid — exactly the same as if we just rolled it off and let the revs drop in fourth through the corner. So the motor must have been producing more urge at mid-revs than we thought. Another point confirmed this. Coming away from Sear in the peak rev in third gear, we pulled on gently and progressively yet the motor came on strong enough to make me slide back down the seat. When I took over from Peter to use up the remaining fuel Dave got ready to take over "my" stint. But when the

fuel ran out half an hour later I was quite happy to go on for another tankful. In any case the rain had stopped again and someone had swept away most of the puddle from Russells.

I could feel the effects of not having slept for 24 hours but what surprised me most was that I didn't have any more pains — less than I would have expected from just being up all night on a windy, rainswept airfield, let alone having to ride a bike as well. The handlebars and controls had been set up around me so they were just the way I like them. I have an inch or two longer and sits flatter than I have any more pains in his wrists and chest, mostly from the strain of braking and the longish action of the twistgrip, which was all right on upright bars but a bit too much for short, dropped bars.

But out on the bike, I was feeling pretty cheerful especially when, after a couple of showers the sun suddenly burst from behind a big black cloud.

This last stint dropped the fuel consumption to an all time low of 27 mpg and the distance covered so far was 1062 miles, with just over four hours to go. This was the next long pitstop where Dave adjusted the cam chain and the drive chain (only half a turn on the adjusters and only the second adjustment not counting the wheel change). He also added half a pint of oil although the bike didn't need it. The level was midway between full and empty, but counting this oil the total consumption was still better than 1000 miles per pint. Ten minutes later, Peter was on his way.

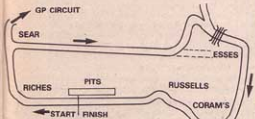
Dave said that the twistgrip rubber was loosening off, slipping on the bars and before long Peter was in again to have it wired up. It was raining again but despite the conditions and the pain from his shoulder he was lapping steadily in the 1m 50 bracket to bring the overall average up to 58 mph and coming in with 1166 miles up (and 1200 showing on the Kawa's speedometer).

MICK ARRIVES

I took over for the last hour and a half until Mick Grant's final hour. Because of the conditions we'd be doing about 20 seconds slower than the hack bike with upright bars, soft tyres and all. There's no doubt that in good conditions the 650 could have got round in 1m 25 or better but as we were in no hurry and Dave Hill asked me to keep down to 8000 so that it would need the minimum of attention at the next stop. I started out gently, saw Colin on the 400 up ahead and squirted it for a couple of laps until I caught the twin and then tucked in behind it. Colin must be wondered what I was doing, because in the next few laps, Peter Craven and Lee Putter, still on the bikes, noticed that he knicked 10 seconds of the 400's lap times.

Then the rain went, patches of blue sky appeared and the track started to dry out for the first time. By the time Colin pulled in for fuel it was drying so quickly

that I could lap in 1m 42 without trying. I'd just decided to let the motor run up to the red line for a few laps to see what it would do when a large sign was waved menacingly from the top of the pit wall. I knew whether the bike, was really ready for more gas or whether Dave Hill's keen ears had picked out the increased pitch of the



slithered and jumped violently but all I could see was the headlamp beam waving about like a disco jersey. I wasn't sure whether running into the bank at Russells would be better than running into Dave Hill later but for some reason the bike found its way back on to the track without falling over or colliding with any immovable objects. I think I can honestly say I don't need the experience of taking to the grass at 70 mph in pitch darkness ever again.

RED ARROWS

By the end of the stint I'd got over the shock and was enjoying the Kawasaki again when I was signalled in — at a few minutes past 5 am, almost the halfway mark — for the bike's major pitstop.

New Dunlop Red Arrows, already fitted to the wheels of the hack bike, replaced the Japanese Dunlops. The back wheel was left intact, with brake and relatively unworn brake shoes, but the sprocket had to be changed as we only had one with 40 teeth. The front pads were OK and all that was left was to check the bike over.

The Japanese Dunlops, not new at the start, had lost .9 mm off the right hand edge of the front tyre and 2.2 mm off the edge of the rear one. The bike had covered 621 miles and if the distance doesn't reflect the hard pace, perhaps the tyre wear does. Nobody had had any "moments" which could be attributed to the original Japanese tyres and on the whole we'd been quite impressed by their roadholding in the wet. Dave and Chris had already scrubbed the new tyres in but Dave

CLOCKWORK KNAKERS



exhaust note. I do know that for the first time in 24 hours the track was drying and I could let the Kawasaki go. I saw the pit signal and nodded, but it's hard to say "You sods" with a single nod of the head.

Mick Grant took over, quickly lapping in 1m 40, gradually getting the time down to 1m 34 with the occasional slide where the track was still wet. Then some minutes from the end, the 650 went missing. We found an embarrassed Mick pushing in with a blown fuse, saying his ears were burning and if it had gone along the back straight he'd have left a note saying "sorry" and hopped over to the main road for a lift home . . .

A couple of wires had touched either where the wiring had been changed for the new handlebars or where it had been stretched when the bars got bent.

Mick thought the 650 "nice" and particularly liked the tyres. His only complaint was about the back suspension, evidently he had been going hard enough to make it wallow. Mick reckoned the brakes — superb for this kind of riding — might be too powerful for road use but the standard fitting is a single disc anyway. Dave had told him to keep it to 8000 (like us) and he'd taken it to 8500 (like us) but where we'd been getting 8000 at the end of the back straight, going up to 8200 in the last stint, Mick had got it up to 8500. According to our road test radar equipment these speeds corresponded to a true 101 and 107 mph.

SWEET AS EVER

At the end of its 24 hour run the 650 was showing no signs of its ordeal. Usually bikes take on a rough, growling sound after they've been run hard for any length of time, they won't tick over and are hard to start. The Kawasaki was running as sweetly as when we started, it would tick over smoothly and took two or three jabs on the button to fire up. The motor appeared to have loosened up — at least it was pulling a couple of hundred rpm more along the straight (500 rpm more if you allow for the Grant factor). It had covered 1293.9 miles based on the 1.917 mile circuit, which made an average of 53.9 mph including stops.

The efforts we made to make up for the bad conditions are reflected in the fuel consumption and tyre wear. The average was 32 mpg with a worst stint at 27 mpg. The Red Arrows used for the second 12-hour period covered slightly more miles than the original tyres and we checked wear on the centre and right hand edges of the tread. The front lost .8 mm (edge) and .5mm (centre) while the rear lost 1.1 mm on the edge and 3.2 mm in the centre.

Other than the blown fuse and an exhaust guard plate which fell off the right hand pipe, the 650 had nothing to go wrong at all. The front brakes were still OK, the back one had been adjusted up quite a lot and the chain, as promised, needed the absolute minimum of adjustment.

Raising the gearing by two teeth had been a bit too much — one tooth would have been about right — but far from a bike which I initially thought to be a bit gutless, the 2650 is a very accommodating machine with enough performance to justify a sports label. The generally good handling seems to have a flaw in the rear dampers and the machine as a whole was improved by a bit of attention to the riding position and the tyres.

Peter Hughes summed it all up by saying, "The significant thing is that after 24 hours — in atrocious conditions — three people got off the bike and said they liked it and would willingly have got on for another stint."

A GOOD LITTLE 'UN...



Pit stop shock, horror, drama as the Z400 is about to move out — someone forgot to spray the Regina chain.

BIG CHIEF John Norman, boss of Kawasaki U.K., has endless powers of persuasion — he must have to have conned us into even thinking of riding a Z400 round Snetterton circuit for 24 hours! As it happened, his confidence in the little four-stroke twin was well founded and the Z400's reliable performance staggered even the most pessimistic of us. Here's how it put 1,180 miles under its belt in 24 hours.

FIRST STINT: Modifications to the Z400 Kawasaki minutes before the start included fitting Dave Walker's modified drop-bars, taping a seat inner foam onto the pillion seat as a bum stop, and a lump on the tank as a chest rest. Dave Hill had already squeezed a 7inch 75 watt headlamp in the standard lamp shell for improved lighting, and a Regina Grand Prix chain had been fitted to cut pit stop adjustments to a minimum. In fact, the Italian chain cut adjustment out almost completely.

With no time left to try the bike to see if the quickly-made mods made it better or unrideable, the machine was tanked up, Bob Goddard hoisted aboard, and flagged away at 5.23 pm with Ditchburn on the 650 to disappear into the pouring rain and descending gloom. As the last of the daylight disappeared over the horizon to make way for yet more rain clouds, Bob was settling down to cautious but steady laps at around 2m 6s. When the bike ran on to reserve after almost two hours and Bob came in to refuel and hand over to Phil Grundy, a fraction under 100 miles had been covered.

SECOND STINT: We lost two and a quarter minutes before Phil Grundy got out on the track again because there had been no time to check tank size, and as the overworked pit crew had only one quick-filler, the 400 had to be taken to the Shell pumps across the paddock before Phil roared off into the night at 7.20 pm.

Without the benefit of learning his way round the track in daylight, it took Phil the first hour to get his lap times below 2m 20s, but towards the end of his first stint his speed gradually improved to a best time of 2m 8s before the motor spluttered and he pulled in to hand over to Colin after 51 laps, bringing the total mileage up to 197. It was now 9.23 pm and the 400 had been running exactly four hours.

THIRD STINT: Dave Hill and Chris Trainer had been putting 2.5 gallons of juice in the quick filler for the 400 Kawasaki, to ensure the tank was filled to the brim, but as a little was spilled, and an unknown quantity left in the filler, it was impossible to tell how much fuel the bike was taking, and hence what the consumption was.

After fifteen laps of splashing round in total darkness, Colin Mayo had brought his average lap speeds up to 54 mph while restraining his right fist enough to stretch his tankful of fuel out for 57 laps, and by the time he came in, the overall average speed for the first six hours was 50.53 mph. With 311 miles on the odometer the true mileage covered was 307 miles.

FOURTH STINT: At 11.30 pm, when most sensible people are tucked up in a nice warm bed, Bob was setting out for his second session to ride for another two hours round Snetterton in the pouring rain. Patchy fog kept the Esses secure for the first ten laps around his times down to around 2m 6s, but as the murk cleared, he chipped the seconds off steadily to get it down to 2 minutes, but at a price for the bike was in for fuel again after 49 laps making a total of 400 miles covered by 1.12 am Tuesday morning. This brought the overall average speed to 53.49 mph, not bad for a 400cc touring bike in conditions of pitch darkness and torrential rain.

FIFTH STINT: The average took a big knock before Phil could get out again because of a 12 1/2 minute pit stop while the cam chain was adjusted, rear chain checked, oil topped up (half a pint), and spark plugs extracted for a quick scrutiny.

With the chain lube and tank filled, Phil was again let loose at 1.25 am and he droned steadily around putting in laps of 2m 12s with a best of 2m 6s. He notched up another 48 laps to bring the mileage up to just seven

short of the 500 mile mark when the tank ran out to reserve, and Colin was dragged out of the grub wagon for his ride.

SIXTH STINT: After a two minute stop to change riders, fill the fuel tank and spray the chain, the K's wheels were turning again at 3:17 am. In the small hours it takes quite a few laps to reawaken the brain and get back into the swing of riding quickly on a streaming wet track when you can't see where you are going, and Colin's first few laps were only 2m 17s, improving steadily to 2m 10s and then suddenly going down to 2m 3s where they stayed to the end of his session with a best of 2m 1s.

Somehow, Colin managed to squeeze 58 laps out of his tankful of juice for a record 111 miles in one stint to bring the total mileage up to 604 miles covered in twelve hours. Average at the half way stage, now stood at 50 mph.

SEVENTH STINT: Average speed took another tumble while the bike stood still for 25½ minutes to have its wheels removed and replaced with some more fitted with Dunlop TT100s, instead of the standard Japanese Yokohamas. In fact the wheel changing stop would not have taken so long, but just as Bob was about to set out Colin gave the headlamp a helpful wipe, and the light promptly went out. While Colin rapidly disappeared, muttering "mevsosorry" Dave Hill and Chris Trainer stripped out the headlamp to find the cause — a shorting wire — and then replaced the blown fuse. At 5:51 am, Bob fired up the 400 again, and roared out into the early morning. After a few laps it got used to the totally different feel of the TT100s, he was making the most of the superior grip to pull the lap times down to 1m 54s, and evidence of the increased

THANK YOU

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chain and get Colin installed in the driving seat and the bike was back on the track again, which is a credit to Dave and Chris who hadn't had a break since the test began, and no sleep for over 24 hours. How Chris didn't get his fingers entangled in the chain and sprocket as he sprayed them while chasing the bike on all fours while it was

four minutes. The engine ran clean again and Bob zoomed off. At the end of the lap he was back in, and this time the carb flanges were checked for leaks, float bowls drained again and air filter removed in case it was choking the motor. Once again the motor sounded fine so out went the bike again. Nope, that wasn't it either, and this time, Dave stripped out the fuel tap filter and discovered the cause of the trouble. Glue from sticky tape around the quick-filler hose had been washed into the tank by the petrol and had congealed, blocking the fuel filter. A total of around 50 minutes had been lost sorting out the fault but Bob got his head down for the last 20 laps, lapping between 1.51 and 2.00 so average speed only dropped to 48.76 mph for a total 945 miles covered.

ELEVENTH STINT: Phil took over to take the score over the magic 1000 miles mark with best lap times down to 1m 56s. His 45 laps held the average at 48.63 mph.

It is worth mentioning here, that the Dunlop technicians who supervised the rubberware on the bikes set the tyre pressures for the TT100s at the 400 Kawasaki at 26 psi front and 28 psi rear, and all the riders reported the handling and roadholding in the wet conditions as very good.

TWELFTH STINT: Slick talking by Bob had convinced Colin that after his fourth ride, there would only be another few minutes to go before the 5:23 pm end of the 24-hour marathon, and therefore Colin wouldn't mind finishing off Bob's last few minutes, would he? By the time Colin came in for his fuel stop all I learned that there was another whole hour to go, it was too late. There was Bob, changed out of his riding gear and beaming triumphantly. Still, it had stopped raining, and Colin had the undoubted incentive of trying to keep up with Mick Grant who was on the 650 by this time. Minutes from the end we all thought Mick had literally finished the 650 off, when he stopped between the Esses and Corams Curve with an electrical fault, but apart from stopping to have a few worried words with the amiable Yorkshireman and rushing back to the pits to relay the news of Mick's problem, Colin carried on regardless, and put in a total of 78 laps in his last stint, to bring the total mileage for the 400 up to 1180.872 miles, an average of 49.203 mph for the 24 hours.

**BOB GODDARD
COLIN MAYO**



The end. Mick Grant and Colin Mayo pilot the two Kwackers over the line for the last time.

speeds came when the bike ran on to reserve after just 42 laps.

EIGHTH STINT: As a bleary-eyed Phil stumbled out of the caravan to start his first session in daylight, or rather the thin grey dawn that had managed to filter through the rain clouds at nine minutes past seven, the score stood at 684 miles and an overall average speed of 50.92 mph. The improved visibility allowed Phil to knock another five seconds off his best time to record 2m 1s, and after 46 laps he'd hoisted the tally to 772 miles and the average was still around 50½ mph. It was during this stint that the impossible happened — it stopped raining. Various people rushed out with brooms to remove the large pool of water that had built up at Russell's during the night, and had just about cleared when . . . yes, you've guessed it, it started raining again.

NINTH STINT: When Phil came in, it took the pit crew just 1m 51s to fill the tank, spray the

pushed the last fifteen feet into the pit, amazed us all. But the bike was still running as smoothly as a Swiss watch, and Colin buzzed out of the pit and vanished into the curtain of rain.

Forty-two laps later he was squelching back to the warm haven of Rod's caravan cuisine, having hoisted the mileage to 853. Average speed was now standing at a fraction under 50 mph.

TENTH STINT: Before Bob set out, the cam chain was tweaked again, rear chain and oil level checked and found to be perfect, and float bowls drained as a precautionary measure, in case water had found its way into the fuel system during the night. It must have been a bad omen, because although the bike roared out on to the track as sweetly as ever, at 10:40 am, Bob was back in after only half an hour with a misfire.

In a flurry of activity, Dave and Chris gave the plugs the once over, changed the plug caps and tightened the head studs in just

CLOCKWORK KWACKERS

