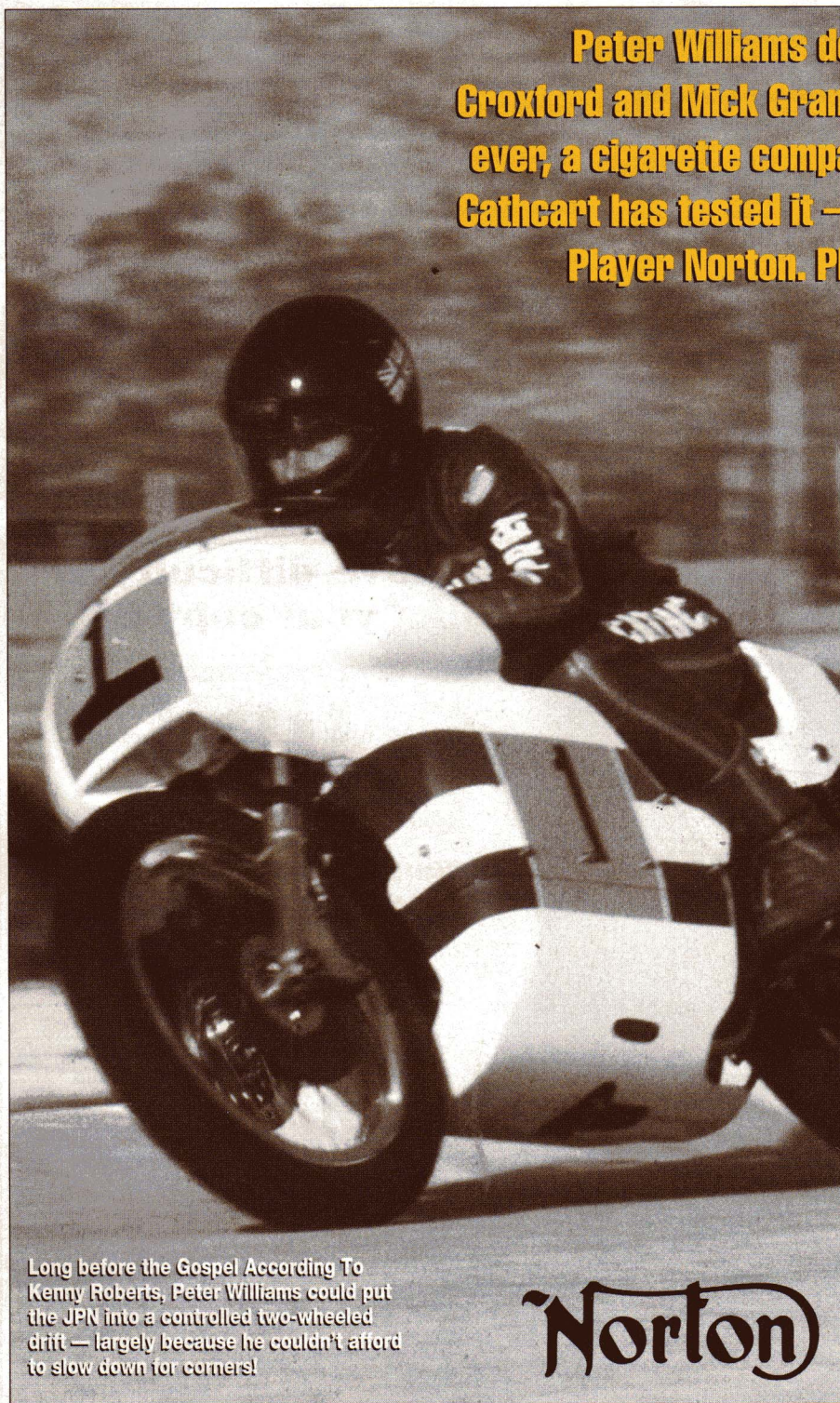


# gentlemen and play

**Peter Williams developed it. Phil Read, Dave Croxford and Mick Grant rode it. For the first time ever, a cigarette company sponsored it. Now Alan Cathcart has tested it — an ex-factory 1972 John Player Norton. Photography by Claudio Boet**



Long before the Gospel According To Kenny Roberts, Peter Williams could put the JPN into a controlled two-wheeled drift — largely because he couldn't afford to slow down for corners!

**Norton**

**W**hen Norton returned to the race track with their unique Wankel-engined RC588 rotary racer, it inevitably stirred some

memories. Foremost of these must have been their last foray into the big-time, more than a decade before, with the under-powered, though well-engineered, John Player Norton air-cooled parallel twins. During the early Seventies, these machines made their mark in top level F750 racing in the hands of Peter Williams, Dave Croxford, Phil Read and Mick Grant. In 1973, Williams won Norton's last pre-Rotary Isle of Man TT on the innovative JPN monocoque, a machine derived from the equally avant-garde pannier-tank racer of the previous year.

This latter marked the beginning of Norton's sponsorship link with the British cigarette company, the first sponsorship deal of its kind though now, of course, a commonplace arrangement.

The low-slung JPN "panniers" made their debut in the 1972 Daytona 200, with Phil Read finishing an encouraging fourth behind a trio of TZ350 Yamahas. Five of these machines are thought to have been made, of which four are known to be still in existence: one is on display in the National Motorcycle Museum, while the remaining three are all on the Continent. The one which



# n ers

continued in competition longer than any is the machine owned by Norton aficionado, Joaquin Folch.

No fewer than three John Player Nortons made their way to Spain after their factory racing team days were over, and all are now owned by Folch, Spain's leading rider in international historic events. (Such is Folch's enthusiasm, for many years he commuted to work through the busy streets of Barcelona on a succession of Commando twins bought from the local Norton importer.)

For promotional purposes, Challenge Motors — whose proprietor, Juan Antonio Rodes, can best be described as Norton-crazy — bought one of the pannier-tanked JPN works bikes at the start of the '74 season to enter in local F750 events. At the end of the year, Rodes bought a further two machines, both of them that season's space-frame machines. In 1975, these JPNs became PDNs: with sponsorship from sherry vintners, Pedro Domecq, Benjamin Grau won the Spanish F750 title in the face of tough opposition. The collapse of parent company Norton-Villiers-Triumph left Rodes with no stock to sell and, in the following year, he disbanded the race team. One of his riders, Mauricio Aschl, was a close friend of Folch and it was thanks to this

**Peter Williams frame maximised handling to minimise the Norton twin's power deficit**

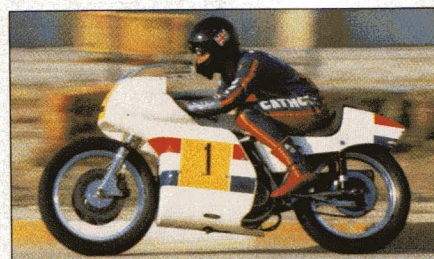
friendship that the latter was able to acquire all three bikes and, more importantly, all the spares, which has enabled him to restore the machines and race them in Classic F750 events all over Europe, as well as the occasional Battle of the Twins race.

Due to restrictions on the importation of Japanese bikes then in force in Spain, Rodes sold a large number of Nortons and was able to engage leading Spanish riders of the day to ride the PDNs — men like Min Grau, Victor Palomo, Quique de Juan and even Angel Nieto. De Juan rode the pannier-tank bike in 1974, but before long he was replaced by Grau. The lusty, vibrating 360-degree parallel twin must have seemed light years away from the little 50 and 125cc Derbis Grau competed on successfully during that time. I was able to make the comparison myself at the seaside Calafat circuit, south of Barcelona, when I rode Joaquin's 1972 John Player Norton moments after completing a few laps on his ex-Grau 50cc Derbi. (Actually, I needed a good five minutes walking around just to restore the circulation to my cramped legs!)

I then had to "feed" myself into the



Low slung JPN was designed for Daytona, the large pannier tanks allowing fewer fuel stops



Surprisingly, the short wheelbase JPN has slow steering but will stick to a line unerringly

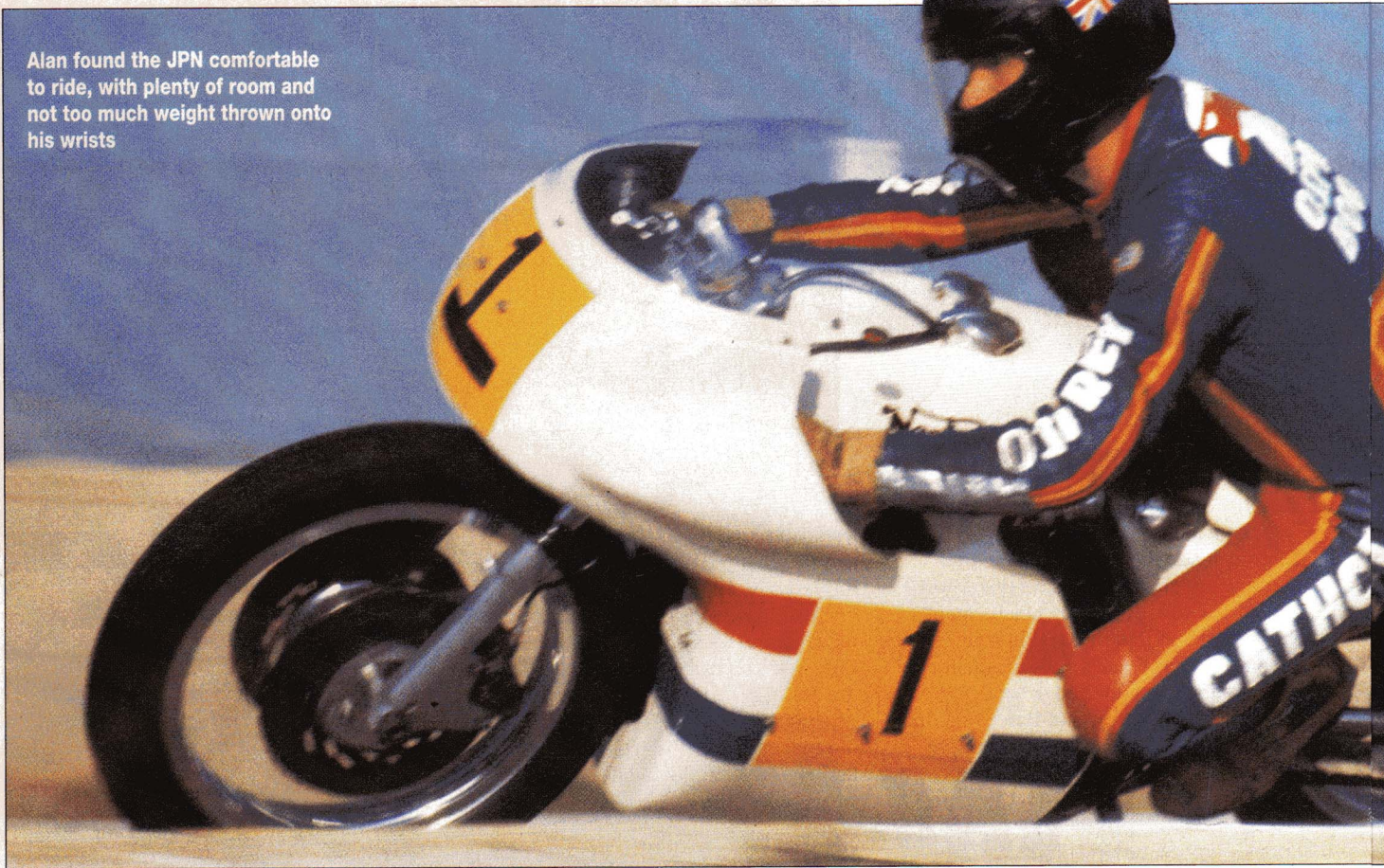
JPN. Peter Williams was development engineer and chassis designer, as well as the team's lead rider. Recognising that the only way an air-cooled, roadster-derived four-stroke could give away more than 40bhp to the 115bhp-plus water-cooled Suzuki two-stroke triples and still be competitive, Peter maximised handling and minimised the frontal area. At the end of 1971, a mere three months after its launch, the JPN team made its debut at Daytona. The problems they experienced there were to influence the overall design of the bike. "We could not handle the Suzukis," recalls Williams, "but we had to have a means of increasing our top speed on the banking. We also had to carry 24 litres of fuel to be able to get away with fewer fuel stops than the Suzukis and other faster, but thirstier, machines. Yet how to do this without jacking up the centre of gravity and increasing the frontal aspect, as well as having tanks so big that the rider would be unable to tuck himself away behind the fairing?"

Williams' answer was to design a low-slung, chrome-moly tubular frame and to take full advantage of its reduced height by fitting an alloy pannier fuel tank that partially enveloped the engine. The tank was carefully shaped to allow the rider to sit as low as possible in the bike, with a high-backed seat to try for good airflow along his back (Williams was able to use the MIRA wind tunnel for purposes of development). The fuel tank's sides filled in the "dead" space that normally exists

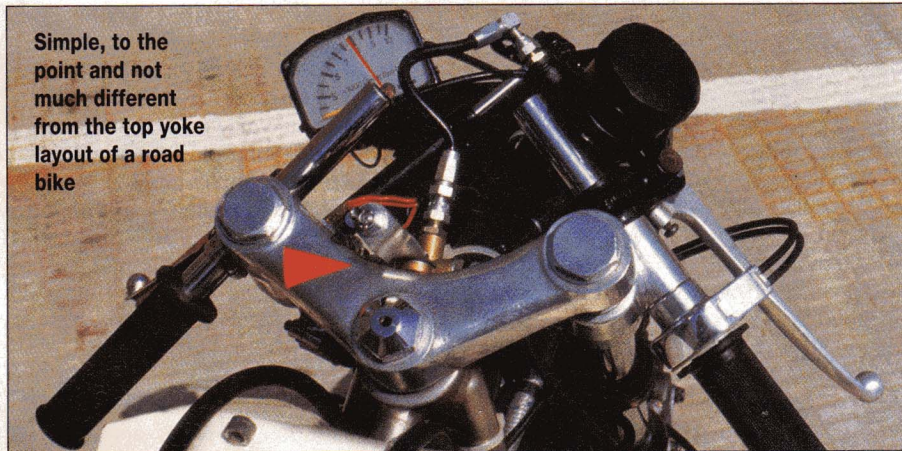




Alan found the JPN comfortable to ride, with plenty of room and not too much weight thrown onto his wrists



Simple, to the point and not much different from the top yoke layout of a road bike



Right: Engine and gearbox have both been tweaked for power (76bhp) and reliability (extra bearing on the mainshaft)

between the fairing and a conventional fuel tank, but the installation of a mechanical fuel pump working off the swingarm was required to pump petrol to a small header tank above the engine. From here, fuel was fed to the twin 32mm Amal Concentric carbs; these gave slightly less power at the top end than the GP Amals initially fitted, but were easier to set up than the remote float GPs.

The bike is certainly low (just 42 inches/1067mm high) but requires an idiosyncratic approach to fire it up. Firstly, to prime the carbs from cold you must push the bike around with the plugs out or, better still, sit on it and bump up and



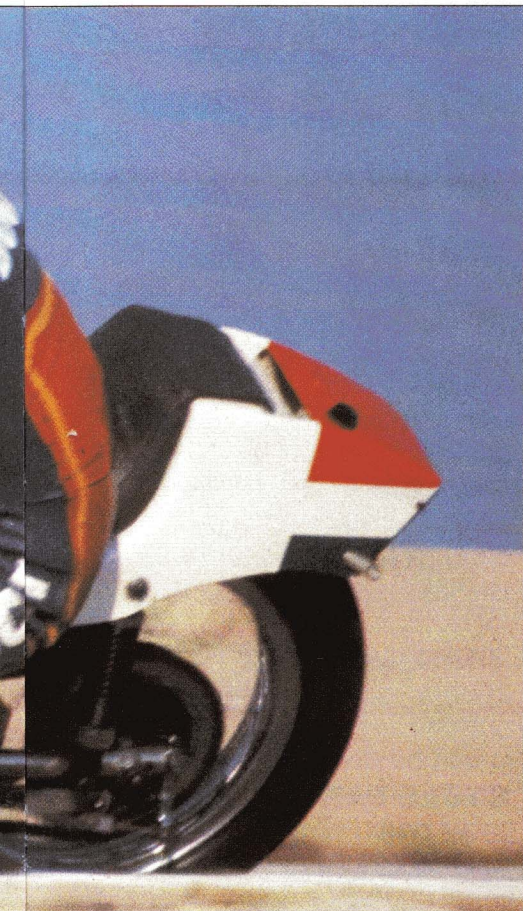
down in the seat a few times to work the swingarm-operated fuel pump. With a good push, the relatively low 10.3 to 1 compression makes starting quite easy; to warm up the bike, you can either ride gently round the paddock or sit on it and repeat the bouncing act while running the

engine. Until it started spluttering on me, I thought this was a lot of nonsense and revved it like a normal bike. So, all together now: one, two, three, whoops a daisy...

Though basically a tuned-up Commando engine (unlike the later short-stroke motor of 1973 onwards), the long-stroke 73 x 89mm engine powering Folch's JPN pannier has been updated in some important areas. Drawing on development work done by the Rodes team, and using parts from their '74 spaceframe bikes, particular attention has been paid to improving the transmission system, the Achilles' heel of early JPNs. "The gearbox was the main problem," says Peter Williams, "partly because of the extra power we found as we went along (76bhp at 7500rpm by the end of 1972, in the form in which the Folch bike is now, compared with 69bhp at the start of the season and 56bhp from a standard Commando 750), and partly because the Norton primary transmission with triplex chain had never been asked to cope with the speeds involved in 150mph-plus racing. The chain pull exerted a large leverage on the mainshaft, which bent it and stripped off the teeth. It wasn't Quaife's fault, who built the five-speed clusters, simply an inherent fault of the Norton primary drive." As the primary drive had changed little since Bert Hopwood's Dominator twin-cylinder design of 1948, this was hardly surprising!

For 1973, the JPN team resolved this



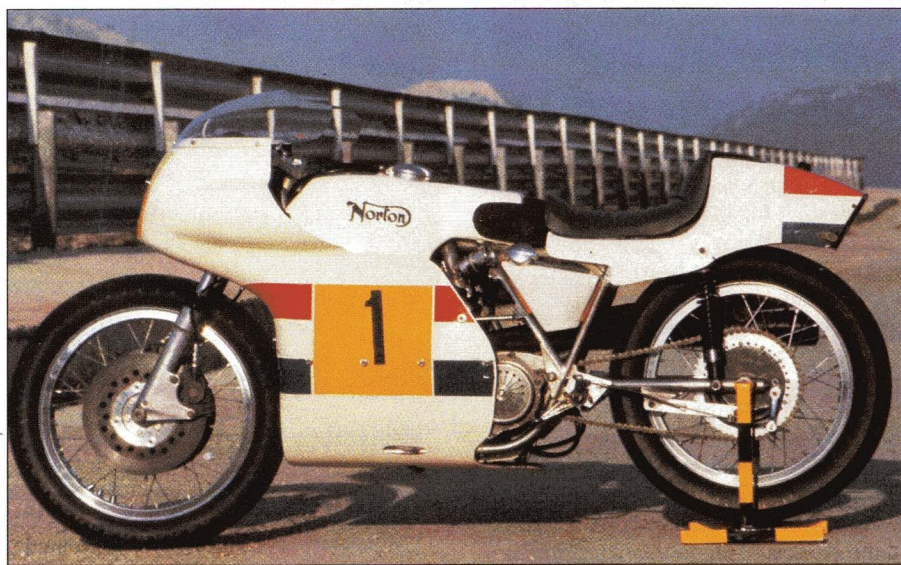


its powerband just by slipping it in a controlled fashion exiting a tight corner, like Calafat's hairpin at the end of the main straight. That's an important advantage because it means you can avoid using bottom gear. Though higher than on a standard Commando gear cluster, bottom gear is low enough to cause the back wheel to lock up if you change down at racing speeds, on the overrun, into such a slow corner.

Moreover, there's quite a gap between bottom and second, though the rest of the ratios are pretty close together. This makes matters worse, so it's best to use second wherever possible, which makes you appreciate the clutch action all the more! The right-foot, one-up gearchange



**Even on the JPN the brakes are wooden; fortunately the strengthened gearbox allows engine braking without disaster**



problem by redesigning the primary drive to incorporate an extra bearing as well as a dry clutch, a modification incorporated on the Spanish machine. Reliability was further improved by speeding up the gearbox and fitting a crankshaft-located shock absorber in the transmission. This was amply demonstrated in the gruelling stop and start confines of the Spanish street circuits: in 1975, Grau won all four races en route to the Spanish F750 title.

The gearbox of the pannier JPN is unusually satisfying to use, with a light, smooth clutch action, easily worked with a pair of fingers, two-stroke GP-style; it allows the engine to be kept working in

is slow but precise, as long as you take your time and don't try to rush the change. However, with the heavy flywheels fitted, the long-stroke engine doesn't lose revs too quickly, making fast changes less vital. Power comes in quite low down — around 3,500rpm with the twin megaphone exhausts fitted, rather than the two-into-one system originally favoured — with the Krober rev counter optimistically relined at 8000rpm.

"I never revved my engines above 7,400rpm," says Peter Williams emphatically, "and then only if I really had a fight on my hands. It was said they were safe to 8,000rpm, even in long-stroke

form, but I always changed up at 7,000 revs if I could, and didn't do too badly in races as a result!" The engine in the Folch pannier JPN seemed happiest taken to 7300rpm before changing up. There was a noticeable surge of extra power from 5400rpm which the close-ratio gearbox made it easy to stay within. Surprisingly enough, the vibration (an inevitable feature of such an engine) didn't get any worse the more you revved it, though you certainly could not forget you were riding a British-built parallel twin — no balance shafts, and tingling extremities long after getting off the bike. The JPN rubber Isolastic engine mounts do make a considerable difference to rider comfort, as I discovered a few weeks later when I rode a rigidly-mounted Kuhn Norton racer, with Seeley frame. I'm still recovering!

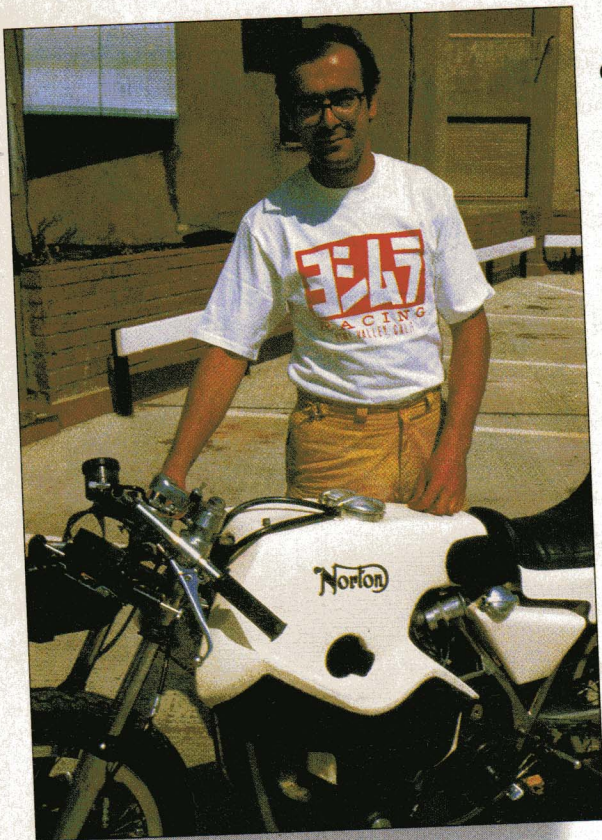
The low-slung riding position is actually extremely comfortable, more so than many race-replica road bikes today which pitch you forwards and tire the hands and shoulders. Sitting, as you do, in rather than on the pannier JPN, I was surprised to find that it wasn't at all cramped, even for my longish legs. The bike is capable of a good deal more angle of lean than I was prepared to risk on the fairly elderly tyres Joaquin had fitted to the bike: a 19-inch Dunlop TT100 front and an 18-inch Endurance rear, which slid with alarming ease. I was not prepared to emulate Williams' approved method for taking corners flat-out in a controlled two-wheel drift!

"People won't believe me when I say I could go into a corner, lay the bike over on its side, get both the front and rear wheels sliding, then keep it in a two-wheel, controlled drift round any corner faster than Druids at Brands Hatch," says Peter. Well I do, because I saw him doing it, but that doesn't mean the rest of us mere mortals can do the same!

All this talk about rear wheel steering the current breed of ultra-powerful GP 500s is nothing new, as Williams and the JPN demonstrated more than a decade ago before the so-called American Revolution. The difference then was that, like an 80cc tiddler today, the Williams' involved keeping up momentum at all costs, rather than braking hard, then getting on the power to make the turn. Cornering speeds with an under-powered four-stroke twin, like the bike I rode, were therefore probably higher than GP stars manage today on their V4 500s — only the acceleration of their bikes is so much greater.

This, in turn, dictated the use of quite narrow tyres like the ones fitted to the test JPN, though I was surprised to find the mix of wheel diameters fitted. Norton began the 1972 season with 18-inch rims, then went to 19-inch wheels on their return to Britain because they ran into





**Owner Joaquin Folch, a bit of a Norton fanatic**

This strange combination would have produced quite different steering geometry from that intended, due to the lower back end, but the Rodes team probably didn't realise the reason for this. They tried to make the JPN handle faster by shortening the swingarm which, combined with the low centre of gravity, does indeed make the bike easy to flick from side to side in a more or less straight line, but still doesn't steer very well in a proper turn. The lazy gait of the JPN in a corner has all the hallmarks of a bike with too much trail, which is what you would expect from the above.

Lack of finesse in the steering department is nothing compared with the poor braking performance: now I know why Peter Williams went in for two-wheel drifting round corners — he couldn't get the bike to stop in time for them! In fact, he even

opted for a single front 11.25-inch disc, but was the only one among various JPN riders to consider this sufficient; everyone else used twin front discs, with one Lockheed calliper behind its fork leg and the other mounted in front to enable the original single-disc sliders to be used, rather than have new ones recast for the second disc.

In 1972, braking was a major problem for the JPN team in their first two races, in Daytona and Imola. A different leverage ratio for the master cylinder improved matters but, in spite of the cast-iron discs and Lockheed calipers (which worked fine on other machines of the era, like the 750 Ducati) braking was never a strong point. Perhaps the pads fitted to the Folch pannier JPN are wrong, maybe it's the master cylinder — whatever the case, the front brakes are wooden and unresponsive and you have to squeeze extremely hard, pray even harder, and stamp hardest of all on the rear drum, if you want an acceptable degree of retardation. Oh yes, you also use the engine's considerable braking power, and give thanks for gearbox modifications which allow you to reverse-load the primary drive and get away with it!

The pannier-tank JPN's forte would be fast, open circuits like Silverstone and the Imola of 1972, with sweeping corners where its sure-footed handling and low build would come into their own. In spite of its 42-inch screen height — extremely low compared with modern 750FL racers — you sit low enough in the well-upholstered seat to tuck yourself right under the screen. Remarkable, when you consider the oil tank for the

ground clearance problems with the low build of the bike. But I didn't think they had ever raced with a 19-inch front and 18-inch rear, as fitted to the Folch machine, but magazine photographs of the bike on its arrival in Spain show that that was how it came from the factory. Even though, in those days, the bike would have run with fast-steering Dunlop triangular racing tyres fitted, I'm still surprised.

The result is a rather cumbersome, slow-steering machine that was a real handful to coax round some of Calafat's many slow corners, even though it sat rock-steady through the faster sweepers on to the straights. In spite of the short 1390mm wheelbase, which uses a 50mm shorter swingarm than when the factory raced the bike, the handling is frankly like nothing so much as a British version of the Ducati big twin: it will stick unerringly to the line you choose, but if you want to change your mind halfway through the bend — forget it!

This is not at all the nimble, nippy, fast-handling 750 with the stature of a 500 that I'd been expecting, and I think the reason is quite straightforward. After they'd finished with the bike, Norton probably fitted any old wheels that came to hand, especially one's they didn't need any more. Their 1973/'74 bikes used rear disc brakes, therefore an 18-inch wheel which happened to have an 8-inch SLS Manx Norton drum brake in the middle of it as used in '72 would have been a prime candidate, as would a 19-inch rim with twin discs which would have been replaced by 18-inchers for '73.

## SPECIFICATION

### 1972 John Player Norton

#### ENGINE:

**TYPE:** Ohv pushrod air-cooled 360-degree parallel twin-cylinder four-stroke  
**BORE & STROKE:** 73 x 89mm  
**CAPACITY:** 745 cc  
**COMPRESSION:** 10.3:1  
**POWER:** 76 bhp @ 7500 rpm  
**CARBURATION:** two 32mm Amal Concentrics

#### ELECTRICAL:

**IGNITION:** Lucas Rita electronic with 12v battery

#### TRANSMISSION:

**GEARBOX : CLUTCH** 5-speed Quaife  
**CLUTCH:** Dry multiplate (Originally oilbath multiplate)

#### CYCLE PARTS:

**FRAME TYPE:** Duplex steel tubular  
**WHEEL BASE:** 1390mm/54.75in

#### SUSPENSION:

**Front:** Norton telescopic forks  
**Rear:** Tubular steel swingarm with Koni units

#### BRAKES:

**FRONT:** Two 10.5 inch/267mm cast iron discs with Lockheed calipers  
**REAR:** 8 inch/203mm sls drum

#### TYRES:

**FRONT:** 4.10 x 19 Dunlop TT100  
**REAR:** 4.25/85 x Dunlop Endurance

**WEIGHT:** 365lb/166kg with oil/no fuel

#### PERFORMANCE:

**TOP SPEED:** 153 mph  
**OWNER:** Joaquin Folch, Barcelona, Spain

dry-sump engine is located beneath the seat. This enables a humble, relatively lightly-tuned pushrod twin to break the 150mph barrier with only 76bhp at its disposal — quite a feat, even if on a tight circuit like Calafat — where the 365lb/166kg dry weight becomes evident on acceleration out of slow turns — that sort of performance isn't readily apparent. Yet the 1972 machine was two inches taller than its monocoque successor, an example of which Joaquin Folch is currently restoring. I can hardly wait! **BB**