



*The 408cc air-cooled four was smooth, satisfying and ultra reliable by mid '70s standards*

*The flat handlebars were a trademark of the 400 Four*

*To those who knew and loved their motorcycles, the 400 Four was considered a masterpiece of both engineering and design*

**T**HIS was one of the most desirable bikes to own when launched and is still pretty desirable today to those who know their bikes. A masterpiece of engineering and design

Its engine is heavily based on that of the CB350 Four, a bike which unfortunately was never imported into the UK but those who rode one will testify that Honda was not exaggerating when it claimed the 350 Four was the finest, smoothest Honda ever built.

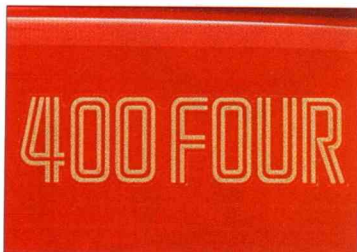
**A great machine**

So it's no surprise the 400 Four is considered such a great machine.

It was fast enough to break the speed limit, and with a small rider on

board it could hit the 100 mph mark, but battling against the windblast on a straight fast road was not its thing.

On a twisty road it was in its element with quick acceleration and a slick gearbox. You'd be lucky to get over the ton on it but this was one of the best bikes Honda built for many a year. ■



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## ENGINE

**C**OMING SEVEN years after Honda's seminal 750-four, the Seventy's favourite middleweight multi was less technically advanced than might be supposed. Unlike Honda's flagship four, all the middleweights adopted wet sump lubrication. The 400's crankcases held a generous 3.5 litres of oil, which also lubricated the gearbox of the unit construction engine.

The 400 also differed in employing chain primary drive, just like Honda's exotic six-cylinder CBX would later use but unlike the more expensive gear drive fitted to the 750. The chain was of inverted tooth 'Hy-Vo' construction and proved utterly reliable. Partly to prevent the engine from running 'backwards' – counter-clockwise as viewed from the right – the clutch lived on its own shaft, which was in turn geared to the gearbox layshaft.

As with the 750, the camshaft is driven by a simple roller chain from a sprocket the centre of the crankshaft – in many ways the essence of all Honda multis. Almost all previous overhead camshaft designs had relied on expensive bevel or spur gears. By making the simple and cheap chain cam drive reliable, Honda put within reach of the masses engines which had previously seemed impossibly exotic.

In retrospect, what the engine lacked was perhaps more striking than the features it possessed. Clearly there was still only a single camshaft, where the Kawasaki Z1 (and Honda's own CB450 of 1965) already had two. And there were just two valves per cylinder, despite the fact that Honda had pioneered four-valve heads during their racing heyday in the Sixties.

### cam drive seizures

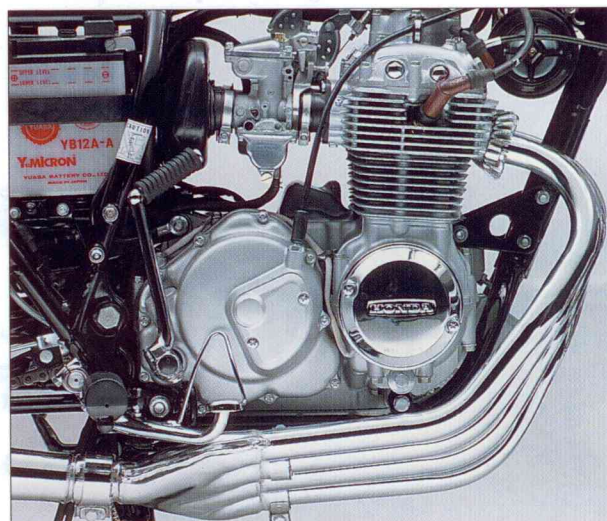
Mind you, the CB400's cam drive wasn't the best Honda ever made. In particular, the slipper tensioner adjuster was somewhat flimsy. After high mileages they were known to seize up, eventually causing unmistakable cam chain rattle.

The valvegear itself comprises simple rocker arms, one per valve, with tappet adjustment by straightforward screw and locknut. The camshaft had no bearings but ran directly on the metal of the cylinder head – another feature that caused alarm at the time but is now commonplace. Equally dependable were the valve springs, which commonly coped in 12,000rpm tuned racing examples, so could comfortably handle the roadster's 10000rpm rev limit.

Towards the rear of the horizontally-split crankcases nestled a six speed constant mesh gearbox employing two shafts. The selector drum rode above the layshaft, whilst the kickstart shaft – retained despite the provision of electric start – lay below the main shaft. The clutch was a conventional multiplate affair running in engine oil. Final drive was by conventional roller chain to the rear hub, which contained its own rubber vane-type transmission shock absorber.

Visually the engine's most obvious feature was its four-into-one exhaust system. By the time the 400 came along, Honda had presumably got over the need to brag about its four cylinders. They had also discovered that a well-designed four-into-one setup could be both quieter and more efficient than four separate silencers, since each cylinder enjoyed the use of a single, larger silencer.

For all their apparent complexity, engines such as the CB400's proved not only wonderfully reliable in service, but also supremely easy to strip down. Lifting of the top crankcase half revealed a neat array of shafts, far easier to fathom than in any vertically-split engine. Modern engines might boast liquid cooling and more camshafts, microprocessors and valves, but the general pattern has changed surprisingly little.



## SPECIFICATION

### ENGINE

Type:	4-stroke
Layout:	sohc transverse four
Total displacement:	408cc
Bore & stroke:	51 x 50mm
Compression ratio:	9.4:1
Valves:	4 x 20mm Keihin CV
Ignition:	points and coil
Cooling:	air
Maximum power:	37bhp @ 8500rpm

### TRANSMISSION

Primary drive:	Hy-Vo Chain
Clutch:	wet multiplate
Clutch:	6-speed
Final drive:	chain

### CYCLE PARTS

Frame:	steel double cradle with single spine
Front suspension:	telescopic forks, no adjustment
Rear suspension:	twin shock absorbers, five-way pre-load
Tyres	
– front	3.0 x 18 Bridgestones
– rear	3.5 x 18 Bridgestones
Brakes	
– front	single 267mm disc, single piston caliper
– rear	165mm sls drum

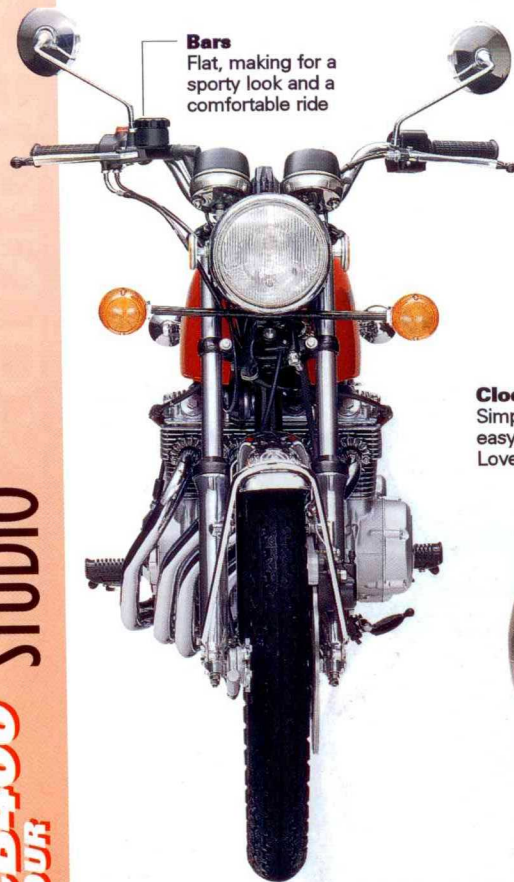
### CYCLE PARTS

Tank capacity:	14.1 l
Dry weight:	180kg
Wheelbase:	1385mm
Seat Height:	785mm



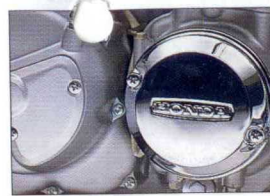
CB400 STUDIO  
FOUR

HONDA



**Bars**

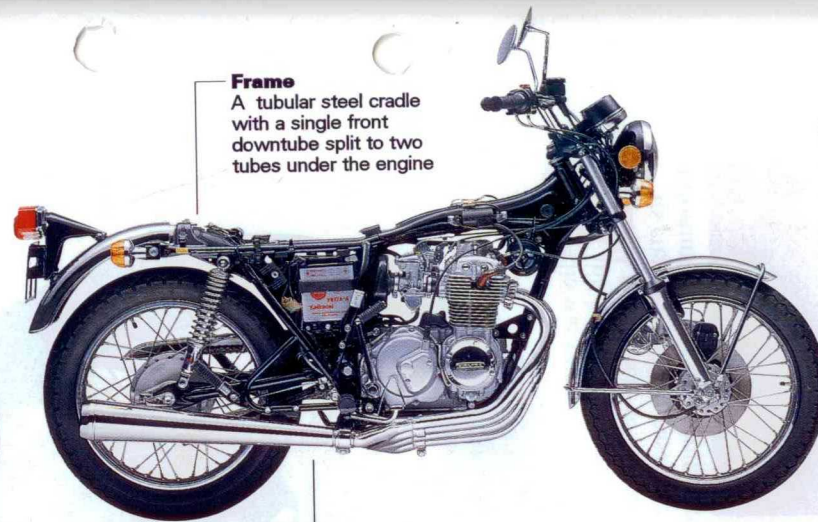
Flat, making for a sporty look and a comfortable ride



*Unlike the bigger 750, the 400 had a six-speed gearbox and a wet, multiplate clutch*

**Clocks**

Simple, clean and easy to read. Lovely



**Frame**

A tubular steel cradle with a single front downtube split to two tubes under the engine

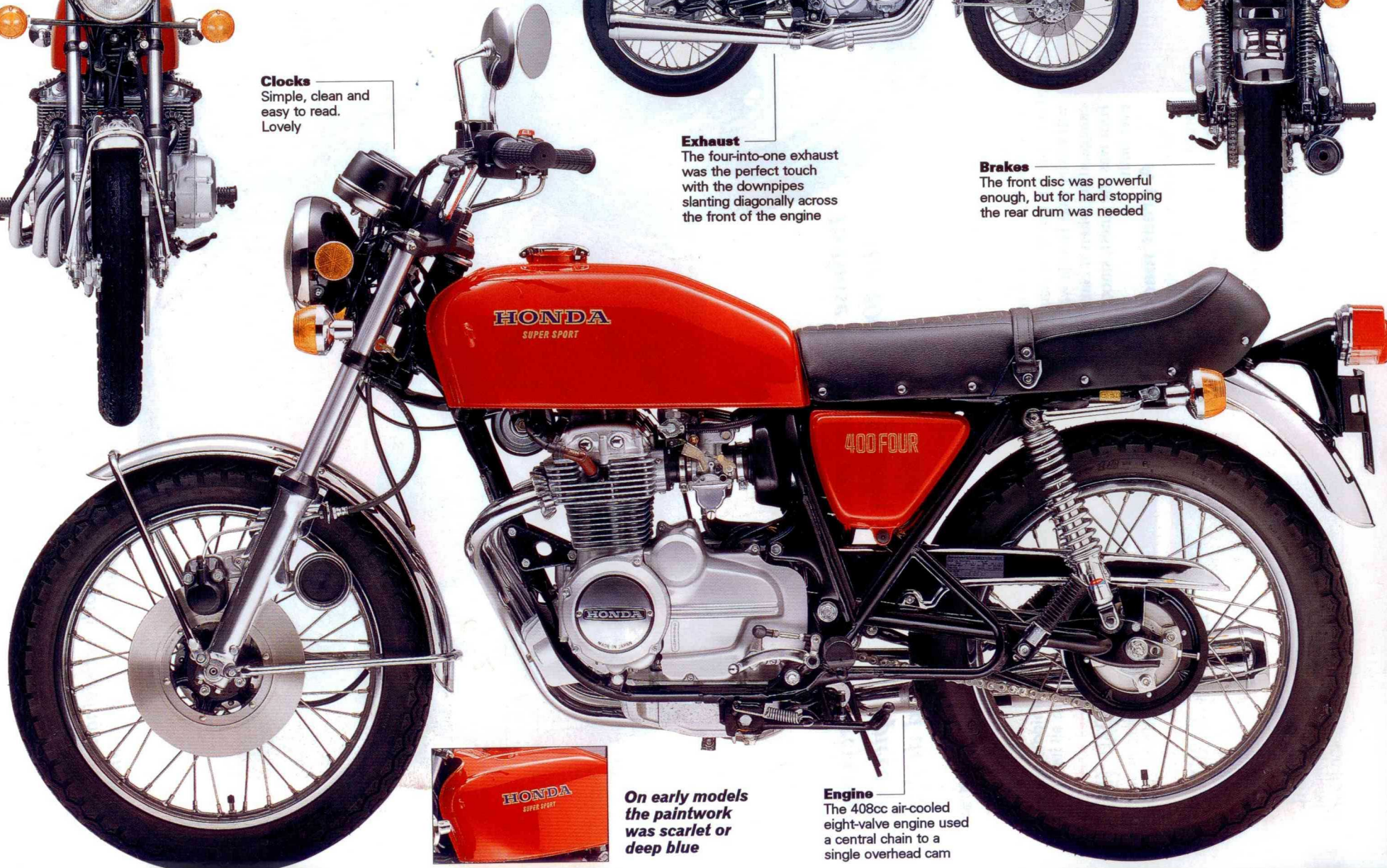


**Exhaust**

The four-into-one exhaust was the perfect touch with the downpipes slanting diagonally across the front of the engine

**Brakes**

The front disc was powerful enough, but for hard stopping the rear drum was needed



*On early models the paintwork was scarlet or deep blue*

**Engine**

The 408cc air-cooled eight-valve engine used a central chain to a single overhead cam



## INTRODUCTION



**H**ONDA'S innovative lightweight multi created a huge stir when unveiled in 1974. Based on the existing CB350/4 (which was never officially imported into the UK, unlike the popular CB500 which shared similar styling), it used substantially the same engine but had a bore increase from 47 to 51mm.

But where the 350 was a scaled-down 500 which looked over-dressed and overweight, the 400 made a virtue of simplicity. In engineering the simplest solution is often the best one, and so it proved with the 400 Four.



## ENGINE/TRANSMISSION



**D**ESPITE the belt-and-braces retention of a kick-start, the little Honda fires up dependably on the button. When cold, the engine is sulky and stubborn, but soon warms up to be as smooth and responsive as only Honda seemed to know how to do at the time.

Power delivery is also typically Honda, with the engine happy to trundle along at less than 2,000 rpm in top gear – commonplace for multis, but still something of a revelation in 1975, particularly for a middleweight machine.

Stronger power comes in at around 5,500 rpm, although there is no sharp power band. This is because power overall is a relatively modest 37 bhp. In still air the 400 cruises easily at 80 mph, but point it at a headwind, and it struggles. In such circumstances fifth gear is usually more effective than top. Acceleration is good without being startling: the quarter mile arrives in around 15 seconds, and needs full use of the engine's revs. Peak power arrives at 8,500 rpm, although the red line sits 1,500 rpm higher and the tacho itself is calibrated to a dizzy 12,000 rpm.

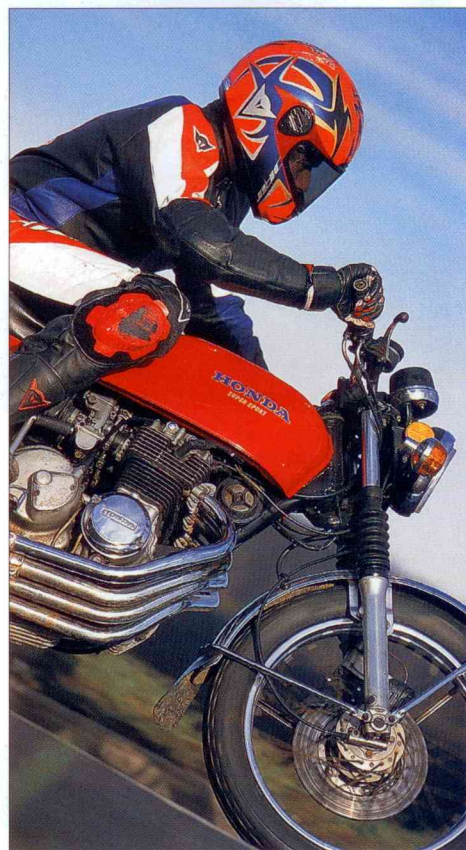
### Confidence

Whatever the revs, with four small cylinders the powerplant is silky smooth, marred only by a mild vibration period at around 5,000 rpm. Fuel consumption averages 50 to 60 mpg, depending on how hard it is ridden.

Compared to any comparable modern machine, the 400 is physically very small, which surely contributed to the confidence which it engendered in so many riders. Ridden conservatively, it is almost utterly viceless, going precisely where it is pointed with a commendable absence of effort or fuss.

Given more stick, the four begins to show a few shortcomings. The rear shocks are patently under-damped, allowing a mild weave through fast turns. Meanwhile the forks have a habit of topping out over bumps, giving a disconcerting vagueness to the steering. Yet even this can't seriously upset the Honda's progress. Whether through lightness, or more likely a well thought-out steering geometry, it generally remains fairly unruffled. 'Manageable' is the expression which perhaps best sums it up.

If the 400 has a Jekyll and Hyde side, it concerns the brakes. In the dry, its ordinary-looking single disc works well. But in wet conditions the combination of stainless rotor and poorly-matched friction material render it woefully inept. At such times you're grateful the rear brake is a simple but comparatively weatherproof single-leading-shoe drum.



*Forks which top out over bumps and vague steering do little to hinder the 400's progress*




**HONDA**
**CB400  
FOUR**
**ROAD TEST**
**ERGONOMICS & STYLE**


*Compared to Honda's other offerings, the 400 had a much more European look and feel*

**P**ERHAPS the 400's main styling ingredient was a marked absence of style. There were no stripes (until later), a refreshing absence of unnecessary chrome plate – just broad slabs of plain colour and the simplest possible lettering.

If the sweep of four header pipes looked rakish when viewed from the right, from the left this was the most understated Honda yet. In essence it said 'appreciate me for what I do, not how I look' – a humility which British bikers at least, found hard to resist. At £669 when introduced, it became an instant hit in the UK.

As well as its unostentatious, slightly idiosyncratic lines, the 400 offered an unusually European riding position.

Practically every previous Honda had arrived with the high-rise handlebars and forward-set footrests which America, if nowhere else, seemed to crave.

The 400 wasn't exactly a race replica, but it dared to be different. Even sitting on it was a more purposeful experience, thanks to lowish handlebars and footrests located father back than previous Hondas.

Most of the rest was equally practical and well conceived. The clocks were clear and neat, the switchgear worked dependably. Even the rider's main complaint – the excessive travel of the push-pull two cable twistgrip, wasn't enough to seriously mar the riding experience.



**VERDICT**

**B**y popular consent the CB400/4 was the best new Honda for years. Where most of the 'Big Aitch' range had grown increasingly soft and woolly, the 400/four at least rediscovered a bit of attitude.

It was a teenager amongst a squad which had grown middle-aged. Whether by fluke or design it was also somehow the most British of all Honda's wares. In the UK it was an outstanding success (and remains so: one won 'best bike' at last year's Stafford Classic Bike Show). The 400 Four wasn't fancy, but it worked.

**RATINGS**

Engine	✓✓✓✓
Transmission/Clutch	✓✓✓✓
Ergonomics	✓✓✓✓
Chassis	✓✓✓✓
Braking power	✓✓✓✓
Desirability	✓✓✓✓
Overall	✓✓✓✓



*“ It rediscovered a bit of attitude ”*



PETER JAMESON RETIRED POSTMAN

## *'I want to look cool in front of the grand children'*

Old can be cool too, according to Peter, he can't get enough of this Honda

“ I was looking through the local papers a couple of years ago, glancing up and down the small ads when something happened that was going to change my life. A little dramatic perhaps but two years on that's how it feels. Nestling between a Skoda with full tax and MOT for under £300, and the aptly named John Green's Gardening Services, was the smallest of small ads announcing that a CB400 four had been stored for the last 10 year and was now for sale for a tad under 500 quid.

“It was exactly what I had been looking for, a little all rounder that I would be proud to own, ideal as my first bike since taking and passing my test nearly three months before. The phone call lasted only a few seconds as I procured the vendors address and the bikes vital statistics. The only thing now was to not get too excited, I've been in this situation before with cars, it all sounds plausible on the phone and you think you've found the bargain of the year, only to be disappointed when the second hand car salesman you've driven half an hour to see opens his garage doors to reveal a steaming heap more in need of the local scrapyards than your executive double garage!

“After twenty minutes of such musings I reached my destination and found the said barn where the bike had been stored for so long. A ruddy faced chap of about sixty came out to greet me and I followed after him like a lap dog. Snippets of conversation were wafting over his shoulders and only reaching me in faraway whisper, 'Son's bike... too old... Canada... never want it again'. I think I caught the jist and was happy to catch the final 'make us an offer' ending to the conversation.

“The bike was finally revealed as we rounded the furthest corner of the barn, all I could see was a touch of remarkably clean chrome and healthy looking front tyre. My farmer friend pulled back the tarp and BINGO! There she was in all her glory. In many ways it was a personal epiphany, after so many years of searching for a genuine bargain, I'd finally found it! There were no dents, there was no rust, there was only minor corrosion on the aluminium casings and the upholstery was immaculate. The clear plastic covers on the clocks had fogged somewhat but other than that it was perfect. As I drank all this in my red-faced friend asked me if I thought £475 was too much, they'd plumped for that because it was what his son had paid some 15 years before. I couldn't con him and we agreed the price.

“I was still looking over my new purchase when my friend returned with two sets of keys, log book and a pile of old bills and service records. Amazingly, he then asked if I'd like to start it? What? It's been out here for ten years it's not exactly going to fire up first kick is it? 'It should do', was the reply. Apparently it was a quiet time on the farm and one of the farm hands who new a thing or two about machines had given it the once over, put in fresh oil, a new battery and cleaned out the carbs! Wouldn't you know it, it started like a dream and with only 17,000 miles on the clock it should keep going for some time yet!

“That was two years ago and me and the yellow peril have been bosom buddies ever since. I've had to do some minor repairs, new cam chain tensioners and some minor electrical work where contacts had corroded, but other than that it's been plain sailing. I was never looking for a sports bike, but I didn't want a moped either, you want to look cool in front of the grand children. They think its great having a sixty-one year old biker in the family, but not as much as I do!

”



**NICKI HOLMES** LECTURER

*'This bike was ideal for me, I'm only 5'3" in my tights and yet I could easily touch the floor'*

“ After passing my test in the early part of last year, I was wondering what to get that would be fun to ride but not expensive to run, reliable but not a modern sealed unit, as I was keen to practice my mechanics skills. After asking around, a friend of mine put me on to the Honda CB400/4, a reliable little 4-cylinder 4-stroke from the seventies, it should even be cheap to insure. It sounded ideal and I was soon found knee deep in free adds papers and MCN's. Several came up but all seemed to be in Devon or Cornwall for some reason, much too far to travel for me, but with persistence I finally found one advertised locally and went to have a look. The deal being done and me being £950 lighter in pocket I tentatively headed out for my first run on the little burgundy Honda.

“On the surface this bike was ideal for me, I'm only 5'3" in my tights and yet I could easily touch the floor, which gave me confidence. The reach over the tank to the bars is also relatively short so no problem there, and the saddle is genuinely comfortable. The Supersport model has electric start as well as an optimistic kick starter, which was fine for me as I didn't want to be kicking over a four cylinder bike in the early hours of the morning. How little I knew of what was before me! The insurance was extremely cheap as the bike has now gained classic bike status, and only costs me £120 TPFT. Fuel consumption is about 60 to the gallon which shouldn't threaten a pot plant let alone a rain forest.

“For the first couple of months of ownership, the tail end of the summer, all was well although a long established biker mate had warned me that the cam chain sounded a bit rattly. Advice I ignored, knowing it to be a costly job. It was when winter started that I started having real problems with the electrics, especially number two cylinder which hardly ever seemed to want to fire at all. The problem was diagnosed as a faulty Boyer Brandsen Ignition but a new circuit board was procured and the problems went away for a week or two! The misfire occurred again on a very nasty morning in November when everything just seemed to pack

up half way to work. It was clear that a better solution was required. We bought a new loom from Dave Silver Spares and spent a weekend fitting it. I must admit, those connections were pretty corroded.

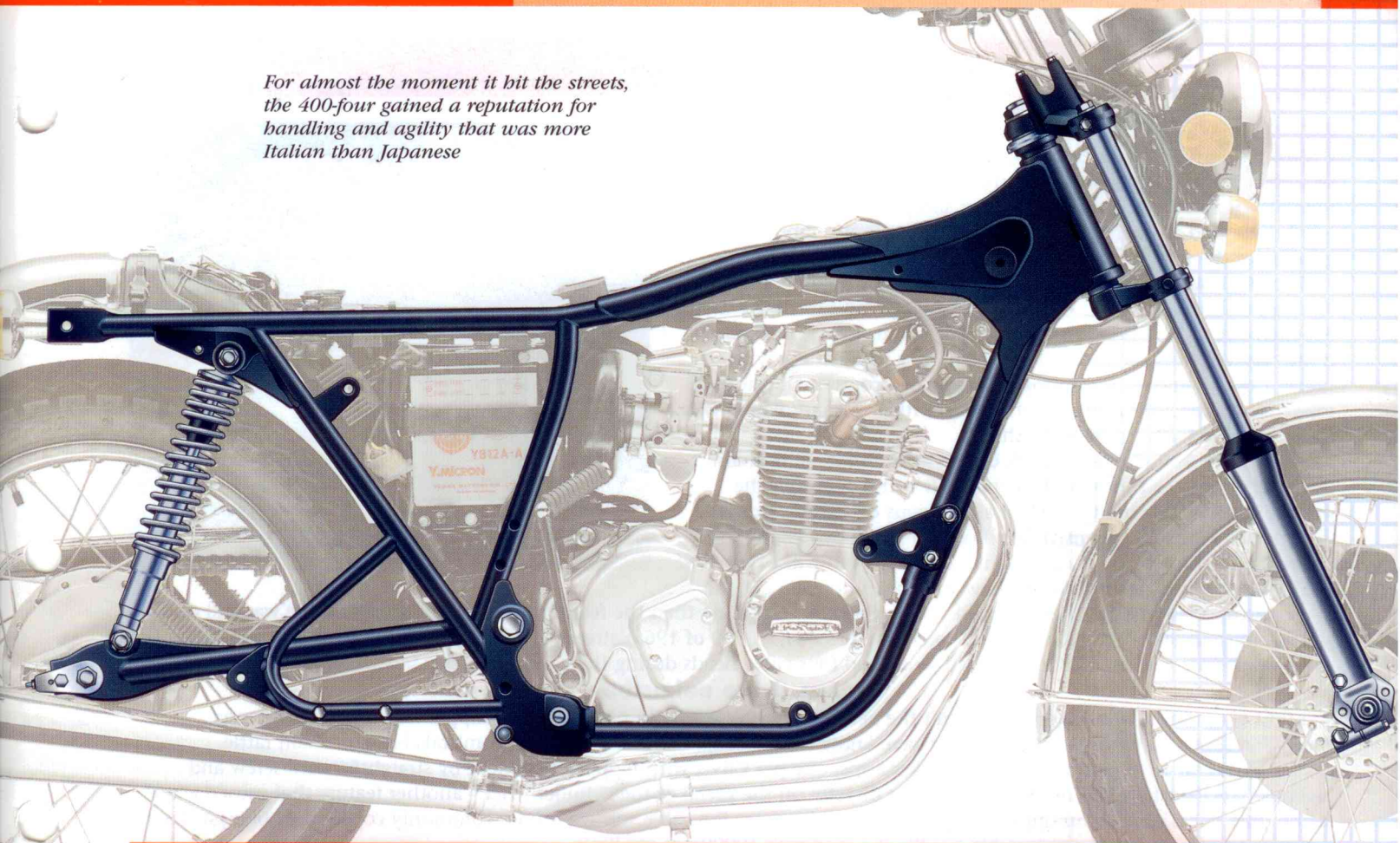
“The bike ran great for another couple of months but then the cam chain fell apart and did loads of damage! Why didn't I listen? The engine stripped we could see the extent of the damage and realised that the bike needed new pistons, new rings and a cam chain. The repairs cost me almost everything I had, but at least that should be the end of it. According to most pundits the electrics and the pistons are the worse offenders so it all should be done, here's looking forward to the good weather of spring.

“The good weather is here, the roads are dry and I'm sitting in my flat wondering what I'd done to upset the Biker Gods. Last week the selectors in the gearbox mangled themselves and in a fit of pique I put an add in the free papers, I'm just waiting for someone to come round and look at her. I can safely say that my mechanics skills are coming on nicely! ”





*For almost the moment it hit the streets, the 400-four gained a reputation for handling and agility that was more Italian than Japanese*



## CHASSIS

**T**HERE WAS nothing remarkable about this middleweight's chassis, it's main virtues compared to the 750 was that it was some 50kg lighter and had to cope with substantially less power. Even in the mid-Seventies the Japanese favoured engine specification at the expense of quality chassis components. It would not be until 1977 and the arrival of Suzuki's GS750 that this would begin to change.

The 400's frame was a mundane twin cradle, topped with a single spine member, all in mild steel tube. Front suspension was in the hands of conventional telescopic forks, whilst twin shock absorbers controlled the swing-arm rear end. The forks boasted no adjustment whatsoever (although some owners altered their pre-load and the level and viscosity of the damping oil), whilst the rear was adjustable only for spring pre-load.

### Heaviest in its class

Despite it's reputation for lightness, the Honda was actually the heaviest machine in its class, no less than 35kg more than Morini's 350cc V-twin. With at least equal power and far less inertia, all the rival two-strokes beat it on acceleration: Kawasaki's S3, Suzuki's GT380 and the RD400 Yamaha which would be launched the following year.

Nor were the brakes any more exotic, although they performed as well as anything else in the class. A single disc brake adorned the front. Typical of Japanese discs of the time, this had a floating caliper with just a single piston, yet worked at least as well as any comparable unit – unless it's wet.

Equally suspect in the rain were the 400's Bridgestone tyres. The company has come a long way since, but in the Seventies many owners' first task was to throw away the original equipment in favour of European rubber – Dunlop TT100s were popular. Aftermarket rear damper units were another popular modification.

Nonetheless, the 400 possessed some virtues. As well as being relatively light, it was physically small and easy to boss around. It had few serious vices and generally went where it was pointed – something which not every bike could claim. And, by the standards of the time, its cornering clearance was excellent, especially on its 'naked' left side.

