

August 1982

\$2.00* NZ\$2.50*

Two Wheels



**KAWASAKI'S
RED-HOT
550!**

Plus:

**HARLEY
FXRS and
YAMAHA
IT465**

Also:

**RIDING
HONDA'S
SENSATIONAL
VT 250**

**TURBOS:
DO WE
NEED
THEM?**

Contents

August 1982

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And many thanks to the weather,
for its cooperation, and the
Vicks cough drops afterwards.

NEWS

HONDA'S VT250F — We told you it was coming..... 10

TESTS

KAWASAKI GPz550 — Unitrak pocket rocket; so who needs 750s?..... 18
HARLEY-DAVIDSON FXRS — This Hog delivers the bacon 26
YAMAHA IT465J — Shock! Bike bites man!..... 46

FEATURES

HARLEY HISTORY — The marque that made Milwaukee famous 34
TURBO: ERA OR ERROR? — Will we *all* pay the price of turbotech? 38
THE TOWN BIKE — Long term GSX750E. We've all been on it 44
THE LONG ROAD TO JUNEE Pt II — Talk about the odd trio 56
KAWASAKI'S TOP GUN IN THE WEST — WA superbike champ Bob Jackson 72
BIKE SPOTTER'S GUIDE — Would you know a Zcht if you saw one? 79
PRIDE AND PREJUDICE — A tale of two twins, both CX500s 83

RIDING

LIVING WITH IT — 12 months with a Yamaha IT465H 52
ROUGH ROAD JUSTICE — Honda F2B vs Yamaha XV1000
vs Honda CX500TC 67

DEPARTMENTS

It's All Happening	4	Wrap On.....	86
A Different Drum	16	Tech Trips	88
Behind Bars	37	Rally Rave	92
Horsefeathers.....	64	Club Register.....	94
Gizmo File	76	Maynard.....	98

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antidive) keep the front wheel under control. The chassis assembly (including wheels and brakes) weighs 6.5 kg less than the Z550 (which didn't make it to Australia). Our test GPz550 wore new series Japanese Dunlop tyres which hung on better than any original equipment Oriental tyres we've come across so far. The new tyres felt secure right to the limits of the GPz's excellent handling.

Of course there's no point in having all the good gear in the world if your hotrod looks like a step through, so Kawasaki has given all its GPzs visuals to suit their racey performance. Key feature of the '82 models is the mini bikini fairing. Covering only the instruments and headlight assembly, it is little more than a styling embellishment, doing zilch to protect the rider. On the other hand, its smoked bubble doesn't direct a helmet-buffeting airstream at the rider's face, as do a lot of larger units. For all practical purposes, the bike is unfaired.

Handsome is as handsome ...

Styled in the mode of its larger brothers, the 550 is a handsome motorcycle. Essentially an exercise in red (appropriately named Firecracker Red) and black with only the occasional touch of polished alloy or striping, Kawasaki's trio of GPzs look like motorcycles built for business. The 550's exhausts, engine sidecovers and a few other bits and pieces are finished in two layers of black chrome (the latest miracle finish from Japan) — which we liked and found reasonably easy to clean — but the engine's cambox covers and carburettor tops are finished in wrinkle black paint which brings to three the number of different blacks on the engine. We also felt the red painted wheels and oil cooler came perilously close to overdoing a good thing. And while most of us didn't mind the black lensed tail light all felt the angular rear mudguard detracted from the lines of the bike.

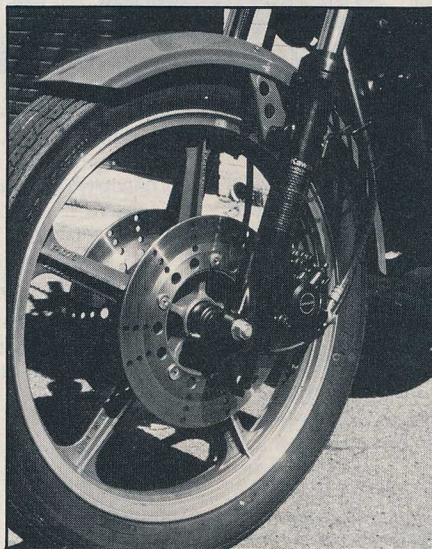
Although not directly connected with the 550's role as a middleweight Q-ship, the new instrument layout, dangle control levers, forged alloy handlebars and seat with dual density padding went over well. Other notable features of the GPz550 are its short (1460 mm) wheelbase, low (785 mm) seat, good cornering clearance, positive six-speed gearbox and flex-free frame. In spite of a dry weight 5kg up on the XJ550's, the GPz is the lighter of the two to sit on, rock from side to side and manoeuvre, so we presume its centre of gravity is closer to the deck than the Yamaha's. Both bikes are far better in this regard than even the lightest 750s.

The GPz's powerplant is a real

screamer. Without the help of YICS or any other performance-boosting trickery, it goes like a 4-valve 550 should. Indeed, for an engine of such astonishing energy, its recipe is unusually plain, underlining just how important in modern engine design are refinement and attention to detail.

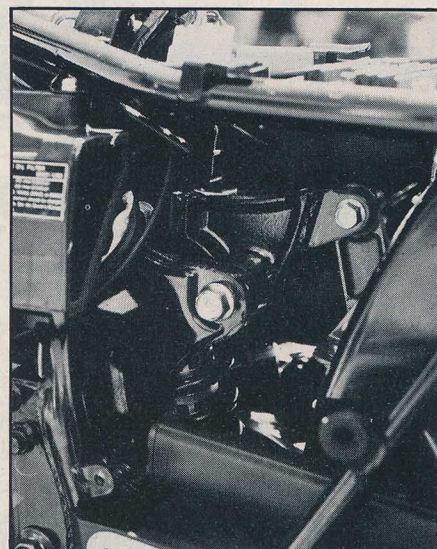
The motor itself is an across-the-frame double overhead cam four with four 26mm CV carbs and a balanced four-into-two exhaust system.

The crankshaft spins in plain bearings (and has flywheel weight measured in micrograms judging by the unit's responsiveness to the throttle), camshaft



as possible at high revs (the choke butterfly disrupts airflow when the carb's piston slide is fully up). Yet despite its unparalleled top end steam, the 550 mill makes more power at low and mid-range rpm than any other bike in its class. Our dyno session showed it to be significantly stronger at all engine speeds than Yamaha's XJ550.

The second anomaly between the GPz's state of tune and its on-road performance comes to light at petrol station bowlers — these insidious money grabbers will be a long way apart for GPz550 owners. On test, hard riding returned 16.7 km/litre, city work 19.6



Slightly quick steering and too much nose-dive under brakes are minor flaws on an otherwise excellent front end (top left). Rear Unitrak (above) works well, but needs better access for preload changes. Instrumentation (left) is up-to-the-minute without being gimmicky. Accuracy of speedo and fuel gauge is suspect.

drive is by automatically tensioned silent chain and lubrication is wet sump aided by an oil-cooler. Sparks come from a transistorised battery/coil setup with mechanical advance.

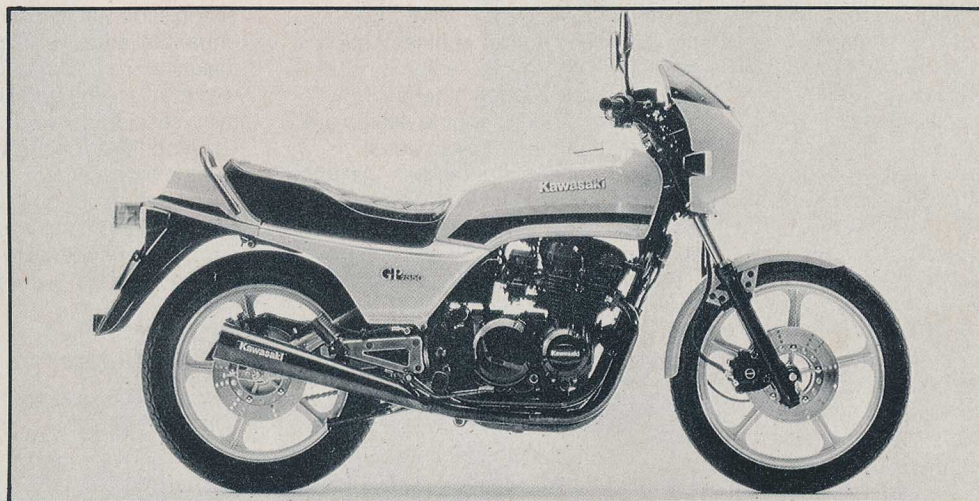
Some clue to the engine's state of tune comes from its compression ratio (a beefy 10.0:1), the 10,000 rpm redline, and serious ignition advance statistics. Cam timing too is not sedate while a low restriction, two-filter air cleaner and free-flowing exhaust aim at extracting as much top end power as possible.

Similarly, the adoption of CV carbs with an enriching circuit rather than a butterfly choke was done deliberately to flow as much mixture through the engine

km/litre and solo touring a commendable 23.2 km/litre, figures much the same as those achieved by the Yamaha XJ550 under similar conditions.

Under the extremely harsh conditions of our dragstrip session, the GPz still refrained from turning into a gulper — its 13.8 km/litre consumption at the strip was better than most bikes of similar power. Final confirmation of the 550's petrol thrift came from its run over our standard economy loop (mainly flat, open country ridden at 100 km/h) where it returned an excellent 28.8 km/litre. There was no observable drop in oil level during the test, although some oil mist escaped from the bike's head gasket.

Kawasaki GPz 550



ENGINE

Air-cooled, transverse, four-cylinder four-stroke with chain-driven double overhead camshafts and two valves per cylinder. Plain bearing crankshaft and big-end bearings with wet sump lubrication and oil cooler.

Maximum rear wheel power	37.1 kW at 10,000 rpm
Maximum torque	39.7 Nm at 8500 rpm
Bore x stroke	58.0 x 52.4 mm
Displacement	553 cm ³
Compression ratio	10.0:1
Maximum engine speed	10,000 rpm
Carburetion	4 x 26 mm constant velocity Teikeis
Air filtration	Oiled foam and paper element
Starter system	Electric only
Ignition	Mechanically triggered battery/coil with mechanical advance

TRANSMISSION

Hy-Vo chain primary drive through jackshaft to wet multiplate clutch and six-speed gearbox with one-down, five-up pattern, and positive neutral finder. Final drive by roller chain.

Ratios (overall:1)	
First	17.92
Second	12.39
Third	9.63
Fourth	7.84
Fifth	6.70
Sixth	5.94
Primary reduction:	Two stage, 2.934:1
Secondary reduction:	2.375:1

FRAME AND BRAKES

Welded, tubular double-cradle frame with needle roller swingarm bearings and tapered roller steering head bearings. Box section swinging arm with fully floating, progressively linked, single-shock suspension with four-way damping adjustment, continuous spring preload adjustment and oil damping. Air-assisted, oil-damped coil spring forks with leading axle lugs. Hydraulically operated dual-disc front brake and single-disc rear brake.

Front suspension travel	140 mm
Rear suspension travel	140 mm
Fork rake	27.5 degrees
Fork trail	110 mm
Front brake diameter	265 mm
Rear brake diameter	265 mm
Front tyre	3.25 H19 Dunlop F8 Mark II
Rear tyre	4.00 H18 Dunlop K427

DIMENSIONS

Dry weight	193 kg
Seat height	785 mm

Wheelbase	1460 mm
Ground clearance	165 mm
Fuel capacity (incl. reserve)	18.5 litres
Fuel reserve	3.4 litres
Engine oil capacity	3 litres

CALCULATED DATA

Weight to power ratio (90 kg load)	7.63 kg/kW
Specific power output	67.1 kW/litre
Mean piston speed at redline revs	17.5 m/sec

PERFORMANCE

Acceleration

Standing 400 m	12.8 seconds at 166 km/h
Average of last three runs	12.85 seconds
Zero to 100 km/h	4.7 seconds
Maximum speed	191 km/h

Braking

From 100 km/h to zero	34.4 metres
Average of last three stops	34.6 metres
From 60 km/h to zero	12.0 metres
Average of last three stops	12.1 metres

Fuel consumption

Touring	23.2 km/litre
City	19.6 km/litre
Hard riding	16.7 km/litre
Average on test	19.4 km/litre

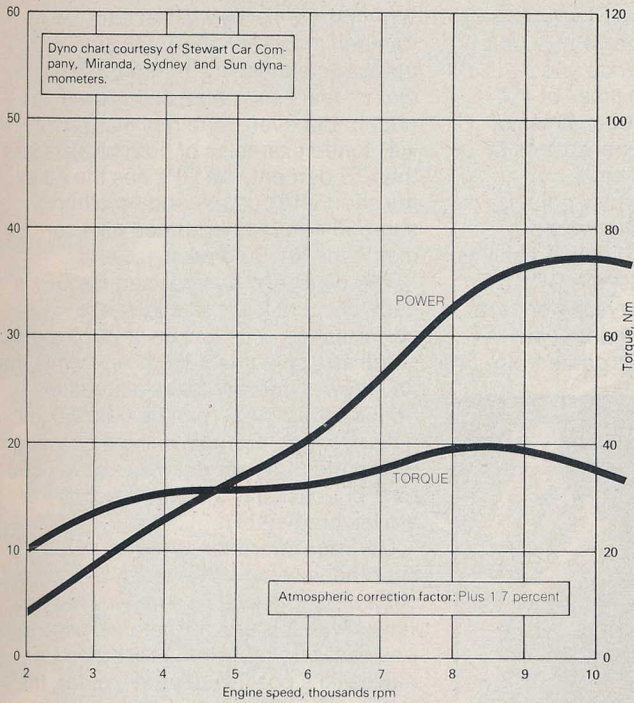
TEST MACHINE

Manufacturer	Kawasaki Heavy Industries, Akashi, Japan
Test machine	Kawasaki Australia, Alexandria, NSW
Price	\$2799

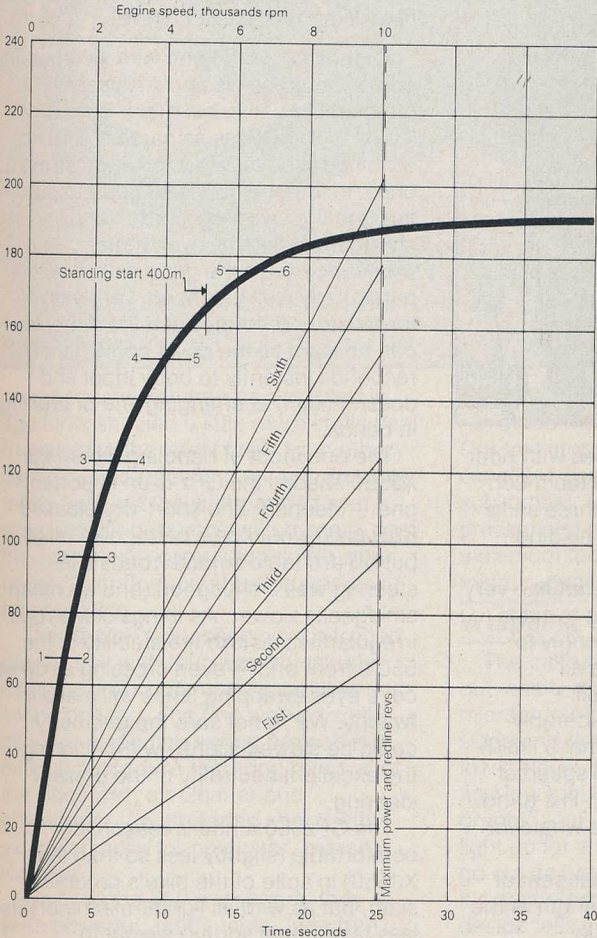
Best points: The smallest, lightest rocket bike ever. Enough top end beans to see off all but the fastest 750s; provides punchy low and midrange power and commendable economy. Good handling, suspension and ground clearance are backed by superb brakes — bike is light in weight, easy to chuck about and extremely forgiving. Bike's appearance informs onlookers of the 550's sporty nature; strong headlight, loud horns and sidestand-down warning light improve safety. Rider comfort is quite good.

Worst points: The 550 needs Kawasaki's rubber engine mounting system — the buzziness detracts from its otherwise charming nature and mirrors blur terribly at speed. Slightly slower steering geometry would improve stability on irregularities. The pillion position is cramped. We could do without the gimmicky wrinkle-finish black paint. Easier rear suspension adjustment would be good, as would a more accurate fuel gauge and a new rear mudguard with decent, integrated lines.

CHASSIS DYNAMOMETER



ACCELERATION



SUMMARY

	Poor	Below Average	Average	Above Average	Outstanding
RATINGS					
ENGINE					
Responsiveness					●
Smoothness		●			
Bottom end power				●	
Mid range power				●	
Top end power					●
Fuel economy				●	
Starting			●		
Ease of maintenance		●			
Quietness		●			
Engine braking				●	
TRANSMISSION					
Clutch operation			●		
Gearbox operation			●		
Ratio suitability				●	
Drivetrain freeplay				●	
HANDLING					
Steering			●		
Cornering clearance				●	
Ability to forgive rider error				●	
High speed cornering			●		
Medium speed cornering				●	
Bumpy bends				●	
Tossing side to side					●
Changing line in corners				●	
Braking in corners				●	
Manoeuvring				●	
Top speed stability		●			
SUSPENSION					
Front				●	
Rear				●	
Front/rear match				●	
BRAKES					
Resistance to fading					●
Stopping power					●
Braking stability				●	
Feel at controls				●	
CONTROLS					
Location of major controls			●		
Switches				●	
Instruments				●	
TWO-UP SUITABILITY					
Passenger comfort		●			
Stability with pillion				●	
Cornering clearance two-up				●	
GENERAL					
Quality of finish				●	
Engine appearance				●	
Overall styling				●	
Seat comfort				●	
Riding position			●		
Touring range				●	
Headlight				●	
Other lights			●		
Stands			●		
Rearview mirrors		●			
Horn				●	
Toolkit		●			
VALUE FOR MONEY					
				●	

Starting from cold normally required two attempts as the motor usually petered out after a few seconds running. Once lit the second time, however, all was well. Occasionally hot starting produced a similar phenomenon, but mostly one jab was enough. Care had to be exercised during exuberant riding as the ferocious throttle response and super-willing nature of the powerplant meant unintentional over-revving usually followed any slight misjudgement. At Castlereagh an abnormally large backoff on racing changes was necessary to keep the tach needle away from the

Earth-bound sizzler

As we've intimated, the GPz550 is a dragstrip rocket, but how do you reconcile 0 to 100 km/h times of 4.7 seconds and standing 400 m times of 12.8 seconds (and terminal speeds of 166 km/h) with just 553 cm³? Three-quarter litre bikes only got this fast after somebody rediscovered four-valve heads! To rub salt in freshly licked (750 type) wounds, the GPz550 will run these times all day long once its rider becomes au fait with the (easy) technique. Our best times came from

class by recording 37.1 kW at 10,000 rpm, fully 13 percent more than Yamaha's sporty XJ550. In fairness to the XJ we should say that our testbike did not feel as strong as others we've ridden. But even if the real margin for well tuned examples of both bikes is less than 13 percent, the GPz has the XJ by the short and curlies. And no other sub-650 naturally aspirated bike can match the XJ550's pace.

The dyno also emphasised the GPz's hairy chested low and mid-range performance — its torque at 2000 rpm is much as Yamaha's XJ650. And while the XJ's power delivery takes a breather from 5000 to 7000 rpm the GPz550 just gets stronger. There is a slight boosting in the rate of power delivery above 6500 rpm, but basically the bike's power arrives predictably.

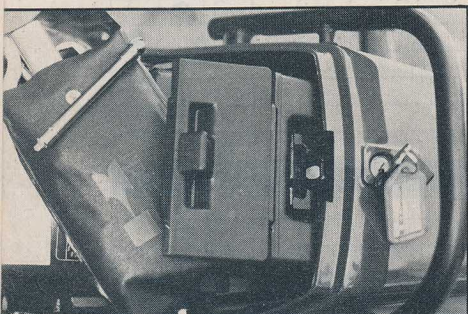
Gearbox operation is a trifle notchy but otherwise no complaints. We never once missed a shift (a sure way to bend valves with this stove-hot four), neutral was easily found without resorting to Kawasaki's positive neutral locator, the clutch was above reproach and the overall and internal ratios suited the bike to a tee. At last Kawasaki has built a four without excessive drivetrain slop (now if only Honda will follow suit).

No dropped passes here!

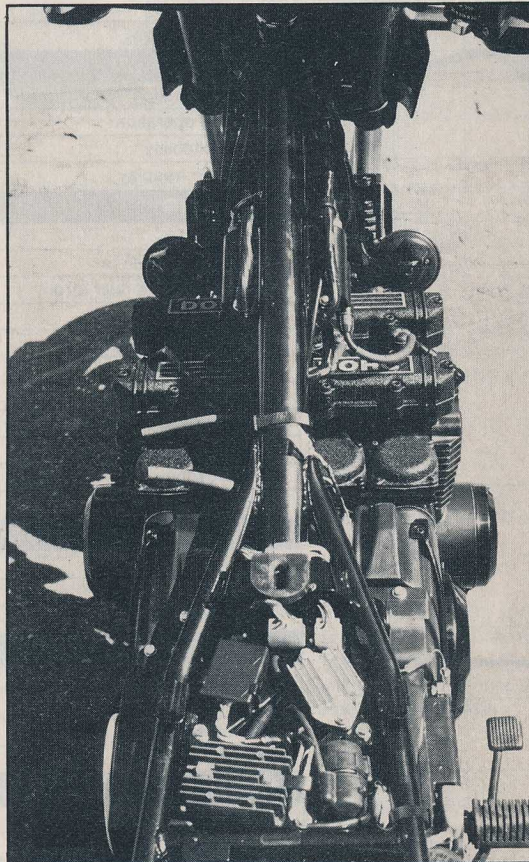
All the fine work done with weight and power would be wasted if Kawasaki fumbled the ball in handling. Rest easy, it didn't. The GPz is as much a gem on winding roads as it is a terror on straight ones. In fact the 550 is so good to punt through the swervery, its solitary shortcoming seems even more pronounced. On the good side, it is particularly well balanced, very easy to throw around, forgiving in the extreme, can be leant till the cows come home, responds instantly to body input and doesn't flinch at changing line or braking in bends.

The one facet of handling where the XJ550 shades the GPz is an important one — steering. The short-wheelbased Kawasaki would be a better bike on all but billiard table smooth roads if its steering was a smidgeon (and we mean smidgeon) slower. As things stand road irregularities disturb the stability of the 550's front end — even crossing a row of cat's eyes swapping lanes will make it twitchy. We're not sure the geometry could be slowed slightly without losing the excellent neutrality of the present steering.

The GPz550's ride is reasonably comfortable (slightly less so than the XJ550) in spite of the bike's prodrace slant, but as with all lighter machinery its less favourable sprung weight to unsprung weight ratio limits the



Natty tailpiece proclaims that GPz is right with it in rear suspension high fashion, contains quite comprehensive tool kit (top and above). View sans tank (right) emphasises bike's compact layout.



12,000 mark as the clutch was flashed in and out.

Only one flaw diminishes the brilliance of the GPz550's engine — the old bugbear of vibration. Between 110 and 150 km/h in sixth, too much finds its way to the rider through the footpegs, handlebars and tank. The bike is not as badly afflicted by buzzing as Suzuki's GSX400 four, but the XJ550's rubber mounted engine is delightfully smooth by comparison. Kawasaki should adapt the rubber mountings of the GPz750 and 1100 to the 550's engine and frame in the model's next revision. We should add here that the Kawasaki's vibration is not severe enough to turn TWO WHEELS staffers off buying the bike, merely that a very good bike would be a whole lot better without it.

8000 rpm wheelspin launches with rider weight well forward to avoid too much front wheel lift, followed by three shifts 500 rpm into the red before holding fourth to the finish.

The bike jumps from the start line very smartly (not too much inertia to set in motion) and accelerates strongly to around the 140 mark, where air resistance begins taking a toll. Acceleration eases off considerably beyond 170 km/h and the final 5 km/h to the 550's respectable top speed of 191 km/h is added in a sloth-like grind. The bike showed no distress whatever during performance testing.

The dyno run confirmed our seat of the pants feelings on the strength of the Kawasaki's engine — the little powerhouse blitzed all comers in its



compliance which can be designed in. The forks showed a little more static seal friction than the latest forks from other Japanese factories and spring rates are mildly firm, but the well-padded seat soaks up minor bumps which sneak past the suspension components. We were unable to bottom out the suspension in normal riding.

The Unitrak monoshock is a nitrogen gas/oil unit with four-way adjustable damping and continuously variable spring preload. The unit worked well, although changing spring preload is a difficult procedure requiring removal of the sidecover, air cleaner and chainguard. An air-spring shock with extension hose for next year, please, Kawasaki.

We liked the 550's stoppers, they were powerful, predictable, fade free and worked in the wet. Feedback to the

controls was reliable and the bike remained nice and stable in crash stops. Our test stopping distances were excellent, but front-end nose dive was substantial, even with the forks pressurised to 78 kPa (11 psi) — the maximum recommended. Heavier oil might reduce this trait.

Wrapping up the package

The instrumentation is sensibly laid out, easily read and well lit. Naturally it is microchip monitored with warnings for sidestand down (a primary safety plus), low oil level, low battery electrolyte level and low fuel level. The fuel gauge is graphic — a row of nine LCD squares light up for a full tank and progressively go out as fuel level falls. Very ducky, but it's a pity response is so non-linear, the device tells you the tank is eight-ninths full after 124 km on a flat road!

The electric tacho doubles as a voltmeter at the press of a button and the mechanical speedo behaves as a prime candidate for electrification — its readings are laughably high, by nine to 13 percent in fact.

Kawasaki's new switchblocks with glove-sized buttons and levers are first rate and the 550 has 'em. The 18.5 litre tank allows a sensible cruise range and the riding position, which seems to suit everybody, goes along.

This lightweight with a heavyweight punch is really going to put a rocket under 750s on tight tracks, to say nothing of on the nation's roads. That will be a good thing. It's not often such a capable all-rounder hits the streets (its sole shortcoming can easily be lived with) so its success is hardly hanging in the balance. Other manufacturers take note.

— C. M.