

2004 Model Information

MARKETING CODE: **VN2000A**

MODEL NAME: **VN2000 (EUR)**
Vulcan 2000 (USA/CAN/AUS)



Note: While material contained herein may be used in the preparation of press releases, technical service material and other SP and marketing material, please keep in mind that this information is intended for internal use only.
All data reflect factory tests. All data subject to change without notice.

OVERALL CONCEPT

In the cruiser category bigger is definitely better, and the super-macho new VN2000 is the largest displacement V-Twin in the world. This high-powered flagship machine is unlike anything in the cruiser category and completely redefines Kawasaki's brand DNA in this important market. Complementing the engine's massive size and impressive power output is an attractive style that mixes modern and traditional design elements in a streamlined, highly integrated package. Centrepiece of the VN2000's remarkable styling is the streamlined headlight nacelle enclosing a "gatling" projector-beam headlamp.



Engine displacement is an incredible 2,053 cm³, making the VN2000 the largest displacement production V-Twin in history. Not only does this muscular power plant produce massive amounts of torque and horsepower, it is also one of the best-looking V-Twin engines in the world, with the huge gracefully tapered cylinders attractively accentuated by the long pushrod tubes and curvaceously shaped engine covers. The "stretched" low-and-long chassis is just as impressive. As the top model in Kawasaki's cruiser line-up, every detail expresses the high quality, superb comfort and feeling of trustworthiness customers expect from a flagship machine.

The VN2000's key sales features can be summarised as follows:

- **World's Largest V-Twin Engine** – As good looking as it is powerful and smooth, the liquid-cooled, OHV, 2,053 cm³ V-Twin engine splays its attractively tapered cylinders at 52 degrees. This massive power plant is equipped with an automotive-style fuel injection system and produces category-shattering levels of torque and an incredible power feel, out-accelerating competing cruisers with ease. In addition to the stimulating aural sensation from the twin slash-cut mufflers, the VN2000's engine produces a feel-good V-Twin heartbeat unmatched by any other cruiser on the market today.
- **Styling That Demands Respect** – The VN2000's masculine styling with stretched fuel tank and thin, tank-mounted speedometer redefines the classic cruiser image while still remaining true to the cruiser tradition. This concept is also carried through to the rear frame, which looks like a custom rigid but is actually a modern single-shock layout.
- **Confident Handling and Luxurious Ride Quality** – Whether manoeuvring at low speeds in a parking area or cruising down the highway, the VN2000's low seat height, quiet belt drive and huge 200 mm rear tyre give riders an unmatched feeling of confidence and stability.

KEY SALES FEATURES

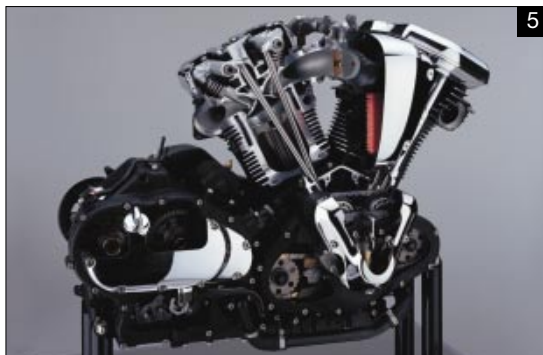
WORLD'S LARGEST V-TWIN ENGINE

Engine



- * Liquid-cooled, OHV, 8-valve, 2,053 cm³ V-Twin engine has a massive bore and stroke of 103 x 123.2 mm. (Photos 1-3)
- * Huge 46 mm throttle bodies fitted with dual throttle valves ensure massive torque output in the low- and medium rpm ranges and contribute to a silky smooth powerband.
- * The use of dual throttle valves – a primary throttle valve directly operated by the rider and a sub-valve operated by electric motor – mitigates sudden torque increases and smoothes out the power delivery.
- * Automotive-type fine-atomising injectors improve performance, fuel economy and emissions. (While fuel spray from conventional injectors has a droplet size of 120 microns, the fine atomising injectors have a droplet size of approximately 70 microns.)
- * 4-valve heads use centrally located irridium plugs fired by high-voltage coils for high combustion efficiency.

- * Twin chain-driven cams operate the pushrods that run along the exterior of the cylinders on the right side of the engine. (Photos 4,5)



- * Hidden oil lines to the cylinder head balance the appearance of the left side of the engine. (Photo 6)
- * Lightweight forged “slipper” pistons, similar to those found in high-performance engines, with short skirts help reduce vibration. Compression is 9.5:1. (Photo 7)

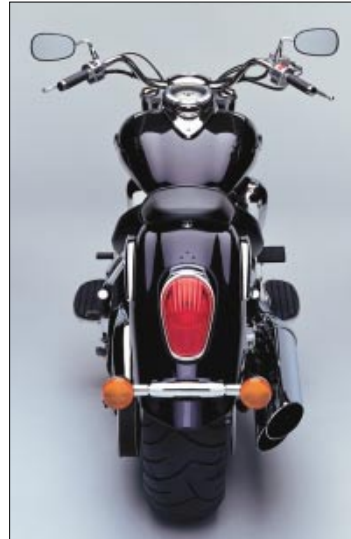
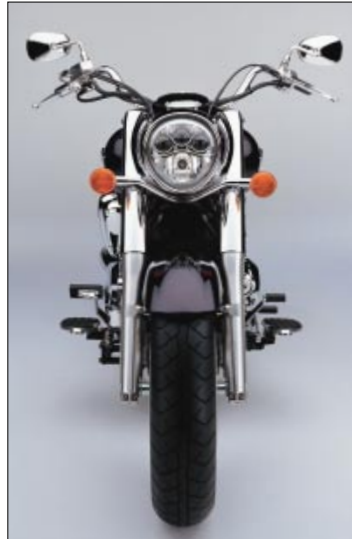


- * Dual primary balancers harmonise primary vibration. Secondary vibration is minimised with the lightweight pistons and rods while the good vibrations are left for the rider to enjoy.
- * A rugged 5-speed transmission delivers the reliability needed for VN2000’s massive torque output. A gear position sensor signals the ECU, ensuring that ignition timing and fuel supply is ideal for the chosen gear and speed range.

* Belt final drive is quiet and efficient. Wide belt is very durable. (Photo 8)



STYLING THAT DEMANDS RESPECT



Engine

* Following the overall design of the VN2000, the engine's dimensions are also long and low. Although stroke is 33 mm longer than that of the VN1500 engines, the VN2000 power plant is only 2 mm taller.

* The crankcase's "wrinkle black" coating juxtaposes nicely with the many chromed engine covers.

- * Dual slash-cut mufflers are joined with two balance pipes for high efficiency and a great sound. The high-quality chrome finish looks superb. (Photo 9)



Headlamp & Tail Light

- * The VN2000's signature feature is the stunning streamlined headlight nacelle housing a "gatling" projector-beam headlamp. A conventional bulb located below the three projector lamps is used for the high beam. (Photo 10)



- * Compared to a standard reflector-type headlamp, the triple-projector beam offers more evenly distributed illumination, for greater confidence when riding at night. (Photo 11)
- * When the high beam is on, all four lighting elements are illuminated for increased brightness.
- * Large, single-bulb tail lamp uses a bright, Fiflex reflector for high visibility. Screwless attachment further enhances the high quality of the beautifully shaped lens. (Photo 12)



Fuel Tank

- * Big, stretched and seamless, the voluptuous fuel tank has the design and finish customers expect of a flagship machine.
- * Large 21-litre (5.5 gal.) capacity for worry-free long-distance cruising. (Photo 13)



- * Step-motor driven instrument console is slim and lightweight, contributing to the bike's elegant lines. (Photo 14)
- * Large-faced speedometer features an easy-to-read LCD display that includes a fuel gauge and warning lamps.

Frame

- * Triangulated swingarm design with hidden single-shock gives the rear of the bike the look of a custom rigid.
- * Ultra-low seat height contributes the VN2000's sleek lines.
- * Locking rear seat uses a stylishly thin seating pad, contributing to the bike's flowing lines.

Wheels & Tyres

- * Newly designed cast alloy wheels feature a dynamically flowing design. These attractive high-quality wheels complement the VN2000's overall luxury look and feel.
- * Super-fat rear tyre enhances the bike's macho appeal and visually expresses the engine's impressive power output.

CONFIDENT HANDLING AND LUXURIOUS RIDE QUALITY

Frame

- * The steel double-cradle frame uses a cast steering head mated to a large-diameter, box-section backbone. (Photo 15)



- * A 32° rake and 10 mm fork offset deliver very balanced handling characteristics, making the VN2000 both highly manoeuvrable at low speeds and very stable on the highway.
- * Steel pipe swingarm features a truss structure for high stiffness.

Suspension

- * Massive 49 mm fork tubes ensure excellent steering feedback and contribute heavily to the VN2000's good-mannered steering.
- * Very low-speed handling is light and free of understeer. At speed on the highway the front end delivers an unsurpassed feeling of trustworthiness and stability.
- * Direct-action single rear shock, adjustable for both preload and rebound damping, is discreetly hidden under the seat and delivers a smooth, comfortable ride. (Photo 16)



Brakes, Wheels & Tyres

- * Dual 300 mm front brake discs are operated by 4-piston callipers for powerful braking.
- * Slowing the rear wheel is a large-diameter 320 mm disc operated by a twin-piston calliper.
- * Radial tyres contribute to stable handling.

Ergonomics

- * Ultra-low seat height of 680 mm makes it easy for riders to reach the ground with their feet.
- * The combination of wide handlebars and an ideal relationship between seat, bars and footboards results in wonderfully comfortable riding position.
- * Ergonomically designed front bucket seat is very comfortable. (Photo 17)



ADDITIONAL FEATURES

Engine

- * Cylinder heads use a large 35° valve angle, helping to realise a short cylinder head layout (intake valve diameter: 40 mm; exhaust: 36 mm).
- * Hydraulic valve lash adjusters are located on the rocker arms, and high-quality SKD tappet material is used for low weight and high durability.
- * Plated cylinders are long wearing and offer excellent heat dispersion. The coolant jacket extends only part way down the cylinders, giving the cylinders an attractively tapered shape with a small cylinder base area. Finning matching that of the cylinder heads is both aesthetically pleasing and functional. (Photos 18,19)



Front cylinder: right-side



Front cylinder: left-side

- * Piston-cooling oil jets are used to keep piston temperature under control.

- * Lightweight alloy-steel connecting rods contribute to low vibration levels. (Photo 20)



- * The crankshaft uses huge 220 mm flywheels to enhance torque feel at low rpm. (Photo 21)
- * A damper on the left end of the crankshaft dampens large torque fluctuations and reduces shock loads on the primary drive and transmission.
- * Chain primary drive (HV) eliminates gear noise and transmits a great V-Twin pulse feel to the rider.
- * Cable-actuated clutch offers superb feel at the lever. Mounting the clutch on the left side of the engine gives the engine a classic V-Twin shape.
- * ECU control items include: injection timing/volume, sub-throttle, ignition timing, radiator fan, decompression, starter motor, and fuel pump.
- * Dual oil pumps are used, one in the crankcase and one in the clutch case, each with its own scavenging pump.
- * High-output, large-diameter 226 mm AC generator is mounted inboard on the crank journal, and contributes to flywheel mass.
- * Large one-piece engine cases house the eleven shafts including the cams. The oil and water pumps are built into the cases, reducing the number of parts. The cases are rigidly mounted in the frame, making the engine a stressed member and increasing chassis rigidity.
- * Semi-dry sump design eliminates external oil lines and isolates engine oil from the crank wheels to prevent windage loss.
- * All engine covers are 2- or 3-step construction, and the chromed transmission cover doubles as an oil accumulation tank.
- * Compact air cleaner with attractive chrome cover is located between the cylinders.
- * Starting is easy, thanks to an automatic decompressor operated by electric solenoid.
- * Honeycomb catalysers in the mufflers reduce exhaust emissions, while twin balance pipes enhance exhaust efficiency.
- * An automatic fast idle setting ensures quick starts, even on cold mornings.

Chassis

- * Large tapered roller bearings are used in the steering head for high stability and high chassis rigidity.
- * The use of castings around the steering head and forged parts around the swingarm pivot results in a clean design, with less welding and very high rigidity.

Other

- * Ignition switch allows on-position key removal, preventing key bunches from damaging the top of the headlight nacelle's lustrous chrome finish while the bike is in operation. Turning the ignition switch collar to the "off" or the "park" position (illuminating the tail lamp) turns the engine off and necessitates re-insertion of the key to restart. (Photo 22)



- * Self-cancelling turn signals.
- * The VN2000 is conveniently designed to allow the oil level to be checked while sitting on the bike using a dipstick attached to the oil cap.
- * Convenient helmet lock located on the left side.
- * A variety of optional accessories will allow customers to customise the VN2000 to suit their personalities and riding styles. Windshields (in a variety of sizes), a backrest with rack, thicker rear seat, passenger footboards, side bags, engine guards, and a light bar are just some of the options being planned. (Photo 23)



COLOUR(S)

* Metallic Dark Purple Prism



* Metallic Majestic Red (USA/CAN)



* Pearl Glacial Blue (USA/CAN)



SPECIFICATIONS

ENGINE	VN2000-A1
Type	Liquid-cooled, 4-stroke V-Twin
Displacement	2,053 cm ³
Bore and Stroke	103.0 x 123.2 mm
Compression ratio	9.5:1
Valve system	OHV, 4 valves per cylinder
Fuel system	Fuel injection: Ø 46 mm x 2
Ignition	Digital
Starting	Electric
Lubrication	Forced lubrication, semi-dry sump
DRIVETRAIN	
Transmission	5-speed, return
Final drive	Belt
Primary reduction ratio	1.500 (48/32)
Gear ratios: 1st	2.550 (51/20)
2nd	1.629 (44/27)
3rd	1.218 (39/32)
4th	0.939 (31/33)
5th	0.729 (27/37)
Final reduction ratio	2.454 (48/44 x 72/32) for EUR/AUS 2.743 (50/41 x 72/32) for USA/CAN
Clutch	Wet multi-disc, manual
FRAME	
Type	Double-cradle, high-tensile steel
Wheel travel: front	150 mm
rear	100 mm
Tyre: front	150/80R16M/C (71V)
rear	200/60R16M/C (79V)
Caster (rake)	32°
Trail	182 mm
Steering angle (left/right)	37° / 37°

SUSPENSION	VN2000-A1
Front: Type	49 mm telescopic fork
Rear: Type	Swingarm with mono-shock (non-link type)
Rebound damping	8-way
Spring preload	Fully adjustable
BRAKES	
Front: Type	Dual 300 mm discs
Calliper	Dual 4-piston
Rear: Type	Single 320 mm disc
Calliper	Twin-piston
DIMENSIONS	
Overall length	2,535 mm
Overall width	1,025 mm (EUR/USA/CAN) 985 mm (AUS)
Overall height	1,155 mm
Wheelbase	1,735 mm
Ground clearance	135 mm
Seat height	680 mm
Dry weight	340 kg
Fuel capacity	21 litres
PERFORMANCE	
Maximum power	76 kW {103 PS}/ 4,800 rpm (EUR) 85 kW {116 PS}/ 5,000 rpm (USA/CAN) 76 kW {103 PS}/ 5,100 rpm (AUS)
Maximum torque	177 N·m {18.0 kgf·m}/ 3,200 rpm (EUR) 191 N·m {19.5 kgf·m}/ 3,000 rpm (USA/CAN) 177 N·m {18.0 kgf·m}/ 3,000 rpm (AUS)

The specifications mentioned here apply to and have been achieved by production models under standard operating conditions. We intend only to give a fair description of the vehicle and its performance capabilities but these specifications may not apply to every machine supplied for sale. Kawasaki Heavy Industries, Ltd. reserves the right to alter specifications without prior notice. Equipment illustrated and specifications may vary to meet individual markets. Available colours may vary by market.