Kawasaki

2009 Model Information

MODEL CODE: **ER650C9F**

MODEL NAME: ***ER-6n***

NEW STYLE. MORE FUN.

When the ER-6n first made its debut three years ago, it offered the market a unique combination of performance, accessibility and stunning good looks. More mature, the new ER-6n improves on this combination while maintaining the key character of its predecessor.

The most apparent change is the sharper, more aggressive new styling. The curved lines of the original ER-6n's unique design are replaced by angular, edged contours. The overall image of the new ER-6n is more active: all lines move forward, giving the bike a crouching appearance.
The characteristic trellis frame and offset laydown rear shock remain, but the frame has been completely redesigned with even greater attention to detail giving the new bike an even higher quality finish.

The ER-6n's amiable nature is apparent from the moment the rider gets on the bike. The natural riding position and ergonomics benefit from a revised seat that makes the reach to the ground even easier. Tweaks to the engine result in smoother response, especially at low-mid rpm; riders will find the more linear quality non-intimidating. Further, revisions to rigidity balance and suspension settings, and the addition of rubber mounts result in reduced vibration and lighter handling, enabling the ER-6n to improve on the comfort and rider-friendly handling qualities of its predecessor.

The ER-6n's lighter handling and rider-friendly ergonomics also make it fun to ride.
The 649cc, liquid-cooled Parallel Twin engine's torquey character is ideal for riding either in town or down country roads. A quicker-revving nature adds to riding excitement and the increased linearity offers a level of control that can easily be exploited for sporty riding.

COMPACT, QUICK-REVVING ENGINE
The balance of compact size and good power offered by the original ER-6n was the key to its success. To fit into its trim package, an In-line Four would have been too wide and a V-Twin too long. The only engine design that offered both good power characteristics and the requisite compactness was a Parallel Twin. While maintaining this balance, the new engine gets a number of tweaks that offer smoother low-mid response and a quicker revving character.

Engine Performance

★Liquid-cooled, DOHC, 8-valve 649 cm3 Parallel Twin with fuel injection delivers smooth, responsive performance, especially in the low and medium rpm ranges. The engine was tuned for rider-friendly power characteristics that will inspire confidence in new riders.
★Revised fuel injection settings result in smoother response (especially below 4,000 rpm) and contribute to the new ER-6n's quicker-revving character.
★The engine's excellent mid-range power characteristics make the bike especially fun to ride at medium speeds on city streets. Roll-on response is exceptional, offering impressive passing performance.
★Large-bore 38 mm throttle bodies feature sub-throttles for high power output with smooth, sensitive throttle response.
★Wider radiator (by 40 mm) offers increased cooling efficiency (17.4 kW >> 19.4 kW).

Compact Engine Design
★the ER-6n's 649 cc liquid-cooled power unit is the most compact engine in its category.
Don't let the words "Parallel Twin" fool you. This engine is loaded with innovative technology that enabled the realisation of its compact design and surprising performance. Its abundance of Ninja technology and know-how explains why this compact and lightweight machine can outperform so many of its middleweight competitors (many of which have larger displacement).

★Triangular layout of the crankshaft and transmission shafts makes the engine very short front-to-back.
★Transmission input shaft, output shaft and change drum are contained in a "cassette"- style package that both allows a compact layout and facilitates transmission maintenance chores.
★Semi-dry sump design reduces engine height.
★Plated, linerless aluminium cylinder is lightweight, and the narrow cylinder pitch reduces engine width.
★Under-engine muffler improves mass centralisation and lowers the bike's centre of gravity.
★Ultra-fine injectors and 32mm throttle bodies with oval sub throttles offer ultra-smooth response across the rev range.
★Lightweight, high-efficiency radiator offers high efficiency cooling.
★180° crankshaft drives a balancer shaft for silky smooth engine operation. The water pump is driven off the right end of the balancer shaft.

Euro-III Compliant

★The combination of efficient fuel injection and a 3-way catalyser inside the muffler make for very low emissions which pass the stringent Euro-III regulations.
★300-cell catalyser offers more compact size and lighter weight compared to previous 200-cell unit. Muffler internals were revised to suit the new catalyser.

★The cast aluminium engine sub-frame allows the front engine mounts to be located behind the cylinder, closer to the engine's centre of gravity. The result is less engine vibration transmitted to the rider (particularly at the handlebars) for a much improved ride quality.
★Through the use of a combination of rigid and rubber mounts, chassis tuning delivers a very planted feel and high levels of feedback. The result is a superb level of control: the rider is better able to understand what the bike is doing.

LIGHT-HANDLING CHASSIS

The key to the ER-6n's compact size is its amazingly compact Parallel Twin engine, which permits the use of a narrow, lightweight frame. The result is a bike with the dimensions of a 400 and the power of a 650 that welcomes beginners with a "Come on, let's go for a ride!" attitude, while also offering plenty of performance for more experienced riders.
Changes to the frame, swingarm and suspension result in reduced vibration and lighter handling, making the new ER-6n more accessible than ever.

Compact Package

★All-new frame maintains the key design elements of its predecessor. Together with the compact engine, the new frame's elegant design realises a package that is slim, low, lightweight and compact.
★The compact engine allows use of a slim, minimalist frame, resulting in a design that is narrow at the knees and feet.
★The compact engine also allows an extremely short wheelbase, giving light and nimble handling.
★Because a long swingarm can be used, rear suspension action and handling are both improved.
★3D analysis was used to achieve the ideal stiffness balance for the frame, contributing to the superb handling characteristics.
★The frame is constructed of high-tensile steel, giving it a lightness rivalling that of aluminium frames.
★The layout of the offset single-shock rear suspension allows the battery to be located beside the shock instead of beneath it. This elegant arrangement allows a lower seat height as well as a slim design.
★The same characteristics that make it fun to ride (responsive handling and rider-friendly ergonomics), also make the ER-6n ideal for new riders.
★A short wheelbase and tight turning radius contribute to the 650R's high manoeuvrability.

Reduced Vibration

★Rubber mounts instead of rigid mounts used for the upper-rear engine mounts reduce vibration transmitted to the rider through the seat.
★Handlebar is rubber-mounted to reduce vibration transmitted through the handle grips.
★Rider and pillion footpegs are rubber coated to further reduce vibration.

Lighter Handling

★Changes to the frame to reduce rigidity and improve appearance also contribute to the ER-6n's lighter handling.

★New swingarm has higher rigidity to balance the reduced rigidity of the frame (due primarily to the rubber engine mounts). Overall, chassis rigidity is the same as that of the previous models.

★Front and rear suspension settings were revised to match the changes to the frame and swingarm. Together with the new frame they offer lighter, rider-friendly handling.

Rider-friendly Ergonomics

★The riding position was specially designed to inspire rider confidence. An ideal relationship between the handlebars, seat and footpegs results in a comfortable and natural position suitable for a wide range of riders.

★The narrow frame and engine make for an overall narrow package, allowing the rider to keep his or her knees and feet close together.

★Thanks to the low seat height and slim overall design, it's easy to keep both feet firmly on the ground when stopped, an important consideration for many riders.

★Narrowing of the frame just aft of the fuel tank enabled the seat construction to be revised, making the reach to the ground even easier.

★Aluminium (previously plastic) passenger grips are positioned lower and have a revised shape, making them easier for tandem riders to grab. Increased passenger confidence thanks to the improved grip also makes it easier for riders when carrying a pillion.

Brakes

★Dual 300 mm front petal disc brakes and 220 mm rear petal disc look great and deliver plenty of braking power.

★Front brake lever uses a new ball-joint (instead of a unitised piece) and revised pivot location to deliver smoother actuation of the master cylinder piston.

SHARPER MASCULINE STYLING

While maintaining the distinctive character of its predecessor, the new ER-6n gets sharper, more muscular bodywork, giving it a more "active" and aggressive image.
Curved lines are replaced with angular ones, and all lines move forward, giving the bike a crouching appearance. Simple in design, the new ER-6n avoids all superfluous design flourishes; lines were made to flow as long as possible. The new, taller fuel tank, pulled back shrouds and sharp tail cowl make the bike look more compact front-to-back.
Attention to the smallest details contributes to the new bike's high-quality finish.

Bodywork

★Stacked dual headlamp is more angular – from both the front and from the side – and features two position lamps. New headlamp shroud also contributes to the new ER-6n's more masculine image.

★Fuel tank is taller – especially noticeable when viewed from the side – which adds to the bike's crouching appearance. Sharp-edged line motif gives it a look very distinct from that of its predecessor. Flush-surface fuel cap contributes to the sleek lines.

★Viewed from the rear or from the side, the tail cowl and seat's sharper design is evident. Thin new LED tail lamp and rear turn signals reinforce this image.

★Redesigned shrouds are sharper, contributing to the ER-6n's new masculine styling and forward-leaning lines.

★Revised front turn signals are integral with the radiator shrouds, enhancing the bike's integrated styling.

★Clear turn signal lenses with orange bulbs further enhance the machine's high-quality appearance.

★The new ER-6n's compact front-to-rear appearance can be attributed to the shorter front cowl (thanks to more compact headlamp design), shorter rear cowl (thanks to the new LED tail lamp) and shrouds that are pulled back behind the line of the front fork.

★Longer front fender reduces mud splash. Two-tone design contributes to the light, compact appearance.

★The addition of an inner fender helps keep the underside of the tail cowl clean and contributes to the new ER-6n's sporty look.

★New license plate bulb housing and slimmer rear mud flap add to the sharp image of the tail.

Frame / Rear Suspension

★While the frame is completely new, its design continues to be a key component of the ER-6f's identity. Like on its predecessor, the ER-6f's bodywork accentuates the frame, rather than hiding it.

★The design of the frame, rear suspension and swingarm create an integrated line running from the steering head to the rear hub.

★A trellis frame of high-tensile steel gives the bike a lightweight appearance. 3D analysis was used to achieve the target rigidity and stress values.

★Offset laydown rear single-shock suspension flows smoothly from the frame to the swingarm.

★The braced steel swingarm follows the lines of the frame and rear shock, its triangulated design contributing to the machine's innovative styling.

★Swingarm now has a D-shaped cross section (instead of a square tube). The pipe-like design of the new swingarm and revised stabiliser further contribute to the 650R's higher-quality appearance.

★Elegant design of the one-piece rider/passenger footpeg stays complements the new swingarm and stabiliser.

★Finish at frame joints is much cleaner, improving overall quality of the bike.

Instrumentation

★Stacked instrument cluster has a sharper design and revised layout.

Analogue-style speedometer uses white LED backlights for excellent visibility at night. The multi-function LCD screen has amber backlighting.

Features include a new fuel gauge, bar-style digital tachometer, clock, odometer and dual trip meters.

★Inner cover added inside the front cowl cleans up appearance in this area.

Mirrors

★New mirror design is similar to that on our Z1000 and Z750 sport models.

Positioned 20 mm further out from the centreline, they also offer an improved rear view.

SPECIFICATIONS EX650C9F

ENGINE		
Type		Liquid-cooled, 4-stroke Parallel Twin
Displacement		649 cc
Bore and Stroke		83 x 60 mm
Valve system		DOHC, 8-valves
Compression Ratio		11.3:1
Fuel system		Fuel injection: ø38 mm x 2 (Keihin)
Ignition		Digital
Starting		Electric
Lubrication		Forced lubrication, semi-dry sump
DRIVETRAIN		
Transmission		6-speed, return
Clutch		Wet multi-disc, manual
Final drive		Sealed chain
FRAME		
Type		High tensile steel diamond type
Caster (rake)		24.5 degrees
Trail		102 mm
Tyre:	front	120/70ZR17M/C
	Rear	160/60ZR17M/C
SUSPENSION		
Front: Type		41 mm telescopic fork
Rear: Type		Offset laydown single-shock with adjustable preload
BRAKES		
Front Type		Dual semi-floating 300 mm petal discs
Caliper		Dual piston
Rear: Type		Single 220 mm petal disc
Caliper		Single-piston
DIMENSIONS		
Overall length		2,100 mm
Overall width		760 mm
Overall height		1,100 mm
Wheelbase		1,405 mm
Seat height		785 mm
Curb Mass		200 kg
Fuel capacity		15.5 litres
PERFORMANCE		
Maximum power		53 kW {72.1 PS}/ 8,500 rpm
Maximum torque		66 N·m {6.7 kgf·m}/ 7,000 rpm

*Curb mass is the weight with all fluids including fuel, plus tool kit etc. This is an accurate ready to ride weight.

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