ER-6n

KEY POINTS:

- Responsive parallel twin engine offers manageable performance
- Light weight and low seat height makes this bike easy to ride
- Unique styling
- Electronic instrumentation
- Under engine muffler
- Ideal entry-level machine
- EURO III compliant
- Genuine Kawasaki accessories available
- 25 kW power down kit available
- ABS version (ER650B6F) available

SPECIFICATIONS	ER650A6S / ER650B6F
Engine type	4-stroke, liquid cooled, parallel twin
Displacement	649 cm^3
Bore x stroke	83.0 x 60.0 mm
Compression ratio	11.3:1
Valve system	DOHC, 8 valves, 4 valves per cylinder
Maximum power	53 kW (72.1 PS) / 8,500 r/min
Maximum torque	66 N·m / 7,000 r/min
Fuel system	2 x 38 mm Keihin throttle bodies
Ignition	digital TCBI
Starting system	electric
Transmission	6-speed
Frame type	steel tubular diamond
Rake / trail	24.5º / 102 mm
Suspension, front	41 mm fork
Suspension, rear	swingarm with single shock absorber
Wheel travel, front / rear	120 / 125 mm
Tyre, front / rear	120/70 ZR 17 / 160/60 ZR 17
Brake, front	300 mm dual discs with dual piston calipers
Brake, rear	220 mm disc with single piston caliper
L x W x H	2,100 x 760 x 1,095 mm
Wheelbase	1,405 mm
Seat height	785 mm
Fuel capacity	15.5 L
Dry weight	ER650A6S 174 kg / ER650B6F 178 kg
Colours	Vivid Yellow, Ebony or Galaxy Silver Type 2

ER-6 (ER650A6S & ER650B6F)

FEATURES AND BENEFITS:

ENGINE

649 cm^3, parallel twin, DOHC engine

- New design highly compact parallel twin engine delivers linear torque particularly in the low-medium speed range.
- Semi-dry sump design reduces engine height.
- Electroplated cylinder bores reduce friction.
- Cooling passageways in the engine reduce the amount of external cooling hoses giving the engine a clean, uncluttered appearance.
- Newly designed radiator has the cores closer together and a new fin design for excellent cooling efficiency.

Fuel system

- Electronic fuel injection feeds the engine exactly the right amount of fuel giving excellent power, fuel economy, driveability and starting.
- High atomising injectors are used to maximise combustion efficiency and minimise emissions.
- The first Kawasaki to meet EURO III emission regulations.
- Dual throttle valves are fitted to significantly improve driveability. The sub-throttle valves are controlled by the ECU to provide precise response.
- Auto fast idle ensures the catalyser quickly reaches its optimum operating temperature to minimise emissions.

Exhaust system

- Under engine exhaust muffler aids mass centralisation and adds to the stylish appearance.
- Curved S-shaped header pipes help tune the exhaust system.
- To minimise emissions a honeycomb type catalyser is used.

TRANSMISSION

6-speed transmission

- Cassette type transmission helps keep the engine compact.
- Transmission ratios selected for ideal urban riding performance.

CHASSIS

Tubular ‘diamond’ high tensile steel frame

- High-tensile steel alloy frame is constructed of large diameter, thin-walled tubing for strength and rigidity.
- 3D design analysis was used to achieve the ideal stiffness balance and handling characteristics.
- A low centre of gravity, short wheelbase and long swingarm give quick and nimble handling.

41 mm front fork

- Delivers a supple ride and gives excellent feedback across the speed range.

Rear suspension

- Direct action offset rear shock absorber with pre-load adjustment delivers a smooth and supple ride.

Front disc and rear disc brakes

- Dual 300 mm front petal discs with sliding pin calipers and a rear 220 mm petal disc with single piston caliper ensure excellent stopping power and feel.
- Petal shaped discs aid handling.

Anti-lock Brake System (ABS) Version (ER650B6F)

- A Bosch system is equipped on ABS versions to prevent wheel lock up during heavy braking.

Detail features

- Digital speedometer with clock, odometer and trip meter with a separate analogue tachometer are set in a colour co-ordinated pod which accentuates the modern design.
- The turn signal switch gear incorporates a hazard warning light switch.
- The belly pan adds to the smooth flowing lines.
- The 15.5 litre fuel tank has a flush fitting fuel cap.
- Lightweight ZX-10R style wheels aid handling.
- A slim rear fuel tank to seat design gives the machine a narrow feel, add in the low seat height and you can see this machine inspires confidence.
- Lightweight, easy to ride and economical to own making this the ideal entry level machine.
- Refer to the technical summary on pages 34-37 for a comprehensive guide to the ER-6n.

ER-6f

KEY POINTS:

- Responsive parallel twin engine offers manageable performance
- Light weight and low seat height makes this bike easy to ride
- Unique styling
- Electronic instrumentation
- Under engine muffler
- Ideal entry-level machine
- EURO III compliant
- Full fairing
- Genuine Kawasaki accessories available
- 25 kW power down kit available
- ABS version (EX650B6F) available

SPECIFICATIONS	EX650A6F / EX650B6F
Engine type	4-stroke, liquid cooled, parallel twin
Displacement	649 cm^3
Bore x stroke	83.0 x 60.0 mm
Compression ratio	11.3:1
Valve system	DOHC, 8 valves, 4 valves per cylinder
Maximum power	53 kW (72.1 PS) / 8,500 r/min
Maximum torque	66 N·m / 7,000 r/min
Fuel system	2 x 38 mm Keihin throttle bodies
Ignition	digital TCBI
Starting system	electric
Transmission	6-speed
Frame type	steel tubular diamond
Rake / trail	25º / 106 mm
Suspension, front	41 mm fork
Suspension, rear	swingarm with single shock absorber
Wheel travel, front / rear	120 / 125 mm
Tyre, front / rear	120/70 ZR 17 / 160/60 ZR 17
Brake, front	300 mm dual discs with dual piston calipers
Brake, rear	220 mm disc with single piston caliper
L x W x H	2,105 x 760 x 1,210 mm
Wheelbase	1,410 mm
Seat height	790 mm
Fuel capacity	15.5 L
Dry weight	EX650A6S 178 kg / EX650B6F 182 kg
Colours	Galaxy Silver Type 2 or Ebony

ER-6f (EX650A6F & EX650B6F)

FEATURES AND BENEFITS:

ENGINE

649 cm^3, parallel twin, DOHC engine

- New design highly compact parallel twin engine delivers linear torque particularly in the low-medium speed range.
- Semi-dry sump design reduces engine height.
- Electroplated cylinder bores reduce friction.
- Cooling passageways in the engine reduce the amount of external cooling hoses giving the engine a clean, uncluttered appearance.
- Newly designed radiator has the cores closer together and a new fin design for excellent cooling efficiency.

Fuel system

- Electronic fuel injection feeds the engine exactly the right amount of fuel giving excellent power, fuel economy, driveability and starting.
- High atomising injectors are used to maximise combustion efficiency and minimise emissions.
- Meets EURO III emission regulations.
- Dual throttle valves are fitted to significantly improve driveability. The sub-throttle valves are controlled by the ECU to provide precise response.
- Auto fast idle ensures the catalyser quickly reaches its optimum operating temperature to minimise emissions.

Exhaust system

- Under engine exhaust muffler aids mass centralisation and adds to the stylish appearance.
- Curved S-shaped header pipes help tune the exhaust system.
- To minimise emissions a honeycomb type catalyser is used.

TRANSMISSION

6-speed transmission

- Cassette type transmission helps keep the engine compact.
- Transmission ratios selected for ideal urban riding performance.

CHASSIS

High-tensile steel frame

- High-tensile steel alloy frame is constructed of large diameter, thin-walled tubing for strength and rigidity.
- 3D design analysis was used to achieve the ideal stiffness balance and handling characteristics.
- A low centre of gravity, short wheelbase and long swingarm give quick and nimble handling.

41 mm front fork

- Delivers a supple ride and gives excellent feedback across the speed range.

Rear suspension

- Direct action offset rear shock absorber with preload adjustment delivers a smooth and supple ride.

Front disc and rear disc brakes

- Dual 300 mm front petal discs with sliding pin calipers and a rear 220 mm petal disc with single piston caliper ensure excellent stopping power and feel.
- Petal shaped discs aid handling.

Anti-lock Brake System (ABS) Version (EX650B6F)

- A Bosch system is equipped on ABS versions to prevent wheel lock up during heavy braking.

Detail features

- Compact analogue speedometer also has a LCD display with digital readouts for odometer, twin tripmeter and clock as well as an LED water-temperature warning lamp. The separate tachometer houses both a fuel gauge and an LED fuel-injection warning lamp. Other instrumentation includes turn signal, high beam, neutral, and oil warning lamps.
- The turn signal switch gear incorporates a hazard warning light switch.
- The 15.5 litre fuel tank has a flush fitting fuel cap.
- Lightweight ZX-10R style wheels aid handling.
- A slim rear fuel tank to seat design gives the machine a narrow feel, add in the low seat height and you can see this machine inspires confidence.
- Lightweight, easy to ride and economical to own making this the ideal entry level machine.
- A full fairing makes for relaxed highway riding.
- Refer to the technical summary on pages 34-37 for a comprehensive guide to the ER-6f.

ER-6n & ER-6f TECHNICAL SUMMARY

ENGINE

- The newly designed highly compact parallel twin engine is short (front to back and top to bottom) and narrow. Other engine configurations were considered during the design stage but the parallel twin gave the engineers everything they required in terms of size, power and driveability.

- The engine is 53 mm smaller (front to back), 54 mm lower and 10 mm narrower than the 498 cm^3 parallel twin engine used in the ER-5.
- A semi-dry sump stores oil in the transmission which helps to keep the engine height down because a deep oil pan is not needed. Passageways between the engine and transmission housing allow oil to drain into the transmission when the engine is shut off. Doing this eases oil level checking/changing procedures.
- Electroplating on the cylinder liners reduces friction.
- A triangular layout of the crankshaft and transmission shafts results in a very compact engine.
- Oil jets in the connecting rods direct oil to the underside of the pistons to aid cooling.
- A 180º crankshaft with a balancer shaft gives low vibration levels.
- The engine has been designed to be seen. Integral coolant passageways eliminate the need for many external cooling hoses giving the engine a clean, uncluttered appearance.
- The new design Denso radiator has the cores placed closer together allowing more to be used in the same space. The fin design has also been changed (compared with radiators on 2005 models) to increase cooling efficiency.

FUEL SYSTEM

- The EFI system used on this machine helped make the ER-6 the first Kawasaki to comply with EURO III emission regulations.
- An auto fast idle system is used to help the honeycomb catalytic converter heat up to its optimum operating temperature. Having the catalyst closer to the engine also helps this process.
- High atomising injectors maximise combustion efficiency.

EXHAUST SYSTEM

- The muffler containing the honeycomb type catalyser is situated under the engine. This improves mass centralisation and gives a unique appearance.

- The exhaust system has stainless steel 's' shape header pipes. Curving the pipes in this way increases the length of the exhaust aiding mid-range torque and adds to the overall look of the machine.

ER-6n & ER-6f TECHNICAL SUMMARY

TRANSMISSION

- A cassette style transmission ensures a compact unit and allows greater accuracy in production resulting in low backlash in the driveline system.
- Keeping backlash to a minimum helps smooth throttle control resulting in a comfortable and easy to control machine.

- Gear ratios chosen for low to medium speeds ensure quick response to throttle input, ideal for the riding situations this bike is designed for.

CHASSIS

- The attractive high tensile steel diamond frame is lighter than a conventional steel frame.

- 3D computer analysis was used to ensure the target rigidity and stress response was achieved.
- The chassis was designed to have a short wheelbase but using a relatively long swingarm. This makes the machine more responsive to rider input, easy to manoeuvre and improves rear end traction.

SUSPENSION

- The 41 mm front fork gives a smooth and responsive action.
- A direct action off-set rear shock absorber is used. This eye-catching design results in high ride comfort and superb performance and feel. The near horizontal layout is compact and allows a lower seat height.

- The colour coordinated rear shock is adjustable for spring pre-load.

STYLING

- The upright riding position combined with the low, narrow seat and short distance between the footpegs inspires confidence.
- Lightweight ZX-10R wheels help the handling of the machine and add to the overall appearance. The front wheel is the same part as the ZX-10R while the rear is the same design and lightweight construction but a different size.

ER-6n & ER-6f TECHNICAL SUMMARY

ER-6n only

- The instrumentation is housed in a colour coordinated pod and includes digital speedometer, odometer, trip meter and analogue tachometer.

- The bikini cowl and belly pan accentuate the sweeping lines.
- The unique design of the front headlamp gives the machine a distinctive look.

ER-6f only

- Aerodynamic windscreen and fairing give protection from the elements while cruising along the highway and contribute to the excellent fuel economy.

- Compact step-motor analogue speedometer includes an LCD display with digital readouts for odometer, twin tripmeter and clock as well as an LED water-temperature warning lamp. The tachometer houses both a fuel gauge and an LED fuel-injection warning lamp. Other instrumentation includes turn signal, high beam, neutral, and oil warning lamps.

- A two-tone seat cover (silver model only) gives the appearance of a single seat cover.

Anti-lock Brake System (ABS) version ER650B6F / EX650B6F

- Wheel speed sensors monitor the rotational speed of the wheels. When the sensors detect wheel lock up they send a signal to the ABS-ECU. The ABS-ECU then sends a signal to the ABS unit to release and re-apply the brake pressure to that wheel. This happens approximately 30 times a second allowing the rider to maintain control of the machine while applying maximum braking pressure.