

CRF450X

2008 Press Information



Introduction

The dynamic, electric-start CRF450X takes off-road riding to exhilarating peaks of fun and excitement, winning hearts and minds while dominating such world-renowned off-road endurance races as the Baja 1000. Based on Honda's phenomenal CRF450R big-bore 4-stroke motocross racer, the CRF450X features breathtaking power, a slim, easy-to-ride form and rugged, long-travel suspension systems augmented by a revolutionary new development: the Honda Progressive Steering Damper (HPSD), which eases control and smoothes handling in cornering and over rugged terrain. For the best that off-road riding has to offer, look to the amazing CRF450X.

Colours

- Extreme Red (with White number plate and sidecovers)

Features and Benefits

New Features

- Lightweight and compact new Honda Progressive Steering Damper (HPSD) developed by Team Honda for improved cornering ability and reduced rider fatigue.
- New front fork triple-clamps feature 22mm offset and revised front axle placement for improved fork action and cornering characteristics.
- New Works-style front and rear brake rotors reduce unsprung weight.
- New Dunlop 742FA front tyre for improved turning feel and traction.
- New narrow-design fuel tank and seat for improved rider ergonomics.
- Carburettor features new accelerator pump and linkage for improved throttle response.
- New lighter and more compact engine decompression system.

Unique Features

- Push-button electric start system for easy start-ups in all conditions.
- Large 7.2-litre fuel tank capacity.
- Resettable, easy-to-read three-digit competition odometer.
- Exhaust emissions comply with all local regulations for off-road motorcycles.
- Spark arrester-equipped silencer complies with all local fire and noise regulations.
- Powerful 35-watt halogen headlight provides a wide range of illumination.
- Eye-catching LED taillight integrated into rear fender.
- Convenient sidestand integrated into left foot-peg bracket can be easily removed for competitive off-road riding needs.



- Smooth-shifting wide-ratio 5-speed transmission.
- Suspension and chassis tuned for competitive off-road riding needs.
- 18" rear wheel provides enhanced protection against flat tyres.
- T-ring sealed chain is narrower, stronger and lighter compared to conventional O-ring chains.
- Skid-plate and engine guards feature a unique three-piece design.

Engine/Drivetrain

- Powerful liquid-cooled, electric-start 449cm³ 4-stroke 4-valve Unicam engine is designed to produce power across a wide rpm band for easy-to-control operation.
- Compact, lightweight engine assembly weighs only 32.2kg.
- Innovative Honda Unicam valve train provides both the light weight of a compact single-cam design and an optimum combustion chamber shape for maximum power at all engine rpm.
- Unicam valve train features a single carburised camshaft directly actuating two 35mm titanium intake valves. The camshaft's centre exhaust lobe actuates two 30mm steel exhaust valves via a forked, low-friction, roller rocker-arm.
- Electric starter drives the clutch side of the crankshaft to provide superior lubrication of starter gears, and produce a narrow engine with a short, strong crankshaft.
- Lightweight titanium intake valves permit use of smaller valve springs, reducing overall engine height.
- ACG cover, clutch cover and cylinder head cover are made of magnesium to reduce engine weight.
- Forged 12 : 1 compression slipper piston is lighter than conventional designs, for quick-revving response while maintaining excellent cylinder sealing and high-rpm power.
- Lightweight NiCaSiL cylinder lining ensures cooler and quieter operation for extended engine life.
- 40mm Keihin FCR-type carburettor features four rollers on the flat slide, resulting in very light throttle effort, smooth operation, crisp throttle response and excellent rideability.
- Carburettor features a throttle position sensor (TPS) that helps maintain linear throttle response throughout the rpm range.
- Twin-sump lubrication system separates oil supply to crankshaft, piston and valve train from supply to clutch and transmission. This ensures a steady supply of cool oil to the clutch, eliminates clutch and transmission material contamination of the engine oil, reduces the amount of circulating oil and permits the use of a smaller oil pump.
- Exhaust system uses a lightweight stainless steel exhaust header and silencer equipped with spark arrester.
- Dual radiators feature a refined core area for improved heat dissipation compared to conventional dual-radiator designs. Coolant recovery tank is located underneath engine for improved mass centralisation. Coolant tank is protected by a plastic skid-plate.
- Gear-driven balancer reduces vibration and drives the water pump. Eight-plate clutch provide the surface area necessary to handle the engine's massive torque, while carefully matched clutch springs provide a light feel at the lever.
- T-ring-sealed chain is approximately 1.6mm narrower and stronger compared to conventional chains.
- Durable and versatile 5-speed wide-ratio transmission.

Chassis/Suspension

- Advanced fourth-generation twin-spar aluminium frame.



- HPSD features a compact damper attached to the lower triple-clamp and the steering head to augment more aggressive steering characteristics and assist straight-line handling. Tuned specifically for higher speed, non-motocross, off-road riding applications, the CRF450X damper incorporates different valving and settings compared to units mounted on motocross models. HPSD provides confident straight-line control at high speeds, a planted feel in corners, less rider fatigue and outstanding handling over a wider variety of terrain and riding conditions.

- Semi-double-cradle frame design features a single, large-diameter tapered down-tube for optimised frame rigidity, with two rugged box-section rails attached to its base to support the engine. A forged aluminium steering head provides a compact and extremely durable mount for the frame spars and engine down-tube.

- Lightweight 47mm Showa inverted twin-chamber cartridge-type fork with aluminium dampers is derived from the CRF450R and features settings unique to the CRF450X. The fork offers 315mm of travel, 16-step rebound and 16-step compression damping adjustability. The inner surfaces of the front fork outer tubes receive the same honing treatment as Works bikes for low-friction operation.

- Pro-Link rear suspension system features single, fully adjustable Showa rear damper with newly revised damper settings and 313mm of wheel travel, separate low-speed (13-step) and high-speed (3.5-turn) compression damping adjusters, and 17-step adjustable rebound damping.

- Large 50mm rear damper piston diameter provides consistent performance under demanding riding conditions.

- Swingarm features a dual-axis, double-taper design with a large cast aluminium cross-member offering high strength and light weight.

- Front wheel features large-diameter front axle and wide wheel-bearing span for excellent rigidity.

- 18" rear wheel features same lightweight rear hub and HRC Works-type lightweight aluminium spoke nipples as used on CRF450R for reduced unsprung weight.

- Large 25mm diameter rear axle and large-diameter bearings provide optimum rigidity and strength to withstand torturous track conditions.

- Compact dual-piston front brake calliper, anodised aluminium brake pistons and lightweight front brake rotor minimise unsprung weight for improved turning and handling.

- HRC Works-type rear brake system integrates the rear master cylinder and fluid reservoir, eliminating the need for a remote master cylinder reservoir and hose assembly.

- Large 240mm Works-type front and rear brake rotors.

Additional Features

- All plastic body components (including radiator shroud, side covers, rear fender, seat base, fuel tank, front fender, and front headlight) designed for slim, aggressive styling and lighter weight.

- Rider ergonomics optimised by adapting handlebar, seat and footpeg height to place rider's legs at frame's narrowest frame width for improved comfort and handling feel.

- Seat cushion uses foam construction that follows the shape of the fuel tank, providing a smooth transition to increase rider mobility and comfort.

- Rear brake pedal and shift lever made of lightweight aluminium and designed to complement the riding position. Brake pedal features optimised ratio to match integrated rear brake master cylinder design.

- Wide, cleated stainless steel footpegs are self-cleaning, corrosion-resistant, provide excellent grip and fold for extra ground clearance.

- Aluminium Renthal handlebar (971 bend) is rubber-mounted to reduce rider fatigue and improve comfort.



- Handlebar holders provide two different mounting positions to match rider preference.
- Works-type handlebar grips add to rider comfort.
- Adjustable front brake lever.
- Hot-start lever conveniently located on clutch perch.
- Quick-adjust clutch perch.
- Chain guide material offers improved wear resistance, with service life five times greater than conventional materials.
- Front disc brake cover helps protect rotor and calliper from damage.
- Removable rear sub-frame allows easy maintenance.
- Comfortable, durable controls and high-quality fasteners.
- Stainless steel clutch cable for long life.
- Honda Racing-inspired colours and graphics.



Specifications

| General | |
|--------------------|---|
| Model | CRF450X |
| Mold Type | ED-type |
| Engine | |
| Type | Liquid-cooled 4-stroke 4-valve SOHC single |
| Displacement | 449cm ³ |
| Bore x Stroke | 96 x 62.1mm |
| Compression Ratio | 12 : 1 |
| Max. Power Output | 33.2kW / 7,500min ⁻¹ (95/1/EC) |
| Max. Torque | 43.1Nm / 7,000min ⁻¹ (95/1/EC) |
| Fuel System | |
| Carburation | 40mm Keihin FCR flat-slide carburettor with throttle position sensor (TPS) |
| Fuel Tank Capacity | 7.2 litres |
| Electrical System | |
| Ignition System | Computer-controlled digital capacitor discharge with electronic advance and lighting coil |
| Starter | Electric / Primary kick |
| Drivetrain | |
| Transmission | 5-speed |
| Primary Reduction | 2.739 (63/23) |
| Gear Ratios | 2.231 (29/13) |
| | 2 1.625 (26/16) |
| | 3 1.235 (21/17) |
| | 4 1.000 (19/19) |
| | 5 0.826 (19/23) |
| Final Reduction | 3.923 (51/13) |
| Final Drive | #520 T-ring sealed chain |
| Frame | |
| Type | Semi-double cradle; aluminium twin-spar |
| Chassis | |
| Dimensions | 2,178 x 821 x 1,273mm |
| Wheelbase | 1,480mm |
| Caster Angle | 27° 3' |
| Trail | 114.7mm |
| Seat Height | 963mm |
| Ground Clearance | 345mm |
| Kerb Weight | 121.4kg |

| Suspension | | |
|------------|-------|---|
| Type | Front | 47mm Showa inverted leading-axle twin-chamber cartridge-type telescopic fork with 16-step adjustable compression and rebound damping; 315mm axle travel |
| | Rear | Pro-Link with Showa damper, adjustable low-speed (13-step) and high-speed (3.5-turn) compression and 17-step rebound damping; 313mm axle travel |
| Wheels | | |
| Type | Front | Aluminium rim/wire spoke |
| | Rear | Aluminium rim/wire spoke |
| Rim Size | Front | 21M/C x 1.60 |
| | Rear | 18M/C x 2.15 |
| Tyre Size | Front | 90/90 21M/C (54R) |
| | Rear | 140/80 18M/C (70R) |
| Brakes | | |
| Type | Front | 240 x 3mm hydraulic disc with dual-piston calliper and sintered metal pads |
| | Rear | 240 x 4mm hydraulic disc with single-piston calliper and sintered metal pads |