

2010 CRF250R Press Information

Introduction

The 2010 CRF250R is loaded with progressive technology and ready to confirm its domination of Supercross and Motocross tracks yet again. Its lightning-quick prowess and radical looks are matched with a new fuel injection system, even more power, lighter weight and smooth, easy handling characteristics. Whether you're out to thrash the competition or just enjoy getting the best out of yourself and your motorcycle, the CRF250R is the tool to showcase your expertise.

Perfect poise

Optimised mass centralisation and perfection of machine equilibrium have allowed Honda to incorporate a new single-muffler exhaust system, enabling a weight saving of 850g. Other changes to the chassis and bodywork increase stability and improve the ergonomics giving an even smoother, more agile ride with enhanced control.

Tough yet smooth

New engine and transmission developments have focused firmly on boosting power and durability while keeping weight to a minimum. Starting, acceleration, cornering, traction and torque feel have all improved. The front fork has been revised to feature a larger-diameter 48mm slide pipe that improves running performance on rough roads. The rear suspension has had its weight reduced and layout changed for better mass centralisation, contributing to greatly improved dynamics. These changes, in combination with the proven Honda Progressive Steering Damper, deliver unbeatable handling through corners, whoops, braking bumps and jumps.

World-beating technology

The CRF250R continues to inherit the race technologies pioneered by its big 450cc brother. Its new fuel injection system is the same as the one introduced on the 2009 CRF450R. The accompanying HRC settings kit is also derived from the CRF450R original, with settings adapted to 250R power characteristics.

Colours

- Extreme Red (with White number plate and side covers)

Features and Benefits

New for 2010

- New ultra-light battery-less fuel injection system delivers enhanced performance, a wider, higher power range and improved power delivery, as well as kick-start capability.
- New fuel injection system automatically adjusts fuel injection and ignition timing to optimal conditions, maximising the engine's potential in varying environments.
- Indicator integrated with engine stop switch shows any problem with the fuel injection system.
- New more durable piston material accommodates increased power while keeping weight gain to a minimum.
- Engine bore is decreased to 76.8mm for greater strength.
- Compression ratio is changed from 13.0:1 to 13.2:1, delivering more power.
- New straight cylinder head port facilitates more efficient air intake and thus more power.
- New valve spring made of ultra-high-strength material uses MotoGP technology to improve durability and achieve higher rpm.
- Large-diameter throttle body (50mm) delivers stronger power and enhanced performance across the entire range.
- New, lighter crankcase wall saves weight by retaining thickness only where it is needed and shaving it off to a mere 2.0mm where extra strength is not required.
- Crankcase reed valve with horizontal layout allows crankshaft to be moved down for a lower centre of gravity.
- New low-friction Kashima coating increases clutch durability.
- New gear ratios enhance engine performance and torque feel throughout all rpm ranges, while gear strength has been improved in conjunction with stronger output.
- Revised gearbox layout increases distance between main (input) and counter (output) shafts from 51.5 to 55mm, allowing for larger, tougher gear.
- Each component of the auto-decompression system has been optimally set, the kick start ratio has been revised and PGM-FI has been adopted, all greatly improving starting.

- New, more rigid crankshaft has been lowered by 10mm compared to conventional models, lowering the engine's centre of gravity.
- Revised geometry optimises front and rear mass distribution for best balance and control.
- New Fifth-generation twin-spar aluminium frame with modified dimensions and optimised lateral and torsional stiffness is based on the CRF450R frame, but with centre and lower spars tailored to match CRF250R engine power.
- New frame incorporates lower engine mount position and more rearward front axle position, resulting in a lower centre of gravity, greater agility, easier manoeuvring and a more planted front feel.
- New 29mm longer swingarm improves stability during acceleration.
- New dimensions include slightly longer wheelbase for improved traction during acceleration, balanced by a smaller caster angle for better cornering.
- New single-muffler exhaust layout enables a weight saving of 850g.
- New layout achieves mass centralisation and optimum machine balance by positioning muffler forward and keeping length to a minimum.
- New radiator increases radiation amount from 14.6 to 14.7 kW, providing better cooling in proportion to engine power increase.
- Improved fuel consumption enables tank capacity to be decreased (by 1.6L), thus facilitating more weight savings and a more compact size which eases rider movement.
- New plastic fuel pump module attached to bottom face of plastic fuel tank responds directly to fuel pressure.
- New, lower fuel cap height facilitates smoother movement along seat and greater rider comfort.
- New airbox makes removal and replacement of air filter easier and incorporates funnel rather than straight pipe for air intake, improving bottom and mid driveability.
- New 48mm front fork with larger 24mm cylinder size and new fork oil provides smoother, more linear damping and further improves controllability. Fork offers 310mm of travel and 16-step rebound and compression damping adjustability.
- Modified front fork outer tube shape provides extra rigidity, while shorter spring length reduces weight, both contributing to improved handling.

- Rear cushion sub-tank configuration has been greatly revised to integrate damper case, resulting in a 100g weight reduction, while also avoiding possibility of interference between rider's foot and sub-tank.
- New wheel rim contour provides extra strength to the wheel rim flange.
- New Revolutionary Ergonomics Design (RED) and slimline CRF450R-based bodywork with smooth surfaces improve riding position for easier, more comfortable rider movement.
- New HRC settings kit, developed from long years of racing experience, provides an easy-to-use programming system with precise data for setting up the machine to meet all race situations. Ignition timing and fuel mapping settings can be uploaded by connecting the motorcycle to a computer and following simple step-by-step instructions. The system radically simplifies the setup process and makes tuning accessible to a wide spectrum of riders. Connection is simple with only one connector and no need to remove the fuel tank.

Engine/Drivetrain

- Powerful 249cc liquid-cooled 4-stroke 4-valve Unicam engine produces optimal, easy-to-control power across a wide rpm range.
- Lightweight and compact engine features specially designed cylinder head area for improved power delivery in all rpm ranges and lighter weight.
- Unicam valve train provides both the light weight of a compact single-cam drive and an optimum combustion chamber shape for maximum power at all engine speeds.
- Unicam valve train features a single carburised camshaft directly actuating two titanium intake valves. The camshaft's centre exhaust cam lobe actuates two steel exhaust valves via a low-friction forked roller rocker arm.
- Forged slipper piston and rings rev quickly while maintaining excellent cylinder sealing, high compression ratio and high-rpm power.
- Ni-SiC (nickel-silicon-carbide) coating with high wear resistance has been applied inside the cylinder.
- Balancer shaft and **lightweight balancer** reduce vibration.
- Drum stop arm, drum stop arm spring and shift cam are all designed to optimise shift feeling.

- Clutch cover and cylinder-head cover made of magnesium for reduced engine weight.
- Twin-sump lubrication system separates oil supply to crankshaft, piston and valve train from clutch and transmission. This ensures a steady supply of cool oil to the clutch and prevents clutch and transmission material from contaminating the engine oil.
- Rugged eight-plate clutch provides ample surface area to handle the engine's massive torque, while carefully matched clutch springs provide a light feel at the lever.

Chassis/Suspension

- Dual-axis, double-taper swingarm design integrates a large cast aluminium cross-member.
- Rear wheel features a thin wall axle, contributing to light weight.
- Front and rear wheels feature lightweight HRC Works type aluminium spoke nipples for reduced unsprung weight.
- Front fork inner cartridge is treated with Kashima coating for a smoother surface, reducing friction of piston and inner cartridge and improving functionality.
- Compact and lightweight Honda Progressive Steering Damper (HPSD), developed by Team Honda, improves cornering ability and reduces rider fatigue. HPSD features a compact and rugged hydraulic damper attached between the steering head and the lower triple-clamp to augment more aggressive steering characteristics and assist straight-line handling. The damper's progressive damping action smoothly increases with handlebar deflection, which produces very natural steering characteristics and feel.
- Pro-Link rear suspension system features a single fully adjustable Showa rear damper with 320mm of wheel travel, separate low-speed (13-step) and high-speed (3.5 turns) compression damping adjusters and 17-step rebound damping.
- Large 50mm-diameter rear damper piston performs consistently under demanding riding conditions.
- Link-type front brake master cylinder and lightweight brake rotor combine to provide strong braking control.
- Compact dual-piston front brake caliper, anodised aluminium brake pistons and lightweight front brake rotor minimise unsprung weight for improved turning and manoeuvring.
- HRC Works-type rear brake system integrates the rear master cylinder and fluid reservoir, eliminating conventional external reservoir and hose.

- Front and rear brake discs and disc covers are designed for low weight.

Additional Features

- Frame design allows larger intake ducts in airbox sidecovers, contributing to excellent airflow in the mid and upper rpm ranges.
- Pirelli Scorpion MX Mid-Soft 32 front and rear tyres provide superior traction and cornering feel.
- Front disc brake cover helps protect rotor and caliper from damage.
- Removable rear sub-frame allows easy maintenance.
- Comfortable, durable controls and high-quality fasteners.
- Stainless steel clutch cable for maximum durability.
- Cleated rear brake pedal and folding shift lever constructed in 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 selfcleaning, corrosion-resistant, provide excellent grip and fold away for extra ground clearance.
- Works-type handlebar design features long, tapered cushions and deep pre-cut wire grooves for tight, slip-free wire grip.

Specifications**CRF250R (ED-type)****ENGINE**

Type	Liquid-cooled 4-stroke 4-valve SOHC single
Displacement	249.4cm ³
Bore × Stroke	76.8 × 53.8mm
Compression Ratio	13.2 : 1
Max. Power Output	32.4kW/11,000min ⁻¹ (95/1/EC)
Max. Torque	29.3Nm/8,000min ⁻¹ (95/1/EC)

FUEL SYSTEM

Carburation	PGM-FI electronic fuel injection
Fuel Tank Capacity	5.7 litres

ELECTRICAL SYSTEM

Ignition System	Computer-controlled digital capacitor discharge with electronic advance
Starter	Primary kick

DRIVETRAIN

Clutch	Wet, multiplate
Transmission	5-speed, constant mesh
Primary Reduction	3.166 (57/18)
Gear Ratios	1 2.357 (33/14) 2 1.888 (34/18) 3 1.555 (28/18) 4 1.333 (24/18) 5 1.136 (25/22)
Final Reduction	3.692 (48/13)
Final Drive	#520 roller chain

FRAME

Type	Semi-double cradle; aluminium twin-spar
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CHASSIS

Dimensions (LxWxH)	2,187 x 827 x 1,273mm
Wheelbase	1,493mm
Caster Angle	27° 9'
Trail	116mm
Seat Height	955mm
Ground Clearance	325mm
Kerb Weight	100.7kg

SUSPENSION

Type	Front	48mm inverted Showa leading-axle twin-chamber cartridge-type telescopic fork with 16-step adjustable compression and rebound damping; 310mm axle travel
	Rear	Pro-Link with single Showa damper, adjustable low-speed (13-step) & high-speed (3.5-turn) compression and 17-step rebound damping; 320mm axle travel

WHEELS

Type	Front	Aluminium rim/wire spoke
	Rear	Aluminium rim/wire spoke
Rim Size	Front	21 x 1.60
	Rear	19 x 1.85
Tyre Size	Front	80/100–21 51M
	Rear	100/90–19 57M

BRAKES

Type	Front	240mm × 3mm hydraulic disc with dual-piston caliper and sintered metal pads
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Rear 240mm × 4mm hydraulic disc with
single-piston caliper and sintered
metal pads

All specifications are provisional and subject to change without notice.