

HONDA CRF300RX ENDURO 2021



Press release date: November 2020

Model updates: the new CRF300RX Enduro 2021 combines sensational power with formidable torque. Aluminium frame and swingarm and Showa suspension complete the winning package for enduro, for all tastes!

Road homologation and fitting are by Redmoto S.r.l., official partner of Honda Motor Europe LTD for the distribution of the Honda CRF off-road range in Italy.

Summary:

1. Introduction
2. Model Highlights
3. Main features
4. Technical Specifications
5. Special Version



1. Introduction

Our decision to expand the CRF platform in 2019, with the introduction of the new CRF250RX is confirmed by the launch of the new CRF300RX Enduro 2021.

Based on the CRF250RX 2021 it is the “big bore” enduro version of RedMoto. Fast, powerful, agile and easy to handle, it is a formidable race bike but above all a splendid Honda enduro for all off-road lovers.

The new CRF300RX 2021 maintains all its strengths already highlighted in the 2020 model that have crowned it "best seller" among the RedMoto enduros in the past season. Lots of low and mid-range torque and lots of power, together with the aluminium frame and swingarm and dedicated suspension set-up to exploit its full potential, make the 300RX the perfect mix for every enduro rider.

As usual the street legal versions both for the Italian and the European market are made by Redmoto S.r.l, official partner of Honda Motor Europe Ltd. for the distribution of the CRF off-road range.

2. Model Highlights

The CRF300RX Enduro takes advantage of the solid base of its brother 250 from which it differs in the adoption of a cylinder with an increased diameter. It has a 7.3 litre tank, an 18” rear wheel and a dedicated suspension set up. The bike has a forged aluminium side stand.

For the 2021 model the ECU mappings have been revised for an even more homogeneous power delivery.

Already for the 2020, the development of the twin-cam 300cc engine was aimed at the improvement of torque at low and mid-range rpm. Honda’s engineers hit the mark. Thanks to a radically new design of the combustion chamber, the new twin-cam engine can claim both a higher midrange torque and more power at high revs.

Second gear ratio is now closer to third gear to reduce the natural rev drop during gear change. Clutch performance has been improved as well. Furthermore, optimized intake and exhaust flows and updated engine maps make riding even more effective.

Frame and swingarm on the CRF300RX are the same of the CRF 250RX, lighter but most of all they have an optimized rigidity. The new chassis takes full advantage of the new dedicated suspension set up, and improves stability, the feeling of control, and driving precision through high speed turns on rough terrains.

3. Main Features

3.1 Engine

- ***3 EMSB dedicated Maps***
- ***Ignition timing and gear by gear Honda PGM-FI maps***
- ***Narrower second gear ratio to reduce rpm drop on gear change***





The CRF300RX Enduro shares the engine with its 250 2021 brother, but features revised ignition and fueling mappings for a gradual and more manageable power delivery on the diversified funds typical of the enduro.

Max power is at 11,300rpm and maximum torque is at 9,500rpm. The rev limiter is at 14,300rpm, in order to let the rider use the same gear beyond max power, a very useful feature for the enduro racer.

The improvements have been achieved already from the 2020 model, through revised shaping of the inlet/exhaust ports, piston and combustion chamber, and a new cam profile which keep the exhaust valves open for longer with more overlap with the opening of the intake valves. The internal volume of the exhaust ports goes from 12cm³ to 12.7cm³, while the piston crown's cutaways are re-shaped, increasing volume from 21.7cm³ to 22.2cm³. And to cope with the extra heat generated by the harder-working engine the radiator volume has been increased.

To maintain engine rpm when shifting from 2nd to 3rd the gap between the two gears is closer; 2nd is now 16 main/28 counter giving a 1.75 ratio (from 15/27, 1.8) while 3rd remains 17/25 and 1.47. To improve durability 3rd and 4th gear gain a new surface treatment; and, like the CRF450RX, the addition of a gear position sensor allows the use of three specific ignition maps for 1st and 2nd, 3rd and 4th, and 5th. The clutch spring rate has also been increased, giving an 18% increase in performance.

Bore and stroke remains 86 x 50.9mm, with a 4.5mm cylinder offset to reduce friction. The valves are titanium; 33mm inlet and 26mm exhaust. Lift is 10.5mm inlet and 9.5mm exhaust and the valve angle is set at 20.5°. The valve springs themselves are oval in section; the inlet valves are fed by symmetrical straight-shot downdraft intakes.

The cylinder born in collaboration with ATHENA already in 2020 presents a chromium-plated steel barrel with nickel-chromium drowned in the casting. The design increases the capacity of the coolant; a 5-hole piston oil jet maintains optimum piston cooling and ignition timing. A scavenge oil pump system reduces friction and 'pumping' losses at high rpm, by discharging oil and air in the crankcase and maintaining negative pressure. The oil also lubricates the clutch and gearbox, with a total oil capacity of 1.25L.

The combined oil pump/drive gear, oil filter and oil way are on the right side of the engine – the oil's path around the engine is short and straightforward. Valve train lubrication is routed through the cylinder head to the inside of both inlet and exhaust cam, directly feeding the sliding surface of cam and rocker arm. The 5-speed gearbox drives a sealed 520 chain.

3.2 Electronics

- **HRC 3 modes launch control**
- **3 power modes EMSB (Engine Mode Select Button)**

HRC Launch Control, introduced on the 2019 model, offers the best stand still starting option in any situation. It has three modes:

Mode 3: 8,250 rpm, mud / beginner;

Mode 2: 8.500 rpm, dry surface / amateur;

Mode 1: 9.500 rpm, dry surface / expert rider.



Launch control activation is easy: just pull the clutch lever and press ignition switch. LED light flashes once to indicate mode 1. Press the ignition switch once more for 5 seconds, LED light blinks twice to indicate mode 2 has been selected. Repeat the procedure and LED light flashes three times to indicate mode 3 has been selected.

The Engine Mode Select Button lets the pilot choose the engine character that best suits the track conditions. From a standing position, with the engine idling, pressing the button for less than 1 second will select the map in ascending order. Rapidly pressing the button, the integrated LED indicates the selected map flashing the corresponding number of times (1 flash, mode 1 etc). Every time a different map is selected, the integrated LED flashes the corresponding number of times.

Mode 1 (Standard) uses a default combination of ignition and fuel injection settings.

Mode 2 (Smooth) offers a soft and smooth, easy to handle power delivery, perfect for slippery surfaces.

Mode 3 (Aggressive) offers the perfect combination of power and torque for maximum responsiveness.

The switchgear with commands like engine stop, EFI indicator, EMSB button and LED indicator are on the left handlebar.

3.3 Chassis

- ***Aluminium frame and swingarm 7th generation same of CRF 250RX***
- ***Stability and riding precision through turns***
- ***Enduro Showa suspension setup for better effectiveness braking and accelerating***

The 2021 CRF300RX Enduro has the same seventh generation frame of the CRF 250RX, a well-aimed evolution of the 2019 CRF 450RX model. Thanks to a thinner swingarm pivot area and it is designed to have greater torsional and lateral stiffness to increase agility and riding through turns, but also to have higher angular yaw rigidity to improve stability and grip while turning.

The aluminium swingarm is balanced to work as one with the frame. The 4 tie footrests help to better remove mud and are also lighter. The battery is positioned lower to better centralize masses. The caster angle is 27°18' and trail is 116mm. Wheelbase is 1,486mm. Curb weight is 111kg. The 49mm upside down Showa fork is just like the 'factory' one used for racing, with a 14mm rod, a 39mm piston and a 25mm diameter cylinder.

Starting from the 2020 model, in order to improve response during hard braking, the diameter of the main 'B' oil duct on the rod is decreased to 1.6mm from 2.4mm, to decrease low speed dumping. The same way the main hydraulics of the shock absorber are modified to increase control under acceleration.

The Renthal Fatbar handlebar reduces the overall weight of the steering system and is flexible enough to reduce riding stress. Bar risers can be mounted in two different positions 26mm apart (back and forth) on the top yoke. Turning the risers by 180° the handlebar moves 10 more millimetres. This way there are 4 different positions available. The central bumper is standard equipment.

The front brake calliper, biting on a 260mm wave disk, has two pistons of different diameter, 30mm and 27mm to be lighter and to have a reduced fading under heavy braking. It guarantees power



and feel. At the back a single piston calliper bite on a 240mm disk. The 2021 CRF300RX Enduro uses rear brake pads that increase power and duration thus allowing to remove the read disc cover.

The light full black DID DIRT STAR aluminium wheels have direct-mount spokes to reduce unsprung masses. The front wheel size is 21x1,6" and the back-wheel size is 18x2,15. The Metzeler Six Days Extreme tyres size is respectively 90/90-21 and 140/80-18.

The 7,3 litres white fuel tank allows to check fuel level at a glance. The streamlined lines of the CRF design help the rider to move freely while the tight front area and the front conveyors help funnelling air to the radiator. The CRF300RX Enduro has a sturdy finish with resistant HRC style stickers.

The front fender for the full led headlight perfectly integrates with the streamlined CRF design. Sturdy back mudguard with integrated support for the registration plate, that also increases the resistance to the hits, typical of heavy off-road use.

The new side stand elastic band support perfectly integrates with the bike's ergonomics.

4. 2020 CRF300RX Enduro Technical Specifications

ENGINE	
Type	Liquid-cooled 4-stroke single DOHC
Displacemente	295.5 cc
Bore x Stroke	86 x 50.9 mm
Compression ratio	13.9 : 1
Total Oil capacity	1,250 cc
FUELLING	
Type	Electronic Fuel injection with ESMB map selection
Fuel tank capacity	7,3 litres
ELECTRICAL SYSTEM	
Ignition	Digital CDi
Starter	Electric



TRANSMISSION	
Clutch	Wet Multiplate
Primary Transmission	5 gears
Final Transmission	Chain
FRAME	
Type	Aluminum Twin Spar
CHASSIS	
Dimensions (LxWxH)	2,181 x 827 x 1,260 mm
Wheelbase	1.486 mm
Caster Angle	27°18'
Trail	116 mm
Seat Height	957 mm
Height	327 mm
Kerb Weight	111 kg
SUSPENSION	
Front	49 mm Showa coil-sprung USD fork
Back	Showa monoshock using Honda Pro-Link system
WHEELS	
Front	Aluminium spoke, 21"x 1.6
Back	Aluminium spoke, 18"x 2.15
TYRES	
Anteriore	90/90-21" Metzeler Six Days Extreme
Posteriore	140/80-18" Metzeler Six Days Extreme

FRENI	
Front	260 mm hydraulic wave disc, dual piston caliper
Back	240 mm hydraulic wave disc, single piston caliper

Product images and specifications are subject to change without notice

5. Special Version



Once again in 2021, Honda RedMoto offers a Special Version embellished with captivating racing details such as:

- Kite front wheel with red anodized machined hub and black anodized Excel rim
- Kite back wheel with red anodized machined hub and black anodized Excel rim
- High density polyethylene skid plate with AXP link
- Twin metal Supersprox Stealth rear sprocket, aluminum core, steel teeth
- Red anodized, machined aluminum X-Trig Rock yoke
- X-Trig aluminum bar riser
- Blackbird anti-skid seat cover
- Blue silicon radiator pipes
- Red anodized, machined aluminum rear brake caliper mounting bracket



- Red anodized wheel hub puller
- Red anodized, machined aluminum front brake master cylinder cover
- Red anodized, machined aluminum rear brake master cylinder cover
- Increased capacity, machined aluminum rear brake oil reservoir
- Machined rear brake linkage bush
- Security cable plate for rear brake
- Simplified wire loom
- Magura hydraulic clutch pump
- Red anodized aluminum engine caps kit
- Rekluse clutch cover
- Vibram frame protections with super grip effect

Upon request the bike can also be equipped with:

- Reinforced Rekluse Core Manual clutch with machined clutch drum
- Rekluse Radius Cx automatic clutch with machined clutch drum
- Steel Termignoni exhaust system with titanium mufflers and carbon fibre muffler caps

