

HONDA

Press Information

FOR IMMEDIATE RELEASE

01 December 2020

21YM HONDA CRF300L



Model updates: Increased cubic capacity for Honda's popular dual-purpose tool, plus revised air intake, inlet cam timing and exhaust system that extract more peak power and considerably stronger torque across the rev-range. Shorter gearbox ratios are topped with a taller 6th gear while an assist/slipper clutch allows confident control of the rear wheel. Handling on any terrain is improved with a new swingarm and more laterally flexible frame, increased ground clearance, longer travel suspension and revised riding position. Sharp new bodywork and graphics mark the 2021 upgrades, and there's a crisp, positive LCD instrument display. Kerb weight is reduced by 4kg to 142kg, making for a 13% improvement in power to weight ratio.

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1. **Introduction**

The essence of what makes a true dual-purpose motorcycle has long been in Honda's DNA. In the late 1970s the XL250S was launched - a bike providing genuine on-road usability with excellent off-road performance. The entire XL range that followed became legendary, and proved that combining an economical and easy-to-use single-cylinder four-stroke engine with a competent chassis created a motorcycle that was useful, versatile and, as riders the world over found, a great deal of fun.

Over a decade ago, exhaustive discussions within Honda R&D took place about the creation of a brand-new dual-purpose machine. The company's long history – in off-road competition and trail-ready machinery – was a useful touchstone when development of the bike first began.

Looking to the needs of customers came first. While some riders insist upon competition-level off-road performance, many others value ease of use, practicality and convenience. For weekday, urban environments they wanted a tough, practical bike with cutting-edge off-road style. But, come the weekend, it needed to provide a ticket to ride, wherever they wanted to go, on or off-road.

Honda's new dual-purpose bike was always viewed by its development team with global perspective. It not only needed a powerful and frugal engine, its chassis also had to have a broad and capable range. And it needed to be affordable, offering high quality and outstanding value for money, with low overall running costs a priority.

The CRF250L, launched across Europe in 2012, was just that motorcycle.

And Honda's engineers got the formula right. The CRF250L has proved a fruitful base platform which, as well as spawning a RALLY version*, enjoys consistent sales success around the world.

Time marches on, however, and now the new CRF300L takes the stage for 2021 – lighter, more powerful and with an array of detail improvements. It is every bit the do-it-all, dual-purpose motorcycle the CRF250L was. Just more so.

*See separate CRF300 RALLY press kit.

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2. Model Overview

Now 286cc, the CRF300L's new engine produces 10% more peak power of 20.1kW @ 8,500rpm, and 18% more peak torque at 26.6Nm @ 6,500rpm. Inlet cam timing has been revised, alongside both air intake and exhaust system for much stronger mid-range torque and power. Gear ratios 1-5 are shorter, for improved response, while 6th is taller for more relaxed high-speed cruising. An assist/slipper clutch now manages the rear wheel under hard down changes and offers 20% less load at the lever.

A redesigned steel frame, aluminium swingarm and bottom yoke are major contributors to a 4kg overall weight loss and feature revised rigidity balance for feedback and feel. Steering geometry has been adjusted in detail to match, alongside longer travel front/rear suspension and increased ground clearance.

Sharp-edged bodywork features a slimmer tank and seat, and a new positive LCD instrument display. The riding position, too, has been altered to encourage the light steering manoeuvrability needed off-road and, just as usefully, around town.

3. Key Features

3.1 Engine

- **Larger capacity 286cc engine puts out an extra 1.9kW and 4Nm**
- **Revised gearbox ratios for both acceleration and cruising**
- **Assist/slipper clutch with 20% lighter lever load**

An extra 14% cubic capacity for the single-cylinder, liquid-cooled DOHC engine – from 250cc to 286cc – is acquired by a 63mm stroke, as opposed to 55mm. Bore remains 76mm, as does compression ratio of 10.7:1. Peak power of 20.1kW arrives @ 8,500rpm, peak torque of 26.6Nm @ 6,500rpm (up from 18.2kW @ 8,500rpm/22.6Nm @ 6,750rpm). The full dyno graph curves tells the full story beyond the peak power and torque uplift: the new engine is considerably stronger, everywhere, from 2,000rpm up.

To match the engine's heavier punch and to smarten pick-up and acceleration, gear ratios 1-5 are shorter, while 6th gear is taller for more relaxed highway cruising. Addition of an assist/slipper clutch reduces lever load by 20% and manages rear wheel 'hop' on rapid downshifts – great for control, on or off-road. On the highway, top speed goes from 129km/h to 132km/h.

Revised timing of the intake cam specifically boosts low- to mid-range response – the rpm range most used around town or off-road – and works with redesigned air filter, exhaust downpipe (660g lighter than the previous design), muffler and ignition timing. An iridium spark plug, along with precise metering of fuel from the PGM-FI injection system, further enhances combustion efficiency and improves environmental credentials.

The engine uses an offset cylinder, reducing internal frictional losses, while the piston itself

incorporates a special surface material, plus molybdenum coating. The oil pump features an internal relief structure that prevents aeration of relieved oil. The crank journal employs a half-split, press-fit metal bearing while the crank bearing uses a cast-iron bush. A primary balance shaft further reduces vibration.

The cooling system uses a 12.7kW heat-release radiator, sited on the left of the bike, protected with a polypropylene grill baffled to improve airflow. A thin guide-ring cooling fan is used to maintain even temperatures at low speeds, either in congested traffic or tricky off-road situations.

The CRF300L engine is fully EURO5 compliant.

3.2 Chassis

- ***Handling and agility improved on any terrain from wide-ranging updates***
- ***Significant weight saving from a new frame and swingarm***
- ***Revised rigidity balance for both, with increased ground clearance***
- ***Longer travel front and rear suspension***

A total of 4kg has been saved overall from the CRF300L's chassis, with wet weight of 142kg. The steel semi-double cradle frame is completely new and contributes 2.15kg to the weight loss. Just as importantly, to promote handling feel and connection to front/rear traction, its flexibility balance has been tuned with 25% less lateral rigidity.

This has been achieved with decreased width (-30mm) for the main down tube and smaller, 25.4mm diameter lower down tubes (from 28.6mm) plus a 20mm decrease in width across the central bracing tube.

To match, the one-piece cast aluminium swingarm is not only 550g lighter, it features a 23% reduction in lateral rigidity. It's also 15mm narrower just behind the pivot point and smooth, cross-sectional shaping is used to create uniform deflection. Extruded aluminium is used for the chain adjustment collar. The steel bottom yoke of the previous design has been changed for aluminium; this shaves 730g from an area high relative to the centre of gravity for faster steering response.

The 43mm Showa inverted fork gains 10mm of stroke to 260mm, with spring weight and damping settings revised for precise control over a wide range of terrain and speeds. Pro-Link rear suspension now features a 260mm axle stroke, from 240mm; the Showa shock absorber is a single tube design.

Ground clearance has been increased, from 255 to 285mm and the frame and engine sit 20mm higher, thanks to revisions to the lower frame, engine crankcases and oil drain plug. Rake and trail are now set at 27.5°/109mm (from 27.6°/113mm) with 10mm longer wheelbase of 1455mm. Turning radius is 2.3m.

The front brake uses a single 256mm disc gripped by a two-piston caliper, the rear a 220mm disc and single-piston caliper; in common with the CRF competition machines the rear master cylinder is now a lightweight, integrated design. The discs feature a wave

design – also taken directly from the CRF250R/CRF450R – with exceptional self-cleaning abilities in adverse conditions. 2-channel ABS is standard.

Lightweight aluminium rims further reduce unsprung mass; for 2021 the Alumite surface has been polished to a gloss finish. Block pattern enduro-style tyres (front, 80/100-21 51P and rear 120/80-18 62P) provide traction in a wide range of riding situations.

The 21-inch front wheel and 18-inch rear increase stability on rough terrain and allow the fitment of more off-road specific tyres if required. Application of a machined rear sprocket and M8 bolts (instead of M10) plus hollow rear axle saves 240g and 160g respectively.

3.3 Styling & equipment

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- ***Lighter, slimmer bodywork inspired by competition CRF machines***
- ***Revised riding position promotes natural control***
- ***Positive LCD display even easier to read***

Drawing yet more inspiration from the racing CRFs, the CRF300L wears a crisp set of new bodywork and graphics. The 7.8L fuel tank is 190g lighter and slimmer than before to aid movement forward, and matched by a narrower forward seat section. The rear number plate bracket is also much reduced, for a 300g saving, while the aggressively shaped front mudguard is also lighter.

To foster easy, light control, the riding position has been subtly altered: the handlebars are have been pulled back slightly, while the foot rests have been lowered and also moved back, to make gear changes in heavy off-road boots easier. Seat height is increased 5mm, to 880mm, for a naturally upright 'rider triangle'. The side stand, too has been redesigned with a 10% larger area for its (new) folding footplate.

A redesigned, 70g lighter LCD display features large black digits on a crisp white display, for instant readability. The speedo numbers are also 6mm larger, at 23mm. Information includes gear position indicator, fuel mileage and consumption, average speed, stopwatch and rev-counter.

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4. Accessories

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Tailor-made accessories for the CRF300L include 38L top box, rear carrier bracket and mounts and protective sump guard for the engine.

5. Technical Specifications

ENGINE	
Type	Liquid-cooled, single cylinder DOHC
Engine Displacement (cm ³)	286cc
No. of Valves per Cylinder	4
Bore ´ Stroke (mm)	76.0 x 63.0
Compression Ratio	10.7:1
Max. Power Output	20.1kW/8500rpm
Max. Torque	26.6Nm/6,500rpm
Oil Capacity	1.8L
FUEL SYSTEM	
Carburation	PGM-FI electronic fuel injection
Fuel Tank Capacity	7.8L
Fuel Consumption	32.3km/litre
CO ₂ Emissions WMTC	73 g/km
ELECTRICAL SYSTEM	
Battery Capacity	12V-7AH
DRIVETRAIN	
Clutch Type	Wet multiplate, assist/slipper clutch
Transmission Type	6-speed
Final Drive	Chain
FRAME	
Type	Steel semi-double cradle

CHASSIS	
Dimensions (LxWxH)	2230 x 820 x 1200mm
Wheelbase	1455mm
Caster Angle	27.5°
Trail	109mm
Seat Height	880mm
Ground Clearance	285mm
Kerb Weight	142kg
Turning radius	2.3m
SUSPENSION	
Type Front	43mm telescopic USD fork
Type Rear	Prolink
WHEELS	
Wheels Front	Aluminium spoke
Wheels Rear	Aluminium spoke
Tyres Front	80/100-21M/C 51P
Tyres Rear	120/80-18M/C 62P
BRAKES	
ABS System Type	2 channel ABS
Brakes Front	256mm x 3.5mm disc with two piston caliper
Brakes Rear	220 mm x 4.5mm disc with single piston caliper
INSTRUMENTS & ELECTRICS	
Instruments	LCD
Headlight	Bulb
Taillight	Bulb

All specifications are provisional and subject to change without notice

Please note that the figures provided are results obtained by Honda under standardised testing conditions prescribed by WMTC. Tests are conducted on a rolling road using a standard version of the vehicle with only one rider and no additional optional equipment. Actual fuel consumption may vary depending on how you ride, how you maintain your vehicle, weather, road conditions, tire pressure, installation of accessories, cargo, rider and passenger weight, and other factors.