

2021 – 2022 Honda CRF300L Service Info

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Sources: 2021-2022 Honda CRF300L/LA/LR/LRA Factory Service Manual, 2022 (61K1T01).

(A = ABS, R = Rally).

Note that we have the factory service manual for the 2021-2022 CRF300L. We own 2023 CRF300L and a 2012 CBR250RA which shares a lot of engine parts with the CRF300L. As there are no significant changes from the 2021 to the 2024 models that I'm aware of, with the exception of the addition of the CRF300LS model in the US in 2023, this document should also be applicable to the 2023 and 2024 CRF300L/LA/LR/LRA. Most of this information should be applicable to the CRF300LS with the possible exceptions of suspension and drive chain specifications due to shorter suspension travel.

Use this document at your own risk.

Destination Codes

AC: USA 50 state (meets California regulations)

CM: Canada

Models covered by service manual

Rally: CRF300LR, CRF300LRA

Standard: CRF300L, CRF300LA

A = ABS

Recommended Engine Oil

Pro Honda GN4 4-stroke oil or equivalent motor oil.

API service specification: SJ or higher (except energy or resource conserving)

JASO T 903 standard: MA

Viscosity: 10W-30

Engine Oil Capacity

1.4 liters (1.5 US qt) – oil change only

1.5 liters (1.6 US qt) – oil and filter change

Oil Level Check

With the motorcycle resting on the side stand on level ground, start the engine and let it idle for about 3 minutes and then turn it off. Wait for 2 to 3 minutes. With the bike held upright (vertical) on level (horizontal) ground, check the oil sight glass. The oil level should be between the upper and lower marks. If the oil level is below or near the lower mark, remove the oil filler cap and add oil up to the upper oil level mark. Do not overfill. Reinstall the oil filler cap if removed.

Engine Idle Speed

1450 +/- 100 rpm

Coolant (Antifreeze)

Check the coolant level in the reserve tank when the engine is cold.

Recommended Coolant: Pro Honda HP Coolant or an equivalent high quality ethylene glycol antifreeze containing (silicate-free) corrosion inhibitors, premixed or a 1:1 ratio of concentrated antifreeze and distilled water.

Coolant capacity – at draining: 0.77 liters (0.81 US qt)

Chain Slack

CRF300L/CRF300L Rally: 50 – 55 mm (2.0 – 2.2 in). Do not ride if greater than 57 mm.

CRF300LDA: 45 – 50 mm (1.875 – 2.0 in). Do not ride if greater than 52 mm.

Chain slack is measured with the motorcycle on the side stand and the transmission in neutral. There is a slit in the chain guard where a measuring gauge (a ruler) is to be inserted. Pull up on the upper chain run by the slit/ruler and measure between the top of the swingarm and the center line of the upper chain run (center of a rivet). Generally, chain slack (vertical movement) is determined/adjusted at the tightest point of the chain, as chains may wear unevenly. The chain should be properly lubricated prior to chain slack measurement and adjustment.

This motorcycle comes with an O-ring type chain.

Replacement chain: DID 520VF-106LE (106 links)

Brake Fluid

Type: DOT 3 or DOT 4 from a sealed container

Spark Plug

This motorcycle uses a spark plug with an iridium center electrode. Do not adjust the spark plug gap.

Spark plug: NGK SIMR8A9

Spark plug gap: 0.80 – 0.90 mm (0.03 – 0.04 in). Replace spark plug if gap is greater than or equal to 1.0 mm (0.04 in).

Fork Fluid

Viscosity: 10W

CRF300L

Right fork fluid capacity: 638 +/- 2.5 cc

Right fork fluid level: 171

CRF300L Rally

Right fork fluid capacity: 626 +/- 2.5 cc

Right fork fluid level: 182

CRF300L and CRF300L Rally

Left fork fluid capacity (both): 696 +/- 2.5 cc

Left fork fluid level (both): 54

Valve Clearances

Measure with the engine cold: below 35C (95F)

Intake: 0.16 +/- 0.03 mm (0.006 +/- 0.001 in)

Exhaust: 0.27 +/- 0.03 mm (0.011 +/- 0.001 in)

Valve Clearance Inspection

The valve clearance inspection itself is essentially the same as for the CBR250R/RA. The valve clearances are even the same. The procedure for removing and moving parts to gain access to the valve cover will be different, though. The valve clearance inspection procedure for the CBR250RA is documented on this website.

Valve Clearance Adjustment

The valve clearance adjustment itself is essentially the same as for the CBR250R/RA. The valve clearances are even the same. That valve clearance adjustment procedure for the CBR250RA is documented on this website.

Fuel Tank Removal

- The procedure varies between the CRF300L and the CRF300LR due to the difference in the body panels. I'll only document how to remove the fuel tank from the CRF300L.
- Remove the seat (one bolt on each side). See owner's manual.
- Remove the fuel tank shrouds. See owner's manual.
- Remove the left side cover for battery access. See owner's manual.
- Remove the fuel tank mounting bolts, 2 in the front and 2 in the rear.
- Lift the fuel tank a bit and support it. Do not bend or twist the fuel line.
- Disconnect the fuel pump 5P connector.
- Start the engine and let it idle until it stops. Turn off the ignition. This is to reduce the fuel line pressure.

- Disconnect the negative battery cable.
- Clean around the fuel quick connect fitting.
- Place a shop towel or rag around the fuel quick connector to absorb any gas that may leak out.
- Push the retainer tab on the quick connector forward.
- Push down the retainer and disconnect the connector from the fuel pipe. Do not use tools to remove. Push and pull the connector if necessary until it comes off.
- Put small, clean plastic bags over the connector and the fuel pipe and secure them (you could use twist ties or zip ties) to keep them clean.
- Disconnect the fuel tank breather hose.
- Lift off the fuel tank and place on a secure surface and support it so that no weight is placed on the fuel pump and fuel pipe.
- To reconnect the fuel line, push the connector onto the fuel pipe until the retainer clicks into place. You can add a small amount of engine oil to the fuel pipe to make it easier to push the connector on.

Torque Values

Item	Thread Dia. (mm)	N.m	lbf.ft	Remark
Standard Torque Values				
5 mm hex bolt and nut	5	5.2	3.8	
6 mm hex bolt and nut	6	10	7	
8 mm hex bolt and nut	8	22	16	
10 mm hex bolt and nut	10	34	25	
12 mm hex bolt and nut	12	54	40	
5 mm screw	5	4.2	3.1	
6 mm screw	6	9.0	6.6	
6 mm flange bolt	6	12	9	
8 mm flange bolt and nut	8	27	20	
10 mm flange bolt and nut	10	39	29	
Specific Fasteners (incomplete list)				
Oil change				
Engine oil drain bolt	12	24	18	
Oil filter cover bolt				no specific torque value mentioned, so use standard torque value
Valve adjustment				
Cylinder head (valve) cover	6	10	7	
Timing hole cap	14	6.0	4.4	Apply engine oil
Crankshaft hole cap	30	8.0	5.9	Apply engine oil
External bolt securing rocker arm shaft		15	11	
Engine, other				
Spark plug	10	16	12	
Clutch center lock nut	16	108	80	Replace and stake; apply engine oil

Item	Thread Dia. (mm)	N.m	lbf.ft	Remark
Clutch spring bolt		12	9	
Brakes				
Front brake hose oil bolt	10	34	25	Use new sealing washers
Front brake caliper mounting bolt	8	30	22	ALOC, replace with new one
Front brake caliper bleed valve	8	5.4	4.0	
Front brake caliper torque nut	8	22	16	Apply locking agent
Front brake caliper pin bolt	8	17	13	
Front brake pad hanger pin	10	17	13	
Front brake disc bolt	6	20	15	ALOC, replace with new one
Front brake hose guide bolt	6	10	7	
Front brake hose clamp bolt	6	10	7	
Rear brake hose oil bolt	10	34	25	
Rear master cylinder bolt	6	14	10	ALOC, replace with new one
Rear master cylinder push rod nut	8	17	13	
Rear brake caliper nut	8	22	16	Apply locking agent
Rear brake caliper pin bolt	8	12	9	Apply locking agent
Rear brake pad hanger pin	10	17	13	
Rear brake caliper bleed valve	8	5.4	4.0	
Rear brake disc bolt	8	42	31	ALOC, replace with new one
Rear brake hose guide mounting screw	5	1.2	0.9	
Brake pipe joint nut (ABS)	10	14	10	
Exhaust				
Muffler mounting bolt	8	32	24	
Exhaust pipe joint nut	8	18	13	
Muffler band bolt	8	23	17	
Exhaust pipe protector bolt	6	12	9	
Spark arrester mounting bolts		9	6.6	CRF300L Owner's manual
Tail cap cover screws		5.25	3.9	CRF300L Owner's manual
Side stand				
Side stand pivot bolt	10	10	7	
Side stand pivot nut	10	30	22	Self-lock
Side stand switch bolt	6	10	7	ALOC, replace with new one
Front wheel, front suspension, steering				
Front axle bolt	14	69	51	
Front Axle holder bolt	8	22	16	
Front spoke	BC 3.2	3.7	2.7	
Fork center bolt	8	20	15	Apply locking agent
Fork cap	50	35	26	
Fork top bridge pinch bolt	8	29	21	

Item	Thread Dia. (mm)	N.m	lbf.ft	Remark
Fork bottom bridge pinch bolt	8	29	21	
Fork rod nut	10	20	15	
Fork protector bolt	6	7	5.2	ALOC, replace with new one
Handlebar holder bolt				Tighten front bolts first
Steering stem adjusting nut	26			Special procedure
Steering stem nut	24	103	76	
Rear wheel, rear suspension, final drive				
Shock absorber upper nut	10	44	32	Self-lock
Shock absorber lower nut	10	44	32	Self-lock
Shock link bolt (frame side)	10	44	32	Self-lock
Shock link nut (shock arm side)	10	44	32	Self-lock
Shock arm-to-swingarm nut	12	74	55	Self-lock, apply engine oil
Swingarm pivot nut	14	88	65	Self-lock
Drive chain guide bolt	6	10	7	ALOC; replace with new one
Drive chain slider bolt	5	4.2	3.1	ALOC; replace with new one
Drive Chain slider side bolt	5	4.2	3.1	ALOC; replace with new one
Rear spoke	BC 3.2	3.7	2.7	
Rear axle nut	16	88	65	Self-lock
Driven (rear) sprocket nut	8	32	24	Self-lock
Drive chain adjuster lock nut	8	27	20	UBS nut
Drive (front) sprocket fixing plate bolt	6	10	7	
Other				
Seat bolts (hook bolts)		21	15	CRF300L Owner's manual

Thread diameter in mm refers to “male” thread and is measured on the outer surface (peak, not trough) of the bolt thread (equals diameter of smooth portion of bolt shaft if not completely cut with threads).

UBS: “Uniform Bearing Stress”. UBS bolts are designed to resist loosening.

Thread Locking Agent

ALOC - bolts have a pre-applied locking agent on them.

According to the service manual, when applying a thread locking agent to specific bolts, use a small amount towards the end of the bolt, skipping the first 1 to 3 mm. The width of the application area should be 5.5 to 7.5 mm wide. Otherwise just apply a small amount of locking agent to the end of the bolt threads resulting in the locking agent being distributed throughout. Threads should be clean, dry and oil-free before applying thread locking agent. Avoid contact with plastic.

Use a medium strength locking agent unless otherwise specified.