

2011 – 2012 Honda CBR250R/RA Service Info

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Sources: 2011-2012 Honda CBR250R/RA Factory Service Manual, 2011 (61KYJ00), 2021-2022 Honda CRF300L/LA/LR/LRA Factory Service Manual, 2022 (61K1T01).

The CBR250RA shares a lot of engine parts with the CRF300L, CBR300R and CB300R.

Use this document at your own risk.

Torque Values

Item	Thread Dia. (mm)	N.m	lbf.ft	Remark
Standard Torque Values				
5 mm bolt and nut	5	5.2	3.8	
6 mm bolt and nut (incl. SH flange bolt)	6	10	7	
8 mm bolt and nut	8	22	16	
10 mm bolt and nut	10	34	25	
12 mm 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 (8 mm head) and nut	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	6	9	12	CBR250RA Owner's Manual
Valve adjustment				
Cylinder head (valve) cover	6	10	7	
Timing hole cap	14	6.0	4.4	Apply engine oil to threads
Crankshaft hole cap	30	8.0	5.9	Apply engine oil to threads
External bolt securing rocker arm shaft		15	11	Reference: CRF300L service manual
Engine, other				
Spark plug	10	16	12	
Clutch center lock nut	16	108	80	Replace and stake; apply engine oil to threads and seating surface
Clutch spring bolt		12	9	
Cam chain tensioner lifter plug	6	4.2	3.1	
Cam chain tensioner pivot bolt	6	10	7	Apply locking agent: 6.5 mm coating width

Item	Thread Dia. (mm)	N.m	lbf.ft	Remark
Brakes				
Brake hose oil bolt	10	34	25	
Brake caliper bleed valve	8	5.4	4.0	
Front brake caliper mounting bolt	8	30	22	ALOC, replace with new one
Front brake caliper bracket pin	8	13	10	Apply locking agent
Front brake caliper pin	8	22	16	Apply locking agent
Front brake pad hanger pin	10	18	13	
Pad pin plug (CBR250R)	10	2.4	1.8	
Front brake disc bolt	6	20	15	ALOC, replace with new one
Front brake hose stay bolt	6	12	9	
Front brake hose mounting bolt	6	10	7	CBR250RA, apply locking agent
Front master cylinder holder bolt	6	12	9	
Front pulser ring mounting bolt	5	7.0	5.2	ALOC, replace with new one
Rear master cylinder mounting bolt	6	12	9	
Rear reservoir mounting bolt	6	10	7	
Rear master cylinder push rod lock nut	8	17	13	
Rear master cylinder hose joint screw	4	1.5	1.1	Apply locking agent
Rear brake caliper pin	12	27	20	
Rear brake pad hanger pin	10	17	13	
Rear brake disc bolt	8	42	31	ALOC, replace with new one
Rear brake hose guide mounting screw	5	1.3	1.0	ALOC, replace with new one
Rear pulser ring mounting bolt	5	7.0	5.2	ALOC, replace with new one
Brake pipe joint nut (ABS)	10	14	10	Apply brake fluid to the threads
PCV mounting bolt (ABS)	6	10	7	
Delay valve mounting bolt (ABS)	6	10	7	
Exhaust				
Exhaust pipe joint nut	8	18	13	Header to engine
Muffler band bolt	8	22.5	17	Header to muffler
Side stand				
Side stand pivot bolt	10	10	7	
Side stand pivot lock nut	10	30	22	U-nut
Front wheel, front suspension, steering				
Front axle nut	12	59	44	U-nut
Front axle pinch bolt	8	22	16	
Fork bolt	33	22	16	
Fork socket bolt	8	20	15	Apply locking agent
Fork top bridge pinch bolt	8	22	16	
Fork bottom bridge pinch bolt	10	32	24	

Item	Thread Dia. (mm)	N.m	lbf.ft	Remark
Handlebar pinch bolt	8	27	20	
Steering stem adjusting nut	26	-	-	Apply engine oil to threads
Steering stem nut	24	103	76	
Rear wheel, rear suspension, final drive				
Shock absorber mounting nut	10	36	27	U-nut
Shock arm nut	10	75	55	U-nut
Shock arm link nut	10	75	55	U-nut
Swingarm pivot nut	14	88	65	U-nut
Rear axle nut	16	88	65	U-nut
Driven (rear) sprocket nut	10	75	55	U-nut
Drive chain adjuster lock nut	8	21	15	
Drive (front) sprocket fixing plate bolt	6	10	7	
Other				
Main step holder mounting socket bolt	8	27	20	
Main step cap bolt	8	11	8	
Passenger step holder mounting socket bolt	8	27	20	

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.

U-nut: self-locking nut

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.

Oil and Oil Filter Change

The oil and filter change procedure for the CBR250RA is documented on this website.

Recommended Engine Oil

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

API service specification: SG or higher

JASO T 903 standard: MA

Viscosity: 10W-30 (10W-40 also acceptable)

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 (inspection window). 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. Inspect the oil filler cap O-ring, and replace it if not in good condition. Apply engine oil to the O-ring. Reinstall the oil filler cap.

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 (0.031 – 0.035 in). Replace sparkplug if gap greater than or equal to 1.0 mm (0.04 in).

Valve Clearance

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 procedure for the CBR250RA is documented on this website.

Valve Clearance Adjustment

The valve clearance adjustment procedure for the CBR250RA is documented on this website.

Engine Idle Speed

1400 +/- 100 rpm

Coolant (Antifreeze)

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 – radiator and engine: 1.1 liters (1.16 US qt)

Coolant capacity – at draining: 0.79 liters (0.83 US qt)

Coolant capacity – reserve tank: 0.25 liters (0.26 US qt)

Drive Chain

Chain slack: 20 – 30 mm (0.8 – 1.2 in),

with the motorcycle on the side stand and the transmission in neutral, measured midway between the sprockets, on the lower chain run. Generally, chain slack (vertical movement) is measured at the tightest point of the chain, as chains typically wear unevenly.

This motorcycle comes with an O-ring type chain.

Standard number of chain links: 108

Replacement chain: DID520VF or RK520KLO

Brake Fluid

Type: DOT 3 or DOT 4 from a sealed container