

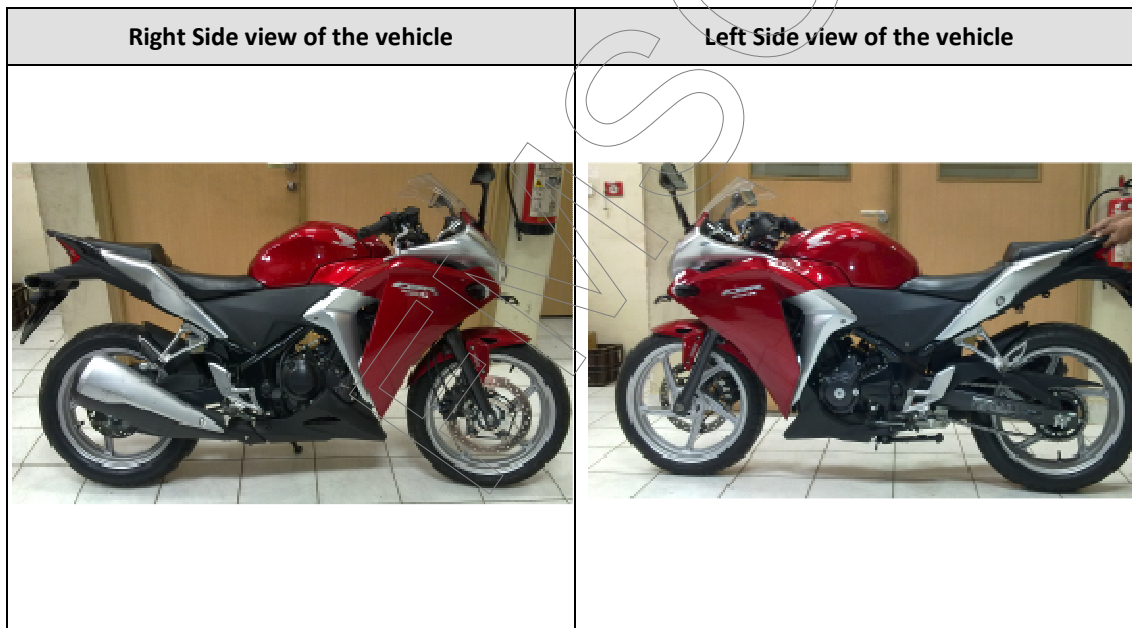


The Federation of Motor Sports Clubs of India

2011
FMSCI 2W Homologation Form

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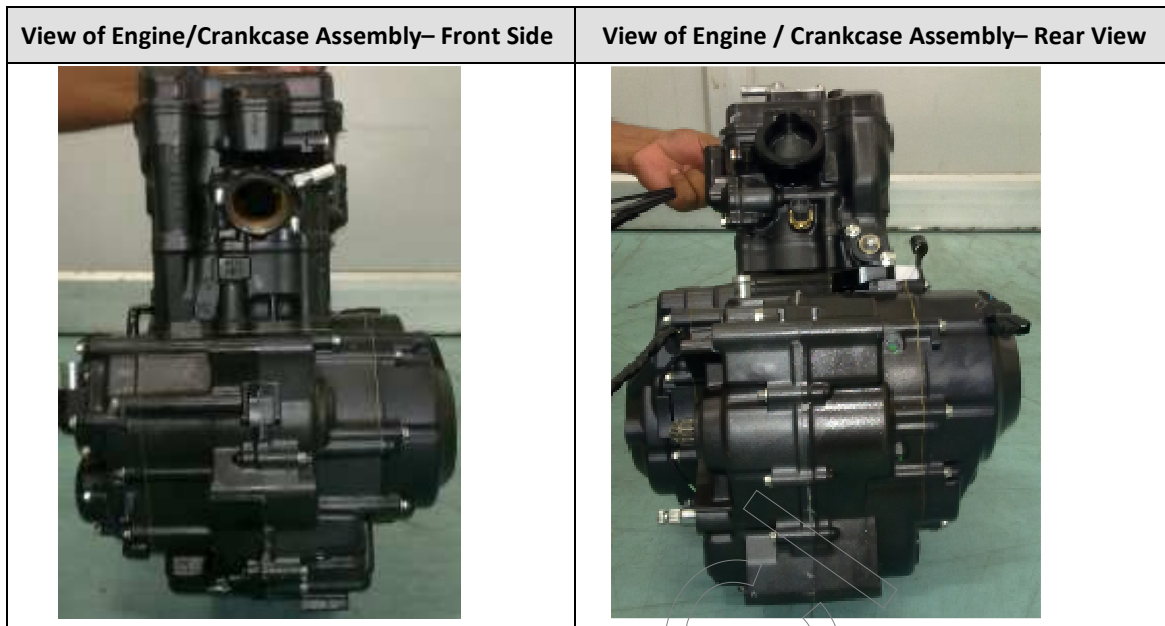
Article	Description	
1. General		
101	Manufacturer's Name	Honda Motorcycle & Scooters India (Pvt.) Ltd.
102	Manufacturer's address	Plot No. 1 & 2 Sector-3 , IMT Manesar
103	Brand name	HONDA
104	Model	
	(a) Model Year	2011
	(b) Model Identification Name	CBR 250
	(c) Beginning Serial No.	ME4MC42
	(d) End Serial No.	
105	Type	<input checked="" type="checkbox"/> Motorcycle <input type="checkbox"/> Scooter <input type="checkbox"/> Moped
106 **	Minimum weight (Refer Manual)	Non ABS – 138 kgs ABS – 144 kgs



2. Engine			
201	Type of Engine	<input checked="" type="checkbox"/> Four Stroke	<input type="checkbox"/> Two Stroke
202	Number of Cylinders	1	
203 **	a) Bore **	76 mm	
	b) Stroke **	55 mm +/- 0.2 mm	
	c) Conrod length **	152.55 mm +/- 0.5 mm	
	d) Supercharging	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	e) Type and number of compressors	NA	
204	Cubic capacity (Refer Manual)	249.6 cc	
205 **	(a) Minimum Volume of Cylinder Head (Refer Manual)	14.75 cc	
	(b) No. of spark plugs per Cylinder	1	
206	Compression Ratio (Refer Manual)	10.7 : 1	
207 **	Piston		
	a) Material	Al Alloy	
	b) Minimum Weight (Refer Manual) **	242 gms	
	c) No. of Rings per Piston	5 (2 compression + 2 oil rings + 1 expander)	
	d) Piston pin offset (Refer Manual) **	mm	
	e) Piston pin material	Steel	
	f) Piston pin weight	42 gms	
208	Material		
	a) Crankcase	Al Alloy	
	b) Cylinder barrel	Al Alloy	
	c) Cylinder head	Al Alloy	
	d) Generator cover	Al Alloy	
	e) Primary case cover	Al Alloy	
	f) Clutch cover	Al Alloy	
	g) Crankshaft cover	Al Alloy	
	h) Gear Box cover	Al Alloy	
	i) Ignition cover	Plastic	
k) Cylinder head cover (valve)	Al Alloy		

		Material	Weight	
208	l) Crank shaft ** (Refer Manual)	Steel	3377 gms	
	m) Conrod ** (with cap, bolts and shell bearings) (Refer Manual)	Steel	276.5 gms +/- 5 gms	
209	Thickness of tightened cylinder head gasket	0.6 mm +/- 0.1 mm (dual plate type)		
210	Position of Cylinder & head relative to the Crank Case	20 degree		
211	a) Method of cooling	<input type="checkbox"/> Air	<input checked="" type="checkbox"/> Liquid	<input type="checkbox"/> Air & Liquid
	b) Type of liquid	Coolant (Ethylene Glycol)		
212	Does the cylinder have a sleeve or liner If yes, material	<input checked="" type="checkbox"/> Yes Material : Fe <input type="checkbox"/> No		
213	Cylinder barrel – coating	<input type="checkbox"/> Chrome	<input type="checkbox"/> Nickel	<input type="checkbox"/> Electrofusion
		Others : HEAT RESISTANT COATING (D2023 CLASS2, GRADE 2)		
214	Method of Induction	<input checked="" type="checkbox"/> Reed Valve	<input type="checkbox"/> Rotary Valve	
		<input type="checkbox"/> Piston Port	<input checked="" type="checkbox"/> Poppet Valve	



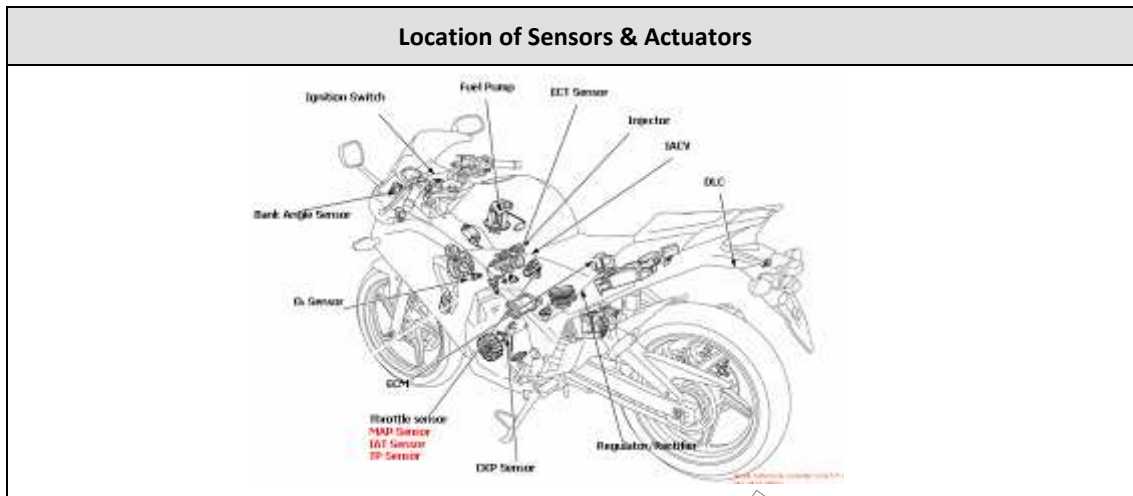


215	A) Fuel feed by Carburettor (NOT APPLICABLE)	
	a) Make	
	b) Type / Model	
	c) Venturi diameter	mm +/- 0.25 mm
	d) Maximum diameter of Carburettor exit port	mm
e) Length of adaptor	mm	

Carburettor showing exit port	

215		B) Fuel feed by Injection		
a) Make	Keihin			
b) Model	Fuel Injection type			
c) Kind of fuel measurement	<input type="checkbox"/> Mechanical	<input checked="" type="checkbox"/> Electronic	<input type="checkbox"/> Hydraulic	
d) Dimensions of intake pipe at the throttle or slide location	Length - 26mm External Dia - 60mm Internal Dia - 38mm			
e) Number of effective fuel outlets	12			
f) Position of injectors	On intake manifold			
f1) Manifold / Cylinderhead	<input checked="" type="checkbox"/> Manifold	<input type="checkbox"/> Cylinder head		
g) Sensors of injection system	8 Sensors			
h) Actuators of injection system	IACV (Intake Air Control Valve)			

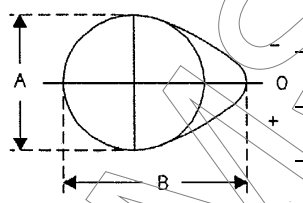




For Two Strokes Only		
216	a) Number of Ports	
	Total	
	Intake	
	Transfer	
	Boost	
	Exhaust	
216	b) Height of Ports	
	Intake	mm
	Transfer	mm
	Boost	mm
	Exhaust	mm
	c) Width of Ports	
	Intake	mm
	Transfer	mm
	Boost	mm
	Exhaust	mm

For Four Strokes only		
217 **	Inlet valves	
	a) Number	2
	b) Diameter **	30 mm + - 0.1mm

	c) Stem dia **	4.5 mm (- 0.010 to - 0.025)	
	d) Overall length **	83.3 mm	
	e) Weight **	26 gms	
	f) Number of springs per valve	2	
	g) Type of valve springs	Compression Coil	
		Inner	Outer
	h) Maximum length of the spring	21.4mm at 154.9 + - 9.3N	24.9mm under a load of 356 + - 21.4 N
	i) External diameter of springs	15.6 +/- 0.2mm	22.6 +/- 0.2 mm
	j) Diameter of spring wire	2.1 mm	3.1mm
	k) Number of spring coils	9.8 mm	7.95 mm
	l) Maximum free length of springs	34.88 mm	40.37mm
218 **	Exhaust valves		
	a) Number	2	
	b) Diameter **	24 mm + - 0.1 mm	
	c) Stem dia **	4.5 mm (- 0.020 to - 0.035)	
	d) Overall length **	83.3 mm	
	e) Weight **	20 gms	
	f) Number of springs per valve	2	
	g) Type of valve springs	Compression Coil	
		Inner	Outer
	h) Maximum length of the spring	-	24.9mm under a load of 356 + - 21.4 N
	i) External diameter of springs	15.73 mm	22.6 +/- 0.2 mm
	j) Diameter of spring wire	3.1 mm	3.1mm
	k) Number of spring coils	9.75 mm	7.95mm
	l) Maximum free length of springs	34.58 mm	40.37 mm
m) Diameter of pipe between manifold and first silencer (OD)	37.08 mm +/- 5%		
219	Maximum valve lift		
	a) Intake	8.6 mm At tappet clearance 0.16	
	b) Exhaust	8.3 mm At tappet clearance 0.27	
220	Type of valve operation	<input checked="" type="checkbox"/> Tappet Rocker arm	<input type="checkbox"/> Oscillating Lever
		<input type="checkbox"/> Direct	<input type="checkbox"/> Hydraulic

		Ratio
221	a) Rocker Arm	/
	b) Oscillating lever	NA
	c) Rocker Arm weight	79 gms +/- 2 gms
222	Overhead valve	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
223	Overhead CAM	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
224	Pushrod	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
225	Method of Cam shaft drive	Timing Chain
		CAM Timing
226	a) Inlet opens	20 Degree BTDC
	b) Inlet closes	35 Degree ABDC
	c) Exhaust opens	40 Degree BBDC
	d) Exhaust closes	0 Degree ATDC
		CAM dimensions
227 **	a) Inlet **	 A=27 +/-0.1 mm
		B=30 .90+/-0.1 mm
	b) Exhaust **	A=27 +/-0.1 mm
		B=30 +/-0.1 mm
	c) Weight of the Cam **	With gear : Inlet : 340 gms +/- 5 gms Exhaust : 340 gms +/- 5 gms
	d) Number	02
	e) Location	Cyl. Head
	f) Number of bearings per shaft	No bearings
	g) Inside diameter of bearings	NA +/- 0.1 mm

Cam lift in mm (dismounted camshaft)							
Intake				Exhaust			
Rotation Angle in Degrees	Lift in Mm	Rotation Angle in Degrees	Lift in mm	Rotation angle in Degrees	Lift in Mm	Rotation angle in Degrees	Lift in mm
0				0			
-5		+5	0.0238	-5		+5	0.0265
-10		+10	0.0487	-10		+10	0.0545
-15		+15	0.0736	-15		+15	0.0826
-30		+30	0.1485	-30		+30	0.1668
-45		+45	0.2520	-45		+45	0.7684
-60		+60	0.7433	-60		+60	2.2598
-75		+75	2.0228	-75		+75	3.4832
-90		+90	3.3330	-90		+90	3.9535
-105		+105	4.0103	-105		+105	3.6670
-120		+120	3.9015	-120		+120	2.6576
-135		+135	3.1644	-135		+135	1.3397
-150		+150	1.9653	-150		+150	0.4522
A shift of +/- 2 degrees of the whole measurement is accepted							

Applicable to both 2 & 4 Stroke Engines			
228	Type of Ignition	Digital ECU Based	
229	Starting Devices	Self	
230	a) Clutch	<input checked="" type="checkbox"/> wet	<input type="checkbox"/> dry
	b) Method of operation	<input checked="" type="checkbox"/> Cable	<input type="checkbox"/> Hydraulic
	c) Weight of Clutch Basket (Refer Manual) **	2140 gms +/- 20 gms	
231 **	Transmission		
	Primary Drive		
	a) Method of primary drive	<input checked="" type="checkbox"/> Gear	<input type="checkbox"/> Belt <input type="checkbox"/> Chain
	b) If gear drive	Straight Cut	
	Primary Drive Ratio	2.807:1 (73/26)	
	If gears / Chain	Drive	Driven
	a) No. of teeth **	26	73
b) Thickness **	22 mm	10 mm	

	if belt				
	a) Diameter of pulleys	NA			
232 **	Gear Box				
	a) Shell Material	Aluminum Alloy			
	b) No. of speeds	6			
	c) Material of gears	Steel			
Gear	Ratio	No. of teeth		Thickness **	
		Drive	Driven	Drive	Driven
First	3.333	12	40	13	14
Second	2.117	17	36	13.8	14.2
Third	1.571	21	33	11.6	12.2
Fourth	1.304	23	30	10.2	10.2
Fifth	1.115	26	29	14	14.4
Sixth	0.962	27	26	15.1	14.2

233 **	Secondary Drive			
	a) Method of Secondary Drive	<input checked="" type="checkbox"/> Chain	<input type="checkbox"/> Shaft	<input type="checkbox"/> Belt
	b) Secondary Drive Ratio	2.714		
	c) If chain, No. of teeth **	Drive 14 Driven 38		
	d) If belt, diameter of pulleys	NA		

3	Chassis and Suspension	
301	a) Main frame type	Twin Spar Tube
	b) Material (Gussets / Tubes)	Steel

Frame	

302	Front Suspension	
	a) Method of suspension	Telescopic Hydraulic
	b) Front tube O.D.	46.80 +/- 0.2 mm
	c) Lower Slider O.D.	37 mm +/- 0.1 mm
303	Rear Suspension	
	a) Method of suspension	<input checked="" type="checkbox"/> Mono Shock Prolink <input type="checkbox"/> Twin Shock
	b) Swinging Arm Type	<input type="checkbox"/> Tubular <input checked="" type="checkbox"/> Rectangular Box Section
	c) Material of Swinging Arm	Steel
304	Wheels	
	a) Front wheel rim diameter (OD)	17 Inches
	b) Width	3.50 Inches
305	a) Rear wheel rim diameter (OD)	17 Inches
	b) Width	4.74 Inches
306	Oil Tank Capacity	1.8 liters
307	Fuel Tank	
	a) Capacity	13 Litres
	b) Material	Steel Sheet with ZN-NI Plating
308	Has the fuel system an electrical pump	Yes KEIHIN
4	Exhaust System	
401	Detachable baffles	Yes Heat Protection Plate / Cover
402 **	Weight of the silencer system with bolts for fixing the same **	8680 gms
403	Inner diameter of the bend of the silencer	32 mm
404	Anti Pollution System : Description	Catalytic Converter

501	5. Brakes NON ABS	Front	Rear
	a) Number of pistons per caliper	2	1
	b) OD of piston in caliper	A = 29.93 mm B = 31.95 mm (+ - 0.05 mm)	34 mm (+ - 0.03)
	c) Drum Brakes	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	c1) Internal diameter	+/-1.5 mm	+/-1.5 mm
	c2) Number of linings per wheel		
	c3) Developed length of lining	+/-1.5 mm	+/-1.5 mm
	c4) Width of lining	+/- 1mm	+/- 1mm
	d) Disc Brakes	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	d1) Number of pads per wheel	2	2
	d2) Number of calipers per wheel	1	1
	d3) Caliper Material	Al. Alloy	Al. Alloy.
	d4) Thickness of new disc	4.5+/- 1 mm	5.2 mm +/- 1 mm
	d5) External diameter of disc	296 +/-1.5 mm	220 +/-1.5 mm
	d6) External diameter of pads rubbing surface	+/-1.5 mm	+/-1.5 mm
	d7) Internal diameter of pads rubbing surface	+/-1.5 mm	+/-1.5 mm
d8) Overall friction length of pads	+/-1.5 mm	+/-1.5 mm	
d9) Ventilated discs	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
501	5. Brakes (COMBI ABS)	Front	Rear
	a) Number of pistons per caliper	3	1
	b) OD of piston in caliper	A=27.02 mm B=22.64 mm C=27.02 mm (+ - 0.05 mm)	38.1 mm
	c) Drum Brakes	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	c1) Internal diameter	+/-1.5 mm	+/-1.5 mm
	c2) Number of linings per wheel		
	c3) Developed length of lining	+/-1.5 mm	+/-1.5 mm
	c4) Width of lining	+/- 1mm	+/- 1mm
	d) Disc Brakes	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
d1) Number of pads per wheel	2	2	

	d2) Number of calipers per wheel	1	1
	d3) Caliper Material	Al. Alloy	Al. Alloy.
	d4) Thickness of new disc	4.5+/- 1 mm	5.2 mm +/- 1 mm
	d5) External diameter of disc	296 +/-1.5 mm	220 mm +/-1.5 mm
	d6) External diameter of pads rubbing surface	+/-1.5 mm	+/-1.5 mm
	d7) Internal diameter of pads rubbing surface	+/-1.5 mm	+/-1.5 mm
	d8) Overall friction length of pads	+/-1.5 mm	+/-1.5 mm
	d9) Ventilated discs	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

6	Radiator	
601	Radiator Core Dimensions	
	a) Height	170 mm
	b) Width	40 mm
	c) Depth	320 mm Length

7	Airbox	
701	a) Air Box	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	b) Material	Plastic
	c) RAM Air intake opening in fairing	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	d) Dimension	NA