

## TECHNICAL DATA – ENGINE »

TYPE	660 LC4
Design	Liquid-cooled single cylinder 4-stroke engine with balancer shaft and electric starter
Displacement	653,7 cm <sup>3</sup>
Bore / Stroke	102/80 mm
Ratio	11,6:1
Fuel	unleaded premium gasoline with a least RON 95
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain
Valve diameter	Intake: 36 mm                      Exhaust: 32 mm
Valve clearance cold	Intake: 0.10 mm                      Exhaust: 0.10 mm
Crank shaft bearing	2 cylinder roller bearing
Connecting rod bearing	needle bearing
Top end bearing	bronze bushing
Piston	forged aluminium alloy
Piston rings	1 compression ring, 1 taper face ring, 1 oil scraper ring
Engine lubrication	2 Eaton-Oilpumps
Quantity of engine oil	SAE 10W/50 (Motorex Power Synt 4T)
Engine oil	2,2 liters including frame
Primary ratio	straight geared spur wheels 31 : 79 teeth
Clutch	multi disc clutch in oil bath
Transmission	5-speed claw shifted
Gear ratios	1. Gear 33:15 2. Gear 24:15 3. Gear 21:18 4. Gear 19:20 5. Gear 18:22
Ignition system	contactless DC- CDI ignition with digital advanced system type KOKUSAN
Ignition timing	adjustment to max. 33° BTDC at 8500 rpm
Generator	12V 200W
Spark plug	NGK DR 9 EA
Spark plug gap	0,9 mm
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump
Cooling liquid	1,8 liter, 50% antifreeze, 50% water, at least -25° C (-13° F)
Starting equipment	electric starter

BASIC CARBURETOR SETTING		
	660 Rally (throttled)	660 Rally (open)
Type	Keihin CR 39	Keihin CR 39
Main jet	190	190
Jet needle	OBDVR	OBDVR
Idling jet	48	52
Main air jet	200	200
Idling air jet	100	100
Needle clip position from top	III	III
Starting jet	85	85
Mixture control screw open	2	2
Throttle valve	15	15
Performance restrictor	24,5	–
Stop pump membrane	3,2 mm	3,2 mm

## TECHNICAL DATA – CHASSIS »

TORQUES		
Collar nut front axle	M16x1,5	40 Nm
Brake caliper front	M8	Loctite 243 + 25 Nm
Collar nut rear axle	M20x1,5	80 Nm
Hex. nut swing arm bolt	M14x1,5	100 Nm
Clamping screw top triple clamp	M8	20 Nm
Clamping screw bottom triple clamp	M8	15 Nm
Clamping screws fork leg axle passage	M8	10 Nm
Collar screw handlebar clamp	M8	Loctite 243 + 20 Nm
Allan head screw handlebar support	M10	Loctite 243 + 40 Nm
Collar nut connecting rod pro lever system	M12x1,75	60 Nm
Collar screw brake discs front/rear	M6	Loctite 243 + 15 Nm
Ball joint for push rod rear brake cylinder	M8	Loctite 243 + 35 Nm
Self locking nut rear sprocket	M6	Loctite 243 + 10 Nm
Other screws chassis	M6	10 Nm
	M8	25 Nm
	M10	45 Nm
Other collar nuts chassis	M6	15 Nm
	M8	30 Nm
	M10	50 Nm

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TIGHTENING TORQUES - ENGINE		
Hexagon nut at primary gear	M20x1,5	Loctite 243 + 170 Nm
Collar nut flywheel	M16x1,25 links	80° C + 150 Nm
Hexagon nut for inner clutch hub	M18x1,5	Loctite 243 + 90 Nm
Allan head screws freewheel hub	M6x12/M6x12,5	Loctite 648 + 12/16 Nm
Hexagonscrew oil pump	M6	Loctite 243 + 10 Nm
Hexagon screw camshaft gear	M10	35 Nm
Allan head screw cylinder head top sect.	M6x25/M6x65/M6x70 (8.8)	10 Nm
Allan head screw cylinder head top sect.	M7x55/M7x60 (12.9)	15 Nm
Cylinder head screws	M10	10/53 Nm
Collar nuts at cylinder base	M10	10/55 Nm
Hexagon screw chain sprocket	M10	Loctite 243 + 40 Nm
Oil drain plug	M22x1,5	30 Nm
Magnetic plug	M12x1,5	20 Nm
Plug bypass valve	M12x1,5	20 Nm
Hollow screws oil lines	M8x1	10 Nm
Hollow screws oil lines	M10x1	15 Nm
Jet screw clutch cover	M8	10 Nm
Screw plug timing-chain tensioner	M12x1,5	20 Nm
Counternuts valve adjusting screws	M7x0,75	16 Nm
Crankshaft locking bolt	M8	20 Nm
Engine mounting bolt	M8	40 Nm
Engine mounting bolt	M10	70 Nm