

## TECHNICAL SPECIFICATIONS - ENGINE 65 SX 2003

Engine	CR-65
Design	Liquid cooled single cylinder two-stroke engine with reed valve intake
Displacement	64,85 ccm
Bore/stroke	45 / 40,8 mm (1.77/1.6 in)
Compression ratio	9.1 : 1
Fuel	SUPER fuel, research octane no 95, mixed with high grade two-stroke oil
Oil/gasoline ratio	1 : 40 when using high grade two-stroke oil (e.g. Shell Advance Racing X), when in doubt, please contact our importer
Lubrication	mixture lubrication
Crankshaft bearing	2 deep-groove ball bearing
Connecting rod bearing	needle bearing
Piston pin bearing	needle bearing
Piston rings	1 compression ring
Primary drive	straight cut spur gears, 23:75 t
Clutch	multiple disc clutch in oil bath, hydraulic operated (Shell HF-E15)
Transmission	6 speed, claw actuated
Gear ratio	1 <sup>st</sup> gear 13 : 37 2 <sup>nd</sup> gear 16 : 34 3 <sup>rd</sup> gear 18 : 31 4 <sup>th</sup> gear 21 : 30 5 <sup>th</sup> gear 23 : 28 6 <sup>th</sup> gear 24 : 26
Transmission oil	0.30 liter (0.0792 USgal) gear oil 20W30 (e.g. Shell Advance Ultra 4)
Ignition system	Moric Digital 2M1
Spark plug	NGK BR 8 ECM
Electrode gap	0.60 mm (0.0236 in)
Carburetor	Mikuni VM 24
Coolant	0.55 liter (0.145 USgal), mixture coolant : water = 2 : 1, at least -25° C (-13° F)
Air filter	wet foam type air filter insert

**TOLERANCES AND FITTING CLEARANCES**

Crankshaft	run out of crank stud	max. 0,050 mm	0.00196 in
Conrod bearing	radial play	max. 0.030 mm	0.00118 in
Piston	fitting clearance	0.05 - 0.06 mm	0.00197 – 0.00236 in
Piston ring	end gap	max. 0.20 mm	0.00780 in
Clutch springs	min. length	27 mm	1.06 in
Transmission shafts	end float	0.10 - 0.20 mm	0.00394 – 0.00787 in

**TIGHTENING TORQUES - ENGINE**

Hexagon nut – primary gear	M 10	60 Nm/44 ft.lb
Collar nut – flywheel	M 10x1,25	40 Nm/30 ft.lb
HH screw – cylinder head	M 7	15 Nm/11 ft.lb
Collar nut – cylinder base	M 8	25 Nm/19 ft.lb
Hexagon screw – inner clutch hub	M 10	Loctite 243 + 60 Nm/44 ft.lb
Screw – clutch	M 6	12 Nm/9 ft.lb
Oil drain screw	M 8	12 Nm/9 ft.lb
Screws – clutch cover	M 6	8 Nm/6 ft.lb
Kickstarter stop plate	M6	12 Nm/9 ft.lb
Screws – stator	M4	2 Nm/1,5 ft.lb
Shift drum locating device	M6	12 Nm/9 ft.lb
Other screws – engine	M 5 M 6	6 Nm/4.5 ft.lb 12 Nm/9 ft.lb

**BASIC CARBURETOR SETTING**

Carburetor	Mikuni VM 24
Main jet	200
Needle jet	N-8
Idling jet	30
Jet needle	5114-3
Needle position from top	III
Throttle valve	2.0
Starting jet	20