

Design	1-cylinder 2-stroke engine, water-cooled, with reed intake
Displacement	49.0 cm ³ (2.99 cu in)
Stroke	40 mm (1.57 in)
Bore	39.5 mm (1.555 in)
Crankshaft bearing	2 grooved ball bearings
Conrod bearing	Needle bearing
Piston pin bearing	Needle bearing
Pistons	Aluminum cast
Piston rings	1 rectangular ring
Engine lubrication (50 SX, 50 SX Junior)	Mixture oil lubrication
Engine lubrication (50 SX Mini)	Separate lubrication
Primary transmission	61:33 straight cut spur gear
Clutch	3-lining automatic clutch on the main shaft / centrifugal force
Gearbox	Rigid 1-stage reduction gear
Transmission ratio	19:42
Ignition	SELETTRA 2p D36
Spark plug	NGK CR 8 HSA
Spark plug electrode gap	0.60 mm (0.0236 in)
Cooling	Water-cooled
Starting aid	Kickstarter

Capacity - gear oil

Gear oil	0.20 l (0.21 qt.)	Gear oil (ATF Dexron 3) (☛ p. 73)
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Capacity - coolant

Coolant	0.5 l (0.5 qt.)	Coolant (☛ p. 73)
		Coolant (mixed ready to use) (☛ p. 73)

Screw, bearing retainer	M5	5 Nm (3.7 lbf ft)	–
Screw, kickstarter	M5	6 Nm (4.4 lbf ft)	Loctite® 243™
Screw, oil pump (50 SX Mini)	M5	6 Nm (4.4 lbf ft)	–
Screw, stator clamp	M5	6 Nm (4.4 lbf ft)	–
Screw, water pump wheel	M5	5 Nm (3.7 lbf ft)	Loctite® 243™
Bleeder flange, engine case	M6	5 Nm (3.7 lbf ft)	Loctite® 243™
Screw generator cover	M6	6 Nm (4.4 lbf ft)	–
Screw, clutch cover	M6	10 Nm (7.4 lbf ft)	–
Screw, clutch spring	M6	7 Nm (5.2 lbf ft)	–
Screw, engine housing	M6	10 Nm (7.4 lbf ft)	–
Screw, engine sprocket cover	M6	10 Nm (7.4 lbf ft)	–
Screw, exhaust flange	M6	10 Nm (7.4 lbf ft)	–
Screw, gear oil level check	M6	10 Nm (7.4 lbf ft)	–
Screw, ignition coil	M6	5 Nm (3.7 lbf ft)	–
Screw, intake flange	M6	5 Nm (3.7 lbf ft)	Loctite® 243™
Screw, water pump cover	M6	10 Nm (7.4 lbf ft)	–
Screw, cylinder head	M7	18 Nm (13.3 lbf ft)	–
Nuts, cylinder base	M8	20 Nm (14.8 lbf ft)	–
Screw, clutch drum	M8	30 Nm (22.1 lbf ft)	Loctite® 243™
Stud bolt, cylinder base	M8	10 Nm (7.4 lbf ft)	–
Spark plug	M10x1	10... 12 Nm (7.4... 8.9 lbf ft)	–
Nut, primary gear	M10x1.25	40 Nm (29.5 lbf ft)	Loctite® 243™
Nut, rotor	M10x1.25	15 Nm (11.1 lbf ft)	–
Oil drain plug with magnet	M12x1.5	20 Nm (14.8 lbf ft)	–

50 SX

Carburetor type	Dell'Orto PHBG 19BS
Needle position	3rd position from top
Idle mixture adjusting screw	
Open	3 turns
Main jet	85
Jet needle	W9
Idling jet	58
Needle jet	260AU
Throttle slide	60
Cold start jet	60

50 SX Junior

Carburetor type	Dell'Orto PHVA 14DS
Needle position	3rd position from top
Idle air adjustment screw	
Open	3.5 turns
Main jet	70
Jet needle	A10
Idling jet	45
Needle jet	211FA
Throttle slide	40
Cold start jet	60

50 SX Mini

Carburetor type	Dell'Orto PHVA 12XS
Needle position	4th position from top
Idle air adjustment screw	
Open	1 turn
Main jet	60
Jet needle	A10
Idling jet	35
Needle jet	211FA
Throttle slide	40
Cold start jet	60