

TECHNICAL SPECIFICATIONS – ENGINE 125/250 SX 2007»


ENGINE	125 SX	250 SX
Design	Liquid-cooled, single-cylinder, two-stroke engine with intake and exhaust control	
Piston displacement	124,8 cm ³	249 cm ³
Bore / stroke	54 / 54,5 mm	66,4 / 72 mm
Fuel	unleaded fuel with at least RON 95 (USA = Premium PON 91), mixed with high grade two stroke oil	
Oil / gasoline ratio	1:40	1:60
	when using high grade, two- stroke oil (Motorex Cross Power 2T).	
Crankshaft bearing	1 deep-groove ball bearing / 1 cylinder roller bearing	
Connecting rod bearing	needle bearing	
Piston pin bearing	needle bearing	
Piston	cast piston	
Piston ring	two plain compression rings	
Dimension „X“ <small>(upper edge piston- upper edge cylinder)</small>	0,0 mm	0,0 + 0,1 mm
Ignition timing	1.4 mm (0.055 in) (16.5°) BTDC	1.6 mm (0.063 in) (17°) BTDC
Spark plug	NGK BR9 EVX	NGK BR8 ECM
Electrode gap	0,60 mm	
Dimension „Z“ <small>(height of the control flap)</small>	43,5 mm (1.68 in)	47 mm (1.85 in)
Exhaust control start open	-	5500/min
Exhaust control fully open	-	7000/7500/7900/min (red/yellow/green spring)
Primary drive	straight cut spur gears	
Primary ratio	23 : 73	26 : 72
Available chain sprockets	13t /14t for chain 5/8 x 1/4"	
Clutch	multiple disc clutch in oil bath, hydraulically operated	
	(Motorex hydraulic fluid 75)	Motorex brake fluid DOT 5.1
Transmission	6 speed, claw actuated	5 speed, claw actuated
Gear ratio		
1st gear	13 : 32 „1S32“	14 : 28
2nd gear	„2S15“ 15 : 30 „2S30“	15 : 24
3rd gear	„3S17H“ 17 : 28 „3S28H“	18 : 24
4th gear	„4S20H“ 20 : 28 „4S28“	21 : 24
5th gear	„5S19H“ 19 : 23 „5S23“H	22 : 21
6th gear	„6S22H“ 22 : 24 „6S24“H	
Gear lubrication	0,7 liter Motorex Top Speed 4T 15W50	
Available chain sprockets	13Z / 14Z für Kette 5/8 x 1/4"	
Coolant	1.2 litres, 40% anti freeze, 60% distilled water, at least -25 °C (-13 °F)	
Ignition system	KOKUSAN 2K-1	Stator 2K-1/Rotor 2K-2
Carburetor	flat-slide carburetor, carburetor setting see table	
Air-filter	wet foam type air filter insert	

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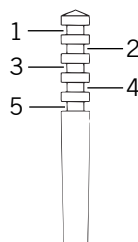
TIGHTENING TORQUES - ENGINE		
Flange bolts - cylinder-head (125 SX)	M7	18 Nm
Flange bolts - cylinder-head (250 SX)	M8	27 Nm
Nuts-cylinder base (125 SX)	M8	30 Nm
Nuts-cylinder base (250 SX)	M10	35 Nm
Flywheel collar nut	M12x1	60 Nm
Nut for primary sprocket (125 SX)	M16x1,5 links	Loctite 243 + 130 Nm
Nut for primary sprocket (250 SX)	M18x1,5 links	Loctite 270 + 150 Nm
Nut for inner clutch hub (125 SX)	M18x1,5	130 Nm
Nut for inner clutch hub (250 SX)	M18x1,5	Loctite 270 + 100 Nm
Bundschraube Kupplungsfeder	M6	10 Nm
Oil drain plug (125/250 SX)	M12x1,5	20 Nm
Oil drain plug (125 SX) Kupplungsdeckel	M10x1	15 Nm
Drain plug for water pump cover	M10x1	15 Nm
Collar screw for water pump cover	M6	Loctite 243 + 10 Nm
Water pump wheel	M5	Loctite 243 + 6 Nm
Crankcase and clutch cover bolts	M6	10 Nm
Collar screws for ignition cover	M5	5 Nm
Collar screws for exhaust flange	M5	6 Nm
Spark plug	M14x1,25	25 Nm
Collar screws for ignition system	M5	6 Nm
Collar screw for kickstarter lever	M8	Loctite 243 + 25 Nm
Other screws	M 6 M 8 M 10	10 Nm 25 Nm 45 Nm

BASIC CARBURETOR SETTING		
	125 SX	250 SX
Carburetor	Keihin PWK 39	Keihin PWK 36 S AG
Carburetor setting mark	98SA0/98SA1	FK0160
Main jet	188 (185/190)	158 (155, 160)
Idling jet	45 (48)	45 (42)
Starting jet	85	85
Jet needle	R1469D (R1468D)	N1E1 (N1EH)
Needle position from top	II	III
Throttle valve	5.5	6,5
Air adjustment screw open	1,5	1

VERGASERTABELLE » CARBURETOR TABLE

VERGASERREGULIERUNG CARBURETOR SETTING KEIHIN PWK-S 39 AG		125 SX 2007						
MEERESHÖHE ALTITUDE ↓	TEMPERATUR TEMPERATURE →	-20°C bis -7°C -2°F to 20°F	-6°C bis 5°C 19°F to 41°F	6°C bis 15°C 42°F to 60°F	16°C bis 24°C 61°F to 78°F	25°C bis 36°C 79°F to 98°F	37°C bis 49°C 99°F to 120°F	
3000 m 10000 ft ↑ 2301 m 7501 ft	LSO ASO LD IJ NADEL NEEDLE POS POS HD MJ	1,5 45 R1469D 2 188	1,75 45 R1470D 2 185	2 42 R1470D 2 182	2,25 40 R1470D 2 180	2,5 38 R1471D 1 178		
2300 m 7500 ft ↑ 1501 m 5001 ft	LSO ASO LD IJ NADEL NEEDLE POS POS HD MJ	1,5 48 R1469D 2 190	1,5 45 R1469D 2 188	1,75 45 R1470D 2 185	2 42 R1470D 2 182	2,25 40 R1470D 2 180	2,5 38 R1471D 1 178	
1500 m 5000 ft ↑ 751 m 2501 ft	LSO ASO LD IJ NADEL NEEDLE POS POS HD MJ	1 48 R1468D 3 192	1,5 48 R1469D 2 190	1,5 45 R1469D 2 188	1,75 45 R1470D 2 185	2 42 R1470D 2 182	2,25 40 R1470D 2 180	
750 m 2500 ft ↑ 301 m 1001 ft	LSO ASO LD IJ NADEL NEEDLE POS POS HD MJ	1 50 R1468D 3 195	1 48 R1468D 3 192	1,5 48 R1469D 2 190	1,5 45 R1469D 2 188	1,75 45 R1470D 2 185	2 42 R1470D 2 182	
300 m 1000 ft ↑ Meeresniveau Sea level	LSO ASO LD IJ NADEL NEEDLE POS POS HD MJ	0,75 52 R1468D 4 198	1 50 R1468D 3 195	1 48 R1468D 3 192	1,5 48 R1469D 2 190	1,5 45 R1469D 2 188	1,75 45 R1470D 2 185	

LSO = Luftregulierschraube offen
LD = Leerlaufdüse
POS = Nadel Clip Position von oben
HD = Hauptdüse




ASO = Air screw open from fully-seated
IJ = Idling jet
POS = Needle clip position from top
MJ = Main jet

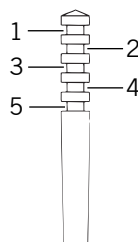
NICHT FÜR STRASSENBETRIEB
Kraftstoff: Super Bleifrei ROZ 95

NOT FOR HIGHWAY USE
Fuel: unleaded fuel with at least RON 95
USA = Premium PON 91

VERGASERTABELLE » CARBURETOR TABLE

VERGASERREGULIERUNG CARBURETOR SETTING KEIHIN PWK-S 36 AG		250 SX 2007						
MEERESHÖHE ALTITUDE ↓	TEMPERATUR TEMPERATURE →	-20°C bis -7°C -2°F to 20°F	-6°C bis 5°C 19°F to 41°F	6°C bis 15°C 42°F to 60°F	16°C bis 24°C 61°F to 78°F	25°C bis 36°C 79°F to 98°F	37°C bis 49°C 99°F to 120°F	
3000 m 10000 ft ↑ 2301 m 7501 ft	LSO ASO LD IJ NADEL NEEDLE POS POS HD MJ	1 45 N1EI 3 158	1 42 N1EI 3 158	1 40 N1EI 2 155	2 40 N1EI 2 152	2,5 38 N1EJ 1 150		
2300 m 7500 ft ↑ 1501 m 5001 ft	LSO ASO LD IJ NADEL NEEDLE POS POS HD MJ	1 45 N1EH 3 160	1 45 N1EI 3 158	1 42 N1EI 3 158	1 40 N1EI 2 155	2 40 N1EI 2 152	2,5 38 N1EJ 1 150	
1500 m 5000 ft ↑ 751 m 2501 ft	LSO ASO LD IJ NADEL NEEDLE POS POS HD MJ	1 48 N1EH 4 162	1 45 N1EH 3 160	1 45 N1EI 3 158	1 42 N1EI 3 158	1 40 N1EI 2 155	2 40 N1EI 2 152	
750 m 2500 ft ↑ 301 m 1001 ft	LSO ASO LD IJ NADEL NEEDLE POS POS HD MJ	1 48 N1EG 4 165	1 48 N1EH 4 162	1 45 N1EH 3 160	1 45 N1EI 3 158	1 42 N1EI 3 158	1 40 N1EI 2 155	
300 m 1000 ft ↑ Meeresniveau Sea level	LSO ASO LD IJ NADEL NEEDLE POS POS HD MJ	0,75 50 N1EF 5 168	1 48 N1EG 4 165	1 48 N1EH 4 162	1 45 N1EH 3 160	1 45 N1EI 3 158	1 42 N1EI 3 158	

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