

TECHNICAL DATA - ENGINE 450/560 SMR 2007 »

TYPE	450 SMR	560 SMR
Design	Liquid-cooled single cylinder 4-stroke engine with balancer shaft	
Displacement	449.4 cm ³	565.5 cm ³
Bore/Stroke	95 / 63.4 mm	100 / 72 mm
Ratio	12 : 1	11 : 1
Fuel	unleaded fuel with at least RON 95 (USA = Premium RON 91)	
Valve timing	4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain	
Camshaft	590/5521	
Valve diameter Intake	35 mm (Titan)	
Valve diameter Exhaust	30 mm (Titan)	
Valve clearance cold Intake	0.1 – 0.15 mm	
Valve clearance cold Exhaust	0.1 – 0.15 mm	
Crank shaft bearing	2 cylinder roller bearing	
Connecting rod bearing	needle bearing	
Top end bearing	bronze bushing	
Piston aluminium alloy	forged	
Piston rings	1 compression ring, 1 oil scraper ring	
Engine lubrication	pressure circulation lubrication with two rotor pumps	
Engine oil	full synthetic oil (Motorex Power Synt 4T 10W/50)	
Quantity of engine oil	1.25 liters	
Primary ratio	straight geared spur wheels 33:76 Z	
Clutch	multi disc clutch in oil bath	
Transmission claw shifted	6-speed	
Gear ratio		
1 st Gear	16:32	
2 nd Gear	18:30	
3 rd Gear	20:28	
4 th Gear	22:26	
5 th Gear	24:24	
6 th Gear	21:18	
Ignition system	contactless DC-CDI ignition with digital advanced system by KOKUSAN 4K-3A	
Generator	12V 40W	
Spark plug	NGK DCPR 8 E	
Spark plug gap	0,6 mm	
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanically driven water pump	
Cooling liquid	1 liter, 50% antifreeze, 50% distilled water, at least -25° (-13° F)	
Starting equipment	kickstarter	

BASIC CARBURATOR SETTING		
	450 SMR	560 SMR
Type	Keihin FCR-MX 4122B	Keihin FCR-MX 4125E
Main jet	185	190
Jet needle	OBDTP	OBDTP
Idling jet	40	42
Main air jet	200	200
Idling air jet	100	100
Needle position	4 th from top	5 th from top
Starting jet	85	85
Mixture control screw open	1,5	1,5
Slide	15	15
Performance restrictor	–	–
Stop pump membrane	858 / 2.15 mm	858 / 2.15 mm
Hot start device	2.2 mm	2.5 mm

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TIGHTENING TORQUES – ENGINE 400/450/525		
Hexagon collar screw, engine case, clutch cover, ignition cover	M6	10 Nm
Oil drain plug	M12x1.5	20 Nm
Allan head plug, oil screen short	M16x1.5	Oil + 10 Nm
Hexagon plug, oil screen long	M20x1.5	15 Nm
Collar screw for oil filter cover	M5	6 Nm
Plug pressure valve	M12x1.5	20 Nm
Jet screw and hollow screw, oil line	M8	10 Nm
Screws, oil pump cover	M5	Loctite 222 + 6 Nm
Hexagon collar screw, cylinder head top section	M6	10 Nm
Hex.collar screw, cylinder head top section, water pump cover	M6	10 Nm
Hexagon collar screw, exhaust flange	M6	Loctite 243 + 10 Nm
Cylinder head screw	M10	Oil + 40/50 Nm
Allan head screw, camshaft gear	M8	Loctite 243 + 28 Nm
Allan head screw, cap rocker arm	M5	6 Nm
Counter nuts, valve adjustment screw	M6x0.75	11 Nm
Allan head screw, primary gear, free wheel	M6	Loctite 648 + 16 Nm
Hexagon nut, primary gear	M20x1.5 left	Loctite 243 + 150 Nm
Allan head screw, balancer shaft gear	M6	Loctite 243 + 10 Nm
Nut for inner clutch hub	M18x1.5	Loctite 243 + 120 Nm
Hexagon collar screw, clutch spring	M6	Loctite 243 + 8 Nm
Allan head screw, shift roller locking piece	M6	Loctite 243 + 10 Nm
Hexagon collar screw, locking lever	M5	Loctite 243 + 6 Nm
Hexagon collar screw, shift roller	M5	Loctite 243 + 6 Nm
Hexagon collar screw securing guide, chain guide, chain tensioner	M6	Loctite 243 + 6 Nm
Hexagon collar screw, clip	M5	Loctite 243 + 6 Nm
Hexagon collar screw, chain adjuster	M6	10 Nm
Hexagon collar screw, stator XC/EXC	M6	Loctite 243 + 10 Nm
Hexagon collar screw, pulser coil	M5	Loctite 243 + 6 Nm
Hexagon collar nut, flywheel	M12x1	60 Nm
Hexagon collar screw, bump part kickstarter	M6	Loctite 243 + 10 Nm
Hexagon collar screw, spring hanger kickstarter	M6	Loctite 243 + 10 Nm
Hexagon collar screw E-starter	M6	10 Nm
Hexagon collar screw, hanger vent hose	M6	Loctite 243 + 10 Nm
Allan head screw, kickstarter	M8	Loctite 243 + 25 Nm
Hexagon collar screw, shift lever	M6	Loctite 243 + 10 Nm
Hexagon screw, engine sprocket	M10	Loctite 243 + 60 Nm
Spark plug	M10	10-12 Nm
Spark plug	M12x1.25	20 Nm