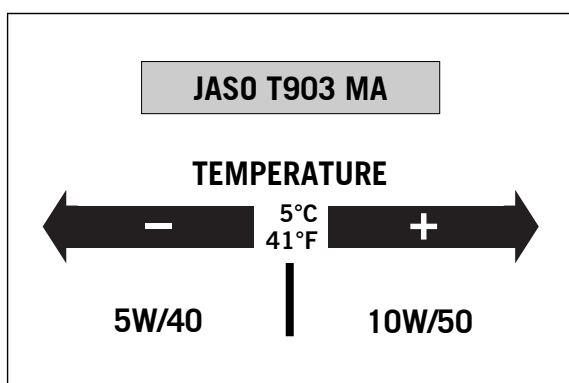


TECHNICAL DATA – ENGINE »

ENGINE	250 SX-F	450 SX-F
Design	Liquid-cooled single cylinder 4-stroke engine	
Displacement	249.51 ccm	449.3 ccm
Bore/Stroke	76 / 55 mm	97 / 60.8 mm
Ratio	12.8 : 1	12.5 : 1
Fuel	unleaded fuel with at least RON 95	
Valve timing	4 valves controlled by finger levers and 2 camshafts, driven by a pair of spur gears and a tooth-type chain	
Camshaft	05	773.36.009.100 / 773.36.010.100
Valve diameter Intake	30.9 mm	40.4 mm
Valve diameter Exhaust	26.5 mm	31.7 mm
Valve clearance cold Intake	0.10 - 0.20 mm	0.15 mm
Valve clearance cold Exhaust	0.12 - 0.22 mm	0.20 mm
Crank shaft bearing	2 cylinder roller bearings	
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 2 rotor pumps	
Engine oil	full synthetic oil (see below)	
Quantity of engine oil	1.1 liters	1.3 liters
Primary drive	22:68	29:74
Transmission claw shifted	6-speed	4-speed
1st gear	13:32	17:32
2nd gear	15:30	19:30
3rd gear	17:28	21:28
4th gear	19:26	23:26
5th gear	21:25	-
6th gear	22:24	-
Ignition system	contactless DC-CDI ignition with digital advanced system by KOKUSAN	
Generator	no generator	42 Watts at 10.000 rpm
Spark plug	NGK CR 9 EBK	
Cooling system	liquid cooled, permanent rotation of cooling liquid through mechanically driven water pump	
Cooling liquid	1.2 liters, 50% antifreeze, 50% distilled water, at least -25° (-13° F)	
Starting device	kick starter	E-starter



Engine oil

Only use fully synthetic engine oils that meet the JASO MA quality requirements (see information on the can).

KTM recommends Motorex Power Synt 4T in the 10W/50 viscosity (for temperatures over 5°C, 41°F) or 5W/40 (for temperatures under 5°C, 41°F).

! CAUTION

Poor oil quality or minor quantity cause early engine-wear.

TECHNICAL DATA – ENGINE »

TIGHTENING TORQUES – ENGINE 250/450 SX-F		
Hexagon collar screw, engine case, clutch cover, ignition cover, water pump cover	M6	10 Nm
Hexagon collar screw, engine case, clutch case	M7x1	14 Nm
Oil drain plug	M12x1.5	20 Nm
Allen head plug, oil screen short (250 SX-F)	M16x1.5	10 Nm oiled
Hexagon plug, oil screen long (250 SX-F)	M20x1.5	15 Nm
Plug, oil screen (450 SX-F)	M32x1,5	30 Nm oiled
Collar screw for oil filter cover (250 SX-F)	M5	6 Nm
Collar screw for oil filter cover (450 SX-F)	M4	6 Nm
Plug pressure valve	M12x1,5 / M14x1,5	18 Nm
Hexagon collar screw/collar nut cylinder / cylinder head	M6	10 Nm oiled
Cylinder head screw (250 SX-F)	M10	40/50 Nm oiled
Collar nut cylinder head (450 SX-F)	M10x1,25	10 Nm/30 Nm/50°
Hexagon collar screw, exhaust flange	M6	Loctite 243 + 10 Nm
Valve cover screws	M6	10 Nm
Hexagon nut, primary gear (250 SX-F)	M18x1.5 left	Loctite 243 + 150 Nm
Hexagon nut, primary gear (450 SX-F)	M27x1	60 Nm
Nut for inner clutch hub (250 SX-F)	M18x1.5	Loctite 243 + 120 Nm
Nut for inner clutch hub (450 SX-F)	M18x1.5	Loctite 243 + 80 Nm
Hexagon collar screw, clutch spring	M6	10 Nm
Allan head screw, shift roller locking piece	M6	Loctite 243 + 10 Nm
Hexagon collar screw, locking lever	M5	Loctite 243 + 6 Nm
Plug for chain tensioner	M24x1.5	25 Nm
Hexagon collar screw, stator	M5	Loctite 243 + 6 Nm
Hexagon collar screw, pulser coil	M5	Loctite 243 + 6 Nm
Hexagon collar nut, flywheel (250 SX-F)	M12x1	60 Nm
Flywheelscrew (450 SX-F)	M10x1	80 Nm oiled
Cable retaining bracket (ignition)	M6	Loctite 243 + 6 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

BASIC CARBURATOR SETTING		
	250 SX-F	450 SX-F
Type	Keihin FCR-MX 3925E	Keihin FCR-MX 4125F
Main jet	175	185
Jet needle	OBETP	OB DTP
Idling jet	40	40
Main air jet	200	200
Idling air jet	100	100
Needle position	5 th from top	4 th from top
Starting jet	85	85
Mixture control screw open	1.25	1.5
Slide	15	15
Performance restrictor	–	–
Stop pump membrane	858 / 2.15 mm	858 / 2.15 mm
Hot start device	2.5 mm	2.5 mm