TECHNICAL DATA - ENGINE 250/300/380 SX/MXC/EXC '99 (only USA)

Engine	250 SX	250 EXC, MXC	300 EXC, MXC	380 SX	380 EXC, MXC
Design	Liquid-cooled single-cylinder two-stroke engine with **KTM** **T**win **V**alve **C**ontrol exhaust system and **K**TM **T**orque **C**hamber				
Piston displacement	249 ccm		297 ccm	368 ccm	
Bore / stroke	67.5 / 69.5 mm (2.66 / 2.74 in)		72 / 73 mm (2.84 / 2.88 in)	78 / 77 mm (3 / 2.98 in)	
Fuel	SUPER fuel, research octane no 95, mixed with high-grade two stroke oil (Shell Advance Racing X)				
Oil / gasolin ratio	1:50 - 1:60 when using high grade two stroke oil. When in doupt, please contact your importer or use 1:40 mix ratio to be on the safe side				
Crankshaft bearing	1 deep-groove ball bearing / 1 cylinder roller bearing				
Connecting rod bearing	needle bearing				
Piston pin bearing	needle bearing				
Piston	cast piston		forged piston	cast piston	
Piston ring	two plain compression rings				
Dimension "X" (upper edge piston - upper edge cylinder)	0 +0.1 mm (0 + 0.004 in)				
Ignition timing	1.8 mm (0.07 in) (17 °) BTDC		2.0 mm (0.08 in) (17°) BTDC	2.2 mm (0.09 in) (17 °) BTDC	
Spark plug	NGK BR 8 ECM				
Electrode gap	0.6 mm (0.024 in)				
Dimension "Z" (height of the control flap)	48 mm (1.9 in)		46 mm (1.7 in)	50.5 mm (1.99 in)	
TVC start open TVC fully open	5400/min 7550/min		5300/min 7750/min	5200/min 7200/min	
Primary drive	straight cut spur gears, primary ratio 25:72			straight cut spur gears, primary ratio 26:72	
Clutch	multiple disc clutch in oil bath, hydraulic operated (Shell HF-E15)				
Transmission	5 speed, claw actuated				
Gear ratio			EXC M-XC		EXC MXC
1st Gear	15:29	15:29	15:29 15:29	15:29	15:29 15:29
2nd Gear	17:27	18:26	18:26 18:26	18:26	18:26 18:26
3rd Gear	19.25	19:22	19:22 19:24	19:24	19:22 19:24
4th Gear	21:23	21:20	21:20 21:23	21:23	21:20 21:23
5th Gear	23:21	23:18	23:18 23:21	23:21	23:18 23:21
Gear lubrication	0.8 l engine oil 20W-40 (Shell Advance VSX4)				
Available chain sprockets	13t / 14t / 15t for chain 5/8 x 1/4"				
Coolant	1.3 litres, 40% anti freeze, 60% water, at least -25 °C (-13 °F)				
Ignition system	KOKUSAN 2K-1	KOKUSAN 2K-2		KOKUSAN 2K-1	KOKUSAN 2K-2
Generator output	no generator	12V 40W		no generator	12V 40W
Carburetor	flat-slide carburetor, carburetor setting see table 3				
Air-filter	wet foam type air filter insert				

TOLERANCES AND FITTING CLEARANCES

Piston fitting clearance	0.05 mm (250) 0.06 mm (300) 0.08 mm (380)
Piston ring end gap	0.3–0.4 mm
Connecting rod bearing - radial clearance	0.021–0.032 mm
Transmission shafts end float	0.1–0.2 mm
Clutch springs - length	Ø 2.5 new = 43 mm, minimum length = 42 mm

GASKET THICKNESSES

Crankcase	0.5 mm
Clutch cover	0.5 mm
Cylinder bottom gasket	as required
Available cylinder bottom gaskets	0.2/0.4/0.5/0.7 mm
Cylinder-head gasket	O-rings

BASIC CARBURETOR SETTING

TABLE 3

	250 SX	250 MXC, EXC 300 MXC, EXC	380 SX, MXC, EXC
Carburetor	Keihin PWK 38	Keihin PWK 38	Keihin PWK 38
Carburetor setting number	090598	100598	070598
Main jet	172(168,170,175)	175(170,172,178)	170(168,172,175)
Idling jet	45(48,50)	45(42,48)	48(45,50)
Starting jet	85	85	85
Jet needle	NOZ G(NOZ H,NOZ I)	N85 C(N85 D)	NOZ H(NOZ G,NOZ I)
Needle position from top	II	III	II
Throttle valve	6	6	6
Air adjustment screw open	1,5	1,5 Umdr.	1,5 Umdr.

TIGHTENING TORQUES

Flange bolts - cylinder-head	M 8	35 Nm (25 ft.lb)
Nuts-cylinder base	M 10	35 Nm (25 ft.lb)
Flywheel collar nut	M 12x1	60 Nm (44 ft.lb)
Nut for primary sprocket (LH thread)	M 18x1.5	Loctite 242 150 Nm (110 ft.lb)
Nut for inner clutch hub	M 18x1.5	Loctite 242 100 Nm (74 ft.lb)
Crankcase and cover bolts	M 6	8 Nm (6 ft.lb)
Swingarm pivot	M 14	100 Nm (74 ft.lb)
Flat head screw release plate kickstarter	M 6x16	Loctite 648 19 Nm (14 ft.lb)
Other screws	M 6 M 8 M 10	10 Nm (7 ft.lb) 25 Nm (19 ft.lb) 45 Nm (33 ft.lb)

TECHNICAL DATA - ENGINE 250/300/380 SX/EXC/EGS '99 (all models out of USA)

Engine	**250 SX**	**250 EXC, EGS**	**300 EXC, EGS**	**380 SX**	**380 EXC, EGS**
Design	Liquid-cooled single-cylinder two-stroke engine with **KTM** **T**win **V**alve **C**ontrol exhaust system and **K**TM **T**orque **C**hamber				
Piston displacement	249 ccm		297 ccm	368 ccm	
Bore / stroke	67.5 / 69.5 mm (2.66 / 2.74 in)		72 / 73 mm (2.84 / 2.88 in)	78 / 77 mm (3 / 2.98 in)	
Fuel	SUPER fuel, research octane no 95, mixed with high-grade two stroke oil (Shell Advance Racing X)				
Oil / gasoline ratio	1:50 - 1.60 when using high grade two stroke oil. When in doupt, please contact your importer or use 1:40 mix ratio to be on the safe side				
Crankshaft bearing	1 deep-groove ball bearing / 1 cylinder roller bearing				
Connecting rod bearing	needle bearing				
Piston pin bearing	needle bearing				
Piston	cast piston		forged piston	cast piston	
Piston ring	two plain compression rings				
Dimension "X" (upper edge piston - upper edge cylinder)	0 + 0.1 mm (0 + 0.004 in)				
Ignition timing	1,9 mm (0.07 in) (17 °) BTDC	1.2 mm (0.05 in) (13.5 °) BTDC	1.2 mm (0.05 in) (13.5 °) BTDC	2.1 mm (0.08 in) (17 °) BTDC	1.4 mm (0.06 in) (13 °) BTDC
Spark plug	NGK BR 8 ECM				
Electrode gap	0.6 mm (0.024 in)				
Dimension "Z" (height of the control flap)	48 mm (1.9 in)		46 mm (1.7 in)	50.5 mm (1.99 in)	
TVC start open TVC fully open	5400/min 7550/min		5300/min 7750/min	5200/min 7200/min	
Primary drive	straight cut spur gears, primary ratio 25:72			straight cut spur gears, primary ratio 26:72	
Clutch	multiple disc clutch in oil bath, hydraulic operated (Shell HF-E15)				
Transmission	5 speed, claw actuated				
Gear ratio 1st Gear 2nd Gear 3rd Gear 4th Gear 5th Gear	 15:29 17:27 19.25 21:23 23:21	 15:29 18:26 19:22 21:20 23:18		 15:29 18:26 19:24 21:23 23:21	 15:29 18:26 19:22 21:20 23:18
Gear lubrication	0,8 l engine oil 20W-40 (Shell Advance VSX4)				
ailable chain sprockets	13t / 14t / 15t for chain 5/8 x 1/4"				
Coolant	1.3 litres, 40% anti freeze, 60% water, at least -25 °C (-13 °F)				
Ignition system	KOKUSAN 2K-1	SEM K11		KOKUSAN 2K-1	SEM K11
Generator output	no generator	12V 130W		no generator	12V 130W
Carburetor	flat-slide carburetor, carburetor setting see table 3				
Air-filter	wet foam type air filter insert				

TOLERANCES AND FITTING CLEARANCES

Piston fitting clearance	0.05 mm (250) 0.06 mm (300) 0.08 mm (380)
Piston ring end gap	0.3–0.4 mm
Connecting rod bearing - radial clearance	0.021–0.032 mm
Transmission shafts end float	0.1–0.2 mm
Clutch springs - length	Ø 2.5 new = 43 mm, minimum length = 42 mm

GASKET THICKNESSES

Crankcase	0.5 mm
Clutch cover	0.5 mm
Cylinder bottom gasket	as required
Available cylinder bottom gaskets	0.2/0.4/0.5/0.7 mm
Cylinder-head gasket	O-rings

TIGHTENING TORQUES

Flange bolts - cylinder-head	M 8	35 Nm (25 ft.lb)
Nuts-cylinder base	M 10	35 Nm (25 ft.lb)
Flywheel collar nut	M 12x1	60 Nm (44 ft.lb)
Nut for primary sprocket (LH thread)	M 18x1.5	Loctite 242 150 Nm (110 ft.lb)
Nut for inner clutch hub	M 18x1.5	Loctite 242 100 Nm (74 ft.lb)
Crankcase and cover bolts	M 6	8 Nm (6 ft.lb)
Swingarm pivot	M 14	100 Nm (74 ft.lb)
Flat head screw release plate kickstarter	M 6x16	Loctite 648 19 Nm (14 ft.lb)
Other screws	M 6 M 8 M 10	10 Nm (7 ft.lb) 25 Nm (19 ft.lb) 45 Nm (33 ft.lb)

BASIC CARBURETOR SETTING

TABLE 3

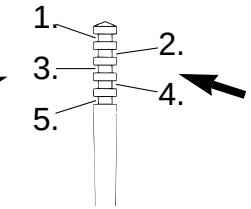
	250 SX	250 MXC, EXC 300 MXC, EXC	250/300 EGS AUSTRALIA	380 SX, MXC, EXC	380 EGS AUSTRALIA
Carburetor	Keihin PWK 38	Keihin PWK 38	Keihin PWK 38	Keihin PWK 38	Keihin PWK 38
Carburetor setting number	090598	100598	100598	070598	060598
Main jet	172(168,170,175)	175(170,172,178)	175(170,172,178)	170(168,172,175)	175(168,170,172)
Idling jet	45(48,50)	45(42,48)	45(42,48)	48(45,50)	45(48,50)
Starting jet	85	85	85	85	85
Jet needle	NOZ G(NOZ H,NOZ I)	N85 C(N85 D)	N85 C(N85 D)	NOZ H(NOZ G,NOZ I)	NOZ G(NOZ H,NOZ I)
Needle position from top	II	III	III	II	II
Throttle valve	6	6	6	6	6
Air adjustment screw open	1,5	1,5 Umdr.	1,5 Umdr.	1,5 Umdr.	1,5 Umdr.
Performance restrictor	–	–	slide stop 31mm	–	slide stop 36mm

VERGASERREGULIERUNG
CARBURETOR SETTING

KTM 250 SX EUROPA / USA '99 KEIHIN PWK 38

MEERESHÖHE *ALTIDUDE*	**TEMPERATUR** →		-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 38°C *79°F to 98°F*	37°C bis 49°C *99°F to 120°F*
3000 m *10000 ft* ↑ 2301 m *7501 ft*	LSCHR	*AS*	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4
	LD	*IJ*	45	42	40	40	40	38
	NADEL	*NEEDLE*	NOZH	NOZH	NOZH	NOZI	NOZI	NOZI
	POS	*POS*	3	2	1	1	1	1
	HD	*MJ*	170	168	165	162	160	160
2300 m *7500 ft* ↑ 1501 m *5001 ft*	LSCHR	*AS*	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2
	LD	*IJ*	48	45	42	42	42	40
	NADEL	*NEEDLE*	NOZG	NOZH	NOZH	NOZI	NOZI	NOZI
	POS	*POS*	3	2	1	1	1	1
	HD	*MJ*	172	170	168	165	162	160
1500 m *5000 ft* ↑ 751 m *2501 ft*	LSCHR	*AS*	1	1 1/4	1 1/2	1 3/4	2	2 1/4
	LD	*IJ*	48	45	45	45	45	42
	NADEL	*NEEDLE*	NOZG	NOZG	NOZH	NOZH	NOZH	NOZI
	POS	*POS*	3	3	2	2	2	2
	HD	*MJ*	175	172	170	168	165	162
750 m *2500 ft* ↑ 301 m *1001 ft*	LSCHR	*AS*	3/4	1	1 1/4	1 1/2	1 3/4	2
	LD	*IJ*	50	48	45	45	45	42
	NADEL	*NEEDLE*	NOZG	NOZG	NOZH	NOZH	NOZI	NOZI
	POS	*POS*	3	2	2	2	2	2
	HD	*MJ*	178	175	172	170	168	165
300 m *1000 ft* ↑ Meeresniveau *Sea level*	LSCHR	*AS*	1/2	3/4	1	1 1/4	1 1/2	1 3/4
	LD	*IJ*	50	48	45	45	42	42
	NADEL	*NEEDLE*	NOZF	NOZG	NOZG	NOZH	NOZH	NOZI
	POS	*POS*	4	3	3	2	1	1
	HD	*MJ*	180	178	180	172	170	168

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



AS = Air screw open from fully-seated
IJ = Idling jet
POS = Clip position from top
MJ = Main jet

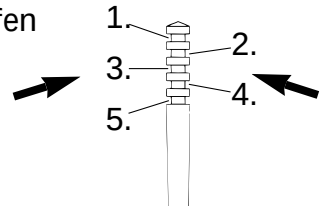
NICHT FÜR STRASSENBETRIEB
Kraftstoff: Super bleifrei ROZ 95
NOT FOR HIGHWAY USE
Fuel: Super unleaded ROZ 95

14.05.98

VERGASERREGULIERUNG / CARBURETOR SETTING — KTM 250/300 MXC/EXC EUR. USA'99 KEIHIN PWK 38

MEERESHÖHE / *ALTIDUDE*	TEMPERATUR →		-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 38°C / *79°F to 98°F*	37°C bis 49°C / *99°F to 120°F*
3000 m *10000 ft* ↑ 2301 m *7501 ft*	LSCHR	*AS*	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4
	LD	*IJ*	45	42	40	40	40	38
	NADEL	*NEEDLE*	N85C	N85C	N85C	N85D	N85D	N85D
	POS	*POS*	3	2	1	1	1	1
	HD	*MJ*	175	172	170	168	165	165
2300 m *7500 ft* ↑ 1501 m *5001 ft*	LSCHR	*AS*	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2
	LD	*IJ*	48	45	42	42	42	40
	NADEL	*NEEDLE*	N85B	N85C	N85C	N85C	N85D	N85D
	POS	*POS*	3	2	2	2	1	1
	HD	*MJ*	178	175	172	170	168	165
1500 m *5000 ft* ↑ 751 m *2501 ft*	LSCHR	*AS*	7	1 1/4	1 1/2	1 3/4	2	2 1/4
	LD	*IJ*	48	45	45	45	45	42
	NADEL	*NEEDLE*	N85B	N85B	N85C	N85C	N85C	N85D
	POS	*POS*	3	3	3	2	2	1
	HD	*MJ*	180	178	175	172	170	168
750 m *2500 ft* ↑ 301 m *1001 ft*	LSCHR	*AS*	3/4	1	1 1/4	1 1/2	1 3/4	2
	LD	*IJ*	50	48	45	45	45	42
	NADEL	*NEEDLE*	N85B	N85B	N85C	N85C	N85C	N85D
	POS	*POS*	3	2	2	2	2	2
	HD	*MJ*	182	180	178	175	172	170
300 m *1000 ft* ↑ Meeresniveau *Sea level*	LSCHR	*AS*	1/2	3/4	1	1 1/4	1 1/2	1 3/4
	LD	*IJ*	50	48	45	45	42	42
	NADEL	*NEEDLE*	N85A	N85B	N85B	N85C	N85C	N85D
	POS	*POS*	4	3	3	2	1	1
	HD	*MJ*	185	182	180	178	175	172

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



AS = Air screw open from fully-seated
IJ = Idling jet
POS = Clip position from top
MJ = Main jet

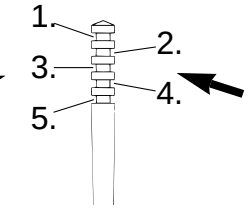
NICHT FÜR STRASSENBETRIEB
Kraftstoff: Super bleifrei ROZ 95
NOT FOR HIGHWAY USE
Fuel: Super unleaded ROZ 95

14.05.98

VERGASERREGULIERUNG / CARBURETOR SETTING — KTM 380 SX/MXC/EXC EUR. USA '99 KEIHIN PWK 38

MEERESHÖHE / *ALTIDUDE*	TEMPERATUR →		-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 38°C / *79°F to 98°F*	37°C bis 49°C / *99°F to 120°F*
3000 m / *10000 ft* ↑ 2301 m / *7501 ft*	LSCHR	*AS*	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4
	LD	*IJ*	48	45	45	42	42	40
	NADEL	*NEEDLE*	H	H	H	I	I	I
	POS	*POS*	3	2	1	1	1	1
	HD	*MJ*	172	170	168	165	162	162
2300 m / *7500 ft* ↑ 1501 m / *5001 ft*	LSCHR	*AS*	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2
	LD	*IJ*	50	48	45	45	45	42
	NADEL	*NEEDLE*	G	H	H	I	I	I
	POS	*POS*	3	2	1	1	1	1
	HD	*MJ*	175	172	170	168	165	162
1500 m / *5000 ft* ↑ 751 m / *2501 ft*	LSCHR	*AS*	1	1 1/4	1 1/2	1 3/4	2	2 1/4
	LD	*IJ*	50	48	48	48	48	45
	NADEL	*NEEDLE*	G	G	H	H	H	I
	POS	*POS*	3	3	2	2	2	2
	HD	*MJ*	178	175	172	170	168	165
750 m / *2500 ft* ↑ 301 m / *1001 ft*	LSCHR	*AS*	3/4	1	1 1/4	1 1/2	1 3/4	2
	LD	*IJ*	52	50	48	48	48	45
	NADEL	*NEEDLE*	G	G	H	N0ZH	NOZI	NOZI
	POS	*POS*	3	2	2	2	2	2
	HD	*MJ*	180	178	175	172	170	168
300 m / *1000 ft* ↑ Meeresniveau / *Sea level*	LSCHR	*AS*	1/2	3/4	1	1 1/4	1 1/2	1 3/4
	LD	*IJ*	52	50	48	48	48	45
	NADEL	*NEEDLE*	F	G	G	H	H	I
	POS	*POS*	4	3	3	2	1	1
	HD	*MJ*	182	180	178	175	172	170

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



AS = Air screw open from fully-seated
IJ = Idling jet
POS = Clip position from top
MJ = Main jet

NICHT FÜR STRASSENBETRIEB
Kraftstoff: Super bleifrei ROZ 95
NOT FOR HIGHWAY USE
Fuel: Super unleaded ROZ 95

14.05.98