

Specifications

Items			ZX750-E1
Dimensions:			
Overall length			2,220 mm, (C) (U) (SA) 2,190 mm
Overall width			740 mm, (C) (F) (U) 720 mm
Overall height			1,260 mm
Wheelbase			1,490 mm
Road clearance			155 mm
Seat height			780 mm
Dry weight			2,285 N (233 kg), (Cal) 2,290 N (233.5 kg)
Curb weight:	Front		1,206 N (123 kg), (Cal) 1,211 N (123.5 kg)
	Rear		1,275 N (130 kg), (Cal) 1,275 N (130 kg)
Fuel tank capacity			17.0 L
Performance:			
Climbing ability			30°
Braking distance			12.5 m from 50 km/h
Minimum turning radius			2.7 m
Engine:			
Type			4-stroke, DOHC, 4-cylinder
Cooling system			Air cooled
Bore and stroke			66.0 x 54.0 mm
Displacement			738 mL
Compression ratio			7.8
Maximum horsepower			82.4 kW (112 PS) @9,000 r/min (rpm), (G) (S) 73.6 kW (100 PS) @9,000 r/min (rpm), (Swi) 61.0 kW (83 PS) @6,600 r/min (rpm)
Maximum torque			99.1 N-m (10.1 kg-m, 73.1 ft-lb) @6,500 r/min (rpm), (G) (S) 94.1 N-m (9.6 kg-m, 69.4 ft-lb) @6,500 r/min (rpm), (Swi) 92.2 N-m (9.4 kg-m, 68.0 ft-lb) @6,000 r/min (rpm)
Carburetion system			DFI (Digital Fuel Injection), Turbo
Starting system			Electric starter
Ignition system			Battery and coil (transistorized)
Timing advance			Electronically advanced
Ignition timing			From 10° BTDC @1,050 r/min (rpm) to 30° BTDC @3,300 r/min (rpm) (U) From 10° BTDC @1,200 r/min (rpm) to 30° BTDC @3,300 r/min (rpm)
Spark plug			NGK BR9EV
Cylinder numbering method			Left to right, 1-2-3-4
Firing order			1-2-4-3
Valve timing:	Inlet	Open	22° BTDC
		Close	52° ABDC
		Duration	254°
	Exhaust	Open	60° BBDC
		Close	20° ATDC
		Duration	260°

(C) : Canadian model

(G) : West German model

(SA) : South African model

(Cal) : California model

(S) : Swedish model

(Swi) : Switzerland model

(F) : French model

(U) : US model

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Items	ZX750-E1
Lubrication system	Forced lubrication (wet sump with cooler)
Engine Oil: Grade	SE class
Viscosity	SAE10W40, 10W50, 20W40, or 20W50
Capacity	3.5 L
Drive Train:	
Primary reduction system:	
Type	Gear
Reduction ratio	1.935 (60/31)
Clutch type	Wet multi disc
Transmission: Type	5-speed, constant mesh, return shift
Gear ratios: 1st	2.285 (32/14)
2nd	1.647 (28/17)
3rd	1.272 (28/22)
4th	1.045 (23/22)
5th	0.833 (20/24)
Final drive system:	
Type	Chain drive
Reduction ratio	3.066 (46/15)
Overall drive ratio	4.946 @Top gear
Frame:	
Type	Tubular, double cradle
Caster (rake angle)	28°
Trail	117 mm
Front tire: Type	Tubeless
Size	110/90 V 18
Rear tire: Type	Tubeless
Size	130/80 V 18
Front suspension:	
Type	Telescopic fork (pneumatic)
Wheel travel	130 mm
Rear suspension:	
Type	Swing arm (uni-trak)
Wheel travel	105 mm
Brake type: Front	Dual disc
Rear	Single disc
Electrical Equipment:	
Battery	12 V 14 AH
Headlight: Type	Semi-Sealed beam
Bulb	12 V 60/55 W (quartz-halogen)
Tail/brake light	12 V 5/21 W x 2,     12 V 8/27 W x 2
Alternator: Type	Three-phase AC
Rated output	20 A @8,000 r/min (rpm), 14 V
Voltage regulator:	
Type	Short-circuit

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Service Data

The following tables list the service data which show criteria for servicing 1984 model. Although reliable measurements can only be obtained by using the proper instruments and following the procedures explained in this manual, detail has not been explained in this section. See each section for a detailed account.

"NOTE"

- "Standards" : Show dimensions or performances which brand-new parts or systems have.
- "Service Limits" : Indicate the usable limits. If the measurement shows excessive wear or deteriorated performance, replace the damaged parts.

Engine:

Item	Standard	Service Limit	See Page
Throttle grip play	2 — 3 mm		291
Idle speed	1,050 ± 50 r/min (rpm), Ⓢ 1,200 ± 50 r/min (rpm)		2-7
Engine vacuum synchronization	Less than 2.7 kPa (2 cmHg) difference between any two cylinders		2-7
Camshafts, Chain:			
Cam height	35.746 — 35.854 mm	35.65 mm	157
Camshaft bearing oil clearance	0.100 — 0.141 mm	0.23 mm	158
Camshaft journal diameter	21.94 — 21.96 mm	21.91 mm	158
Camshaft bearing inside diameter	22.060 — 22.081 mm	22.14 mm	158
Camshaft runout	— — —	0.1 mm TIR	158
Cam chain 20-link length	127.00 — 127.36 mm	128.9 mm	159
Cylinder Compression:			
	785 — 980 kPa (8.0 — 10.0 kg/cm ² , 114 — 142 psi), and less than 98 kPa (1 kg/cm ² , 14 psi) difference between any two cylinders	620 — 980 kPa (6.3 — 10.0 kg/cm ² , 90 — 142 psi), or 98 kPa (1 kg/cm ² , 14 psi) difference between any two cylinders	169
Cylinder Head, Valves:			
Valve clearance:			
Inlet	0.13 — 0.23 mm	— — —	2-4
Exhaust	0.08 — 0.18 mm	— — —	2-4
Cylinder head warp	— — —	0.05 mm	160
Combustion chamber volume	24.6 ± 0.4 mL	— — —	160
Valve head thickness:			
Inlet	0.8 — 1.2 mm	0.5 mm	161
Exhaust	0.8 — 1.2 mm	0.7 mm	161
Valve stem bend	— — —	0.05 mm TIR	162
Valve stem diameter	6.95 — 6.97 mm	6.94 mm	162
Valve guide inside diameter	7.000 — 7.015 mm	7.08 mm	163
Valve/valve guide clearance (wobble method)	0.08 — 0.16 mm	0.33 mm	163
Valve seating area outside diameter:			
Inlet	33 mm	— — —	279
Exhaust	29 mm	— — —	279

(Continued on next page.)

Engine: (Cont.)

Item		Standard	Service Limit	See Page													
Valve seating area width		0.5 – 1.0 mm	— — —	279													
Valve installed height:	Inlet	36.56 – 37.48 mm	— — —	164													
	Exhaust	37.11 – 38.03 mm	— — —	164													
Valve spring free length:	Inlet	37.25 mm	35.3 mm														
	Exhaust	41.85 mm	40.3 mm														
Cylinder Block, Pistons:																	
Cylinder inside diameter		66.005 – 66.017 mm, and less than 0.01 mm difference between any two measurements	66.10 mm, or 0.05 mm difference between any two measurements	169													
Piston diameter		65.951 – 65.966 mm	65.81 mm	170													
Piston/cylinder clearance		0.040 – 0.067 mm	— — —	170													
Piston ring groove width:	Top	1.02 – 1.04 mm	1.12 mm	171													
	Second	1.21 – 1.23 mm	1.31 mm	171													
	Oil	2.50 – 2.52 mm	2.60 mm	171													
Piston ring thickness:	Top	0.970 – 0.990 mm	0.90 mm	171													
	Second	1.170 – 1.190 mm	1.10 mm	171													
Piston ring/groove clearance:	Top	0.03 – 0.07 mm	0.17 mm	171													
	Second	0.02 – 0.06 mm	0.16 mm	171													
Piston ring end gap (top and second)		0.20 – 0.40 mm (installed in standard cylinder bore)	0.7 mm	171													
Crankshaft, Connecting Rods:																	
Connecting rod bend		— — —	0.2/100 mm	172													
Connecting rod twist		— — —	0.2/100 mm	173													
Connecting rod bearing insert/ crankpin clearance		0.036 – 0.066 mm	0.10 mm	173													
Crankpin diameter:	None	34.984 – 35.000 mm	34.97 mm	173													
	○	34.984 – 34.994 mm															
		34.995 – 35.000 mm															
Connecting rod big end inside diameter:	None	38.000 – 38.016 mm	— — —	174													
	○	38.000 – 38.008 mm															
		38.009 – 38.016 mm															
Connecting rod big end bearing insert thickness:	Brown	1.475 – 1.480 mm	— — —	174													
	Black	1.480 – 1.485 mm	— — —	174													
	Green	1.485 – 1.490 mm	— — —	174													
Connecting rod bearing insert selection:				174, 351													
<table><tr><td colspan="2" rowspan="2"></td><td colspan="2">Marking for con-rod big end bore</td></tr><tr><td>○</td><td>None</td></tr><tr><td rowspan="2">Marking for crankpin diameter</td><td>○</td><td>Black P/N: 92028-1204</td><td>Brown P/N: 92028-1205</td></tr><tr><td>None</td><td>Green P/N: 92028-1203</td><td>Black P/N: 92028-1204</td></tr></table>							Marking for con-rod big end bore		○	None	Marking for crankpin diameter	○	Black P/N: 92028-1204	Brown P/N: 92028-1205	None	Green P/N: 92028-1203	Black P/N: 92028-1204
		Marking for con-rod big end bore															
		○	None														
Marking for crankpin diameter	○	Black P/N: 92028-1204	Brown P/N: 92028-1205														
	None	Green P/N: 92028-1203	Black P/N: 92028-1204														

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Engine: (Cont.)

Item	Standard	Service Limit	See Page																
Connecting rod big end side clearance	0.13 – 0.33 mm	0.50 mm	174																
Crankshaft runout	— — —	0.05 mm TIR	174																
Crankshaft main bearing insert/ journal clearance	0.020 – 0.044 mm	0.08 mm	175																
Crankshaft main journal diameter:	35.984 – 36.000 mm	35.96 mm	175																
None	35.984 – 35.992 mm																		
○	35.993 – 36.000 mm																		
Crankshaft main bearing bore inside diameter:	39.000 – 39.016 mm	— — —	175																
○	39.000 – 39.008 mm																		
None	39.009 – 39.016 mm																		
Crankshaft main bearing insert thickness:																			
Brown	1.490 – 1.494 mm	— — —	176																
Black	1.494 – 1.498 mm	— — —	176																
Blue	1.498 – 1.502 mm	— — —	176																
Crankshaft main bearing insert selection:			176																
<table border="1"> <tr> <td colspan="2" rowspan="3"></td><td colspan="2">Marking for con-rod big end bore</td></tr> <tr> <td>○</td><td>None</td></tr> <tr> <td>Brown P/N: 92028-1102</td><td>Black P/N: 92028-1101</td></tr> <tr> <td>Marking for crankshaft journal dia.</td><td>1</td><td>Black P/N: 92028-1101</td><td>Blue P/N: 92028-1100</td></tr> <tr> <td></td><td>None</td><td></td><td></td></tr> </table>						Marking for con-rod big end bore		○	None	Brown P/N: 92028-1102	Black P/N: 92028-1101	Marking for crankshaft journal dia.	1	Black P/N: 92028-1101	Blue P/N: 92028-1100		None		
		Marking for con-rod big end bore																	
		○	None																
		Brown P/N: 92028-1102	Black P/N: 92028-1101																
Marking for crankshaft journal dia.	1	Black P/N: 92028-1101	Blue P/N: 92028-1100																
	None																		
Crankshaft side clearance	0.05 – 0.15 mm	0.35 mm	176																
Primary Reduction System:																			
Secondary gear/clutch housing gear backlash	0 – 0.10 mm	0.14 mm	180																
Clutch:																			
Clutch lever play	2 – 3 mm	— — —	17,346																
Friction plate thickness	2.90 – 3.10 mm	2.8 mm	178																
Friction and steel plate warp	— — —	0.3 mm	179																
Clutch spring free length	35.0 mm	33.9 mm																	
Transmission:																			
Gear backlash	0 – 0.17 mm	0.25 mm	184																
Shift fork ear thickness	4.9 – 5.0 mm	4.8 mm	184																
Gear shift fork groove width	5.05 – 5.15 mm	5.25 mm	184																
Shift fork guide pin diameter:																			
1st, 2nd – 3rd gear shift fork	7.9 – 8.0 mm	7.8 mm	185																
4th – 5th gear shift fork	7.985 – 8.000 mm	7.9 mm	185																
Shift drum groove width	8.05 – 8.20 mm	8.3 mm	185																
Engine Lubrication System:																			
Relief valve opening pressure	4.4 – 6.0 kg/cm ²		186																
Oil pressure @4,000 r/min (rpm), 90°C (194°F) oil temp.	196 – 245 kPa (2.0 – 2.5 kg/cm ² , 28 – 36 psi)		186																

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Engine: (Cont.)

Item		Standard	Service Limit	See Page
Engine oil:	Grade	SE class		18
	Viscosity	SAE 10W40, 10W50, 20W40, or 20W50		18
	Amount	3.5 L		18
	Level	Between upper and lower levels		18
Turbocharger:				
Actuator valve opening pressure @0.5 mm Actuator rod stroke		49 – 69 kPa (0.50 – 0.70 kg/cm ² , 7.1 – 10.0 psi)		3-7

Chassis:

Item		Standard		Service Limit	See Page
Wheels:					
Wheel balance		Imbalance of less than 0.1 N (10 g)			27,348
Tire payload		1,770 N (180 kg)			2-9
Standard tires:					2-9
					</

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Chassis: (Cont.)

Item	Standard	Service Limit	See Page
Drive Train:			
Drive chain slack	35 – 40 mm	35 – 45 mm	347
Drive chain 20-link length	381.0 – 382.0 mm	389 mm	198
Front sprocket diameter	79.01 – 79.21 mm	78.3 mm	199
Rear sprocket diameter	267.29 – 267.79 mm	267.0 mm	199
Rear sprocket warp	— — —	0.5 mm TIR	199
Disc Brake:			
Brake fluid grade	DOT3	— — —	205
Pad lining thickness: Front	4.85 mm	1 mm	203
Rear	5.00 mm	1 mm	203
Disc warp	— — —	0.3 mm TIR	205
Disc thickness: Front	4.8 – 5.1 mm	4.5 mm	205
Rear	6.8 – 7.1 mm	6.0 mm	205
Brake pedal position	50.5 – 54.5 mm		293
Brake light switch operation: Front	Non-adjustable		25
Rear	On after about 15 mm pedal travel		25
Front Fork:			
Air pressure	39 – 59 kPa (0.4 – 0.6 kg/cm ² , 5.7 – 8.5 psi)		292
Oil viscosity	SAE10W		
Oil amount	271 ± 4 mL		212
Oil level	176 ± 2 mm (Compressed)		212
Rear Shock Absorber:			
Air pressure	49 – 294 kPa (0.5 – 3.0 kg/cm ² , 7.1 – 43 psi)		346

Electrical Equipment:

Item	Standard	Service Limit	See Page
Charging System:			
Regulator/rectifier output voltage	Battery voltage – 15 V		223
Alternator output	About 50 V		223
@4,000 r/min (rpm), no load			
Stator coil resistance	0.45 – 0.55 Ω		223
Ignition System:			
Spark plug: Electrode gap	0.5 – 0.6 mm		12
Type	NGK BR9EV		12
Ignition Coil:			
Arcing distance (3-needle method)	7 mm or more		230
Primary winding resistance	1.8 – 2.8 Ω		230
Secondary winding resistance	10 – 16 kΩ		230
Pickup coil resistance	380 – 560 Ω		373
Electric Starter System:			
Starter motor carbon brush length	12.0 – 12.5 mm	6 mm	234
Fuel Gauge:			
Fuel level sensor resistance: Full	1 – 5 Ω		327
Empty	103 – 117 Ω		327
Battery:			
Electrolyte level sensor resistance	600 – 750 Ω		381