

Features & Specifications

2018 QuadSport Z50



LT-Z50L8

YU1: Champion Yellow No. 2

Key Features

- Child-size (Y-6) controls for easy operation
- QuadSport Z50 is designed for adult-supervised riders age 6 and older - includes many features that make learning to ride a safe and fun experience
- A keyed ignition switch lets grown-ups decide when the action begins and ends.
- Simple screw-type throttle limiter allows adult supervisors to limit the maximum power delivery to suit the rider's ability.
- Remote tether-type engine-stop switch allows adult supervisors to instantly shutdown the engine when necessary.
- Easy electric starting system plus standard backup recoil starter.
- Smooth-running CVT automatic transmission provides easy operation and allows the rider to focus on riding instead of shifting
- Competition-inspired bodywork and Suzuki Championship Yellow color scheme.

Engine Features

- Compact 49cc 4-stroke, single-cylinder, air-cooled engine has been designed for durability and low maintenance.
- Efficient, push-rod valve train lets the engine operate quietly. Easy-access oil filter and filler cap simplifies service.
- Clean-burning four-stroke engine easily achieves Environmental Protection Act (EPA) emissions regulations.
- Also meets California Air Resources Board (CARB) emissions standards for red-sticker, off-road registration.
- Spark-arrester equipped muffler is environmentally friendly, yet has a pleasant exhaust note.
- Suitable capacity 0.75 gallon (2.8 L) fuel tank for extended operating range combines with vacuum fuel petcock that automatically stops fuel flow when the engine's not running.

Chassis Features

- Strong, high-rigidity steel frame is sturdy and compact.
- Independent swingarm front suspension with coil-over shock absorbers and a single-shock rear suspension provide long wheel travel for a smooth, comfortable ride
- Large diameter semi-sealed front drum brakes and single fully sealed rear drum brake provide strong braking performance.
- Modern styling with full floorboards and a big Quad look, plus brilliant yellow bodywork with black and red graphics.
- Faux headlamp on front fender mimics the sporty look of the QuadSport Z400.
- One-piece 7-inch wheels with tubeless tires provide a smooth comfortable ride
- This machine has a low seat height of just 21.1 inches for easy mounting and confidence-inspiring operation.
- Suzuki T-shaped seat similar to the QuadSport Z400 for smooth weight transition and a comfortable ride, and is easy to remove to simplify maintenance. Black seat cover complements the ATV's graphics package.



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Additional Features

- 12-month limited warranty is double the length of most other youth ATVs.
- A variety of Genuine Suzuki Accessories for QuadSport owners are available including a large selection of Suzuki logo apparel.
- Minimum Age: 6 Years Old
- For more details, please visit www.suzukicycles.com.

Specifications LT-Z50L8

P-03: USA (P33: California)

DIMENSIONS AND CURB MASS

Overall length	1 270 mm (50.0 in)
Overall width	760 mm (29.9 in)
Overall height	765 mm (30.1 in)
Wheelbase	830 mm (32.7 in)
Ground clearance	120 mm (4.7 in)
Seat height	535 mm (21.1 in)
Front track	575 mm (22.6 in)
Rear track	575 mm (22.6 in)
Curb mass	79 kg (174 lbs)

ENGINE

Type	4-stroke, air-cooled
Number of cylinders	1
Bore	36.0 mm (1.417 in)
Stroke	48.6 mm (1.913 in)
Displacement	49 cm ³ (3.0 cu. in)
Corrected compression ratio	8.4 : 1
Carburetor	MIKUNI VM13, single
Air cleaner	Polyurethane foam element
Starter system	Electric and recoil
Idle speed	2 000 ± 150 r/min

DRIVE TRAIN

Clutch	Dry shoe, automatic, centrifugal type
Gearshift pattern	Automatic
Primary reduction ratio (Automatic drive)	2.091 – 1.879 (Variable change)
Secondary reduction ratio	4.272 (47/11)
Final reduction ratio	3.700 (37/10)
Drive chain	D.I.D. 415. 82 links

CHASSIS

Front suspension	Independent, swing axle, coil spring, oil damped
Rear suspension	Swingarm type, coil spring, oil damped
Front wheel travel	52 mm (2.0 in)
Rear wheel travel	51 mm (2.0 in)
Caster	3 °
Trail	10 mm (0.39 in)
Toe-in	1.5 mm (0.06 in)
Camber	0 °
Steering angle	35 ° (right & left)
Turning radius	2.0 m (6.6 ft)
Front brake	Drum brake
Rear brake	Drum brake
Front tire size	AT16 × 8-7☆, tubeless
Rear tire size	AT16 × 8-7☆, tubeless

Specifications LT-Z50L8

P-03: USA (P33: California)

ELECTRICAL

Ignition type.....	Electronic ignition (CDI)
Ignition timing.....	14 ° B.T.D.C. at 2 000 r/min
Spark plug.....	NGK CR6HSA or DENSO U20FSR-U
Battery.....	12 V 14.4 kC (4 Ah) /10 HR
Fuse	10 A

CAPACITIES

Fuel tank	2.6 L (0.7/0.6 US/Imp gal)
Engine oil, oil change	300 ml (0.3/0.3 US/Imp qt)
overhaul	350 ml (0.4/0.3 US/Imp qt)
Transmission oil, oil change.....	25 ml (0.8/0.9 US/Imp oz)
overhaul	30 ml (1.0/1.1 US/Imp oz)



Service Data LT-Z50L8

P-03: USA (P33: California)

VALVE + VALVE GUIDE

Unit: mm (in)

ITEM	STANDARD		LIMIT
Valve diam.	IN.	14.5 (0.57)	—
	EX.	12.5 (0.49)	—
Valve clearance (when cold)	IN.	0.05 – 0.10 (0.002 – 0.004)	—
	EX.	0.10 – 0.15 (0.004 – 0.006)	—
Valve guide to valve stem clearance	IN.	0.010 – 0.037 (0.0004 – 0.0015)	—
	EX.	0.025 – 0.052 (0.0010 – 0.0020)	—
Valve guide I.D.	IN. & EX.	4.000 – 4.012 (0.1575 – 0.1580)	—
Valve stem O.D.	IN.	3.975 – 3.990 (0.1565 – 0.1571)	—
	EX.	3.960 – 3.975 (0.1559 – 0.1565)	—
Valve stem deflection	IN. & EX.	—	0.35 (0.014)
Valve stem runout	IN. & EX.	—	0.05 (0.002)
Valve stem end length	IN. & EX.	—	3.0 (0.12)
Valve head thickness	IN. & EX.	—	0.5 (0.02)
Valve head radial runout	IN. & EX.	—	0.03 (0.001)
Valve spring free length	IN. & EX.	—	22.8 (0.90)
Valve spring tension	IN. & EX.	36.5 – 41.9 N (3.7 – 4.3 kgf, 8.2 – 9.5 lbs) at length 15.0 mm (0.59 in)	—

CAMSHAFT + CYLINDER HEAD

Unit: mm (in)

ITEM	STANDARD		LIMIT
Cam height	IN. & EX.	28.43 – 28.63 (1.119 – 1.127)	28.13 (1.107)
Rocker arm I.D.	IN. & EX.	4.015 – 4.027 (0.1581 – 0.1585)	—
Rocker arm shaft O.D.	IN. & EX.	3.990 – 4.005 (0.1571 – 0.1577)	—
Cylinder head distortion	—		0.05 (0.002)

CYLINDER + PISTON + PISTON RING

Unit: mm (in)

ITEM	STANDARD		LIMIT
Compression pressure	1 100 – 1 200 kPa (11 – 12 kgf/cm ² , 156 – 171 psi)		800 kPa (8 kgf/cm ² , 114 psi)
Piston-to-cylinder clearance	0.015 – 0.038 (0.0006 – 0.0015)		0.120 (0.0047)
Cylinder bore	36.005 – 36.015 (1.4175 – 1.4179)		Nicks or Scratches
Piston diam.	35.977 – 35.990 (1.4164 – 1.4169) Measure at 5 mm (0.2 in) from the skirt end.		35.885 (1.4128)
Cylinder distortion	—		0.05 (0.002)
Piston ring free end gap	1st	Approx. 4.6 (0.18)	3.7 (0.15)
	2nd	Approx. 4.6 (0.18)	3.7 (0.15)
Piston ring end gap	1st	0.08 – 0.20 (0.003 – 0.008)	0.50 (0.020)
	2nd	0.08 – 0.20 (0.003 – 0.008)	0.50 (0.020)
Piston ring to groove clearance	1st	—	0.180 (0.0071)
	2nd	—	0.150 (0.0059)

ITEM	STANDARD		LIMIT
Piston ring groove width	1st	1.01 – 1.03 (0.0398 – 0.0405)	—
	2nd	1.21 – 1.23 (0.0476 – 0.0484)	—
	Oil	1.51 – 1.53 (0.0594 – 0.0602)	—
Piston ring thickness	1st	0.97 – 0.99 (0.0382 – 0.0390)	—
	2nd	1.17 – 1.19 (0.0461 – 0.0469)	—
Piston pin bore I.D.	10.002 – 10.008 (0.3938 – 0.3940)		10.030 (0.3949)
Piston pin O.D.	9.995 – 10.000 (0.3935 – 0.3937)		9.980 (0.3929)

CONROD + CRANKSHAFT

Unit: mm (in)

ITEM	STANDARD	LIMIT
Conrod small end I.D.	10.006 – 10.028 (0.3939 – 0.3948)	10.040 (0.3952)
Conrod deflection	—	3.0 (0.12)
Conrod big end side clearance	0.15 – 0.50 (0.006 – 0.019)	1.0 (0.04)
Conrod big end width	11.95 – 12.00 (0.470 – 0.472)	—
Crank web to web width	33.95 – 34.05 (1.337 – 1.341)	—
Crankshaft runout	—	0.08 (0.003)

CLUTCH

Unit: mm (in)

ITEM	STANDARD	LIMIT
Clutch housing I.D.	110.00 – 110.15 (4.331 – 4.337)	110.50 (4.350)
Clutch shoe thickness	4.0 (0.16)	3.0 (0.12)
Clutch engagement	2 400 – 3 000 r/min.	—
Clutch lock-up	3 300 – 4 300 r/min.	—

REDUCTION GEAR + DRIVE BELT + DRIVE CHAIN

Unit: mm (in) Except ratio

ITEM	STANDARD		LIMIT
Reduction ratio	Variable change (2.091 – 1.879)		—
Reduction gear ratio	4.272 (47/11)		—
Final reduction ratio	3.700 (37/10)		—
Drive belt width	15.9 (0.63)		14.9 (0.59)
Movable driven face spring free length	76.8 (3.02)		73.0 (2.87)
Drive chain	Type	D.I.D. 415	—
	Links	82	—
	20-pitch length	—	259.0 (10.20)
Drive chain slack	25 – 35 (1.0 – 1.4)		—

CARBURETOR

ITEM	SPECIFICATION
Carburetor type	MIKUNI VM13
Bore size	13 mm
I.D.No.	43G0
Idle r/min	2 000 ± 150 r/min.
Float height	23.4 ± 1.0 mm (0.92 ± 0.04 in)
Main jet (M.J.)	#58.8
Jet needle (J.N.)	3N39
Needle jet (N.J.)	E-6
Pilot jet (P.J.)	#12.5
Air screw (A.S.)	PRE-SET
Throttle cable play	3 – 5 mm (0.12 – 0.20 in)

ELECTRICAL

Unit: mm (in)

ITEM		STANDARD/SPECIFICATION	LIMIT	NOTE
Spark plug	Type	NGK: CR6HSA DENSO: U20FSR-U	—	
	Gap	0.6 – 0.7 (0.024 – 0.028)	—	
Spark performance	Over 8 (0.3) at 1 atm.		—	
Ignition coil resistance	Primary	0.1 – 0.7 Ω	—	Terminal – Terminal
	Secondary	14 – 20 k Ω	—	Plug cap – Terminal
Ignition coil primary peak voltage	150 V and more		—	⊕: Ground ⊖: B
Pick-up coil peak voltage	1.5 V and more		—	⊕: Br ⊖: Ground
Generator coil resistance	Charging	0.5 – 2.0 Ω	—	W/R – Ground
	Pick-up	150 – 230 Ω	—	Br – Ground
Generator no-load voltage (when engine is cold)	20 V (AC) and more at 2 800 r/min.		—	
Generator output	70 W at 5 000 r/min.		—	
Regulated voltage	13.5 – 15.2 V		—	
Starter relay resistance	70 – 90 Ω		—	
Battery	Type designation	YTX5L-BS	—	
	Capacity	12 V 14.4 kC (4 Ah)/10 HR	—	
Fuse size	Main	10 A	—	
Starter motor brush length	5.5 (0.22)		2.75 (0.11)	

BRAKE + WHEEL

Unit: mm (in)

ITEM	STANDARD		LIMIT
Front brake lever play	4 – 6 (0.16 – 0.23)		—
Rear brake lever play	4 – 6 (0.16 – 0.23)		—
Brake drum I.D.	Front	—	80.7 (3.18)
	Rear	—	110.7 (4.36)
Rear axle runout	Rear	—	3.0 (0.12)
Wheel rim size	Front & Rear	7 × 6.0 AT	—
Toe-in (with 30 kg)	1.5 ± 3 (0.05 ± 0.12)		—
Turning radius	2.0 m (6.6 ft)		—
Camber	0°		—
Caster	3°		—
Trail	10 (0.39)		—
Steering angle	35° (Right & Left)		—

TIRE

Unit: mm (in)

ITEM	STANDARD		LIMIT
Cold inflation tire pressure (Solo riding)	Front	20 kPa (0.20 kgf/cm ² , 2.9 psi)	—
	Rear	20 kPa (0.20 kgf/cm ² , 2.9 psi)	—
Tire size	Front	AT 16 × 8-7 ☆, tubeless	—
	Rear	AT 16 × 8-7 ☆, tubeless	—
Tire tread depth	Front	—	4.0 (0.16)
	Rear	—	4.0 (0.16)

SUSPENSION

Unit: mm (in)

ITEM	STANDARD	LIMIT
Front wheel travel	52 (2.0)	—
Rear wheel travel	51 (2.0)	—
Swingarm pivot shaft runout	—	0.6 (0.02)

FUEL + OIL

ITEM	SPECIFICATION		NOTE
Fuel type	Use only unleaded gasoline of at least 87 pump octane (R/2 + M/2) or 91 octane or higher rated by the Research Method. Gasoline containing MTBE (Methyl Tertiary Butyl Ether), less than 10 % ethanol, or less than 5 % methanol with appropriate cosolvents and corrosion inhibitor is permissible.		—
Fuel tank capacity	2.6 L (0.7/0.6 US/Imp gal)		
Engine oil type	SAE 10W-40, API SF/SG or SH/SJ with JASO MA		
Engine oil capacity	Change	300 ml (0.6/0.5 US/Imp pt)	
	Overhaul	350 ml (0.7/0.6 US/Imp pt)	
Final reduction gear box oil type	SAE 10W-40, API SF/SG or SH/SJ with JASO MA		
Final reduction gear box oil capacity	Change	25 ml (0.8/0.9 US/Imp oz)	
	Overhaul	30 ml (1.0/1.1 US/Imp oz)	

TIGHTENING TORQUE ENGINE

ITEM		N·m	kgf-m	lb-ft
Cylinder head cover bolt		11	1.1	8.0
Cylinder head bolt		14	1.4	10.0
Valve clearance adjuster locknut		7	0.7	5.0
Generator rotor nut		35	3.5	25.5
Clutch housing nut		50	5.0	36.0
Clutch shoe nut		60	6.0	43.5
Fixed drive face nut	Initial	13	1.3	9.5
	Final	50	5.0	36.0
Generator coil bolt		10	1.0	7.0
Pick-up coil bolt		4.5	0.45	3.0
Crankcase bolt		11	1.1	8.0
Generator case bolt		11	1.1	8.0
CVT case bolt		11	1.1	8.0
Generator cover bolt		11	1.1	8.0
CVT case cover bolt		11	1.1	8.0
Engine oil drain plug		12	1.2	8.5
Final reduction gear box cover bolt		11	1.1	8.0
Engine mounting nut		31	3.1	22.5
Muffler mounting bolt		23	2.3	16.5
Exhaust pipe nut		10	1.0	7.0
Recoil starter friction plate bolt		5.4	0.54	4.0
Spark plug		11	1.1	8.0
Carburetor mounting bolt		6	0.6	4.5
Intake pipe bolt		6	0.6	4.5

FUEL

ITEM	N·m	kgf-m	lb-ft
Fuel valve bolt	4.5	0.45	3.3

CHASSIS

ITEM	N·m	kgf-m	lb-ft
Front suspension arm bolt	50	5.0	36.0
Knuckle arm nut	50	5.0	36.0
Tie-rod end nut	29	2.9	21.0
Tie-rod locknut	29	2.9	21.0
Steering shaft lower nut	29	2.9	21.0
Steering shaft holder bolt	23	2.3	16.5
Handlebar clamp bolt	26	2.6	19.0
Front shock absorber bolt (upper)	29	2.9	21.0
(lower)	29	2.9	21.0
Front hub nut	65	6.5	47.0
Wheel set nut (front and rear)	28	2.8	20.0
Front brake cable equalizer bolt	6.5	0.65	4.5
Front brake cam lever nut	3.3	0.33	2.5
Swingarm pivot nut	102	10.2	74.0
Rear shock absorber bolt	29	2.9	21.0
Rear shock absorber nut	29	2.9	21.0
Rear hub nut	75	7.5	54.0
Rear brake cam lever nut	7.7	0.77	5.5
Rear brake panel nut	28	2.8	20.0
Rear axle housing bolt	50	5.0	36.0
Rear sprocket bolt	23	2.3	16.5
Footrest bolt	26	2.6	19.0