



ATV
2012 Model: LT-F250L2
Date: February 2011

MSRP \$4,499



Flame Red (YT9)

Key Features

1. 246cm³, 1-cylinder, SOHC engine is designed to produce abundant mid-range torque.
2. Mid-range power is enhanced by a Mikuni™ BS 29mm carburetor mated to a large capacity airbox and tuned exhaust system
3. Functional powertrain combines a centrifugal automatic clutch mated with a smooth-shifting, wide-ratio 5-speed transmission with super-low first gear/ convenient reverse gear and 2x4 shaft system.
4. Precision electronic CDI ignition system and automatic cam chain tensioner system reduce maintenance.
5. Suzuki's start in gear system allows the engine to be started in any gear, when the left handlebar brake lever is pulled and the electric starter button is pushed.

6. Rubber engine mounts reduce vibration and specific design features reduce mechanical noise for a quiet and comfortable ride.
7. Independent double-wishbone coil-over dual-shock absorbers front suspension delivers a full 140 mm (5.5in.) of wheel travel.
8. Smooth transitions between the bodywork, seat and fuel tank make it easier for the rider to shift weight forward-and-rearward or side-to-side.
9. Wide, comfortable seat is well-padded and designed with a low height of only 30.9 inches. Generous 4-liter storage box is located underneath the seat.
10. Vacuum-operated petcock automatically turns the fuel flow on and off.
11. Dual 30/30W, fender-mounted halogen headlights provide a modern look and bright illumination - large 5/21W taillight/brake light combination is standard
12. Serrated steel footpegs increase grip in wet conditions.
13. Steel plate is positioned underneath the engine crankcases, and an ample steel-tube bumper and grill guard are standard.
14. Dual hydraulic front disc brake with a single-piston caliper, and sealed rear drum brake can be set for parking.
15. Maintenance-free battery and 150W generator system. DC power output for various electrical device is optional.



Terra Green (YLG)

SPECIFICATIONS**MODEL: LT-F250L2****DIMENSIONS AND CURB MASS**

Overall length.....	1800 mm (70.9 in)	E-28, 33
Overall width	1045 mm (41.1 in)	E-28, 33
Overall height.....	1070 mm (42.1 in)	
Wheelbase.....	1140 mm (44.9 in)	
Front track.....	790 mm (31.1 in)	
Rear track	790 mm (31.1 in)	
Ground clearance	210 mm (8.3 in)	
Seat height.....	785 mm (30.9 in)	
Curb mass	194 kg (428 lbs)	E-28, 33

ENGINE

Type.....	4-stroke, air-cooled, OHC
Number of cylinders	1
Bore	66.0 mm (2.598 in)
Stroke	72.0 mm (2.835 in)
Displacement	246 cm ³ (15.0 cu. in)
Compression ratio.....	9.2 : 1
Carburetor.....	MIKUNI BS29, single
Air cleaner.....	Polyurethane foam element
Starter system.....	Electric and recoil
Lubrication system.....	Wet sump
Idle speed	1500 ± 100 r/min

DRIVE TRAIN

Clutch.....	Wet multi-plate, automatic, centrifugal type
Transmission	5-speed forward with reverse
Gearshift pattern, forward	All up, foot operated
reverse.....	Foot/hand operated
Primary reduction ratio.....	3.250 (65/20)
Gear ratios, Low.....	3.083 (37/12)
2nd.....	1.933 (29/15)
3rd.....	1.388 (25/18)
4th.....	1.095 (23/21)
Top.....	0.913 (21/23)
Reverse.....	2.833 (34/12)
Secondary reduction ratio	1.235 (21/17)
Final reduction ratio	3.200 (32/10)

CHASSIS

Front suspension	Independent, double wishbone, coil spring, oil damped
Rear suspension.....	Swingarm type, coil spring, oil damped
Front wheel travel	140 mm (5.5 in)
Rear wheel travel.....	140 mm (5.5 in)
Caster	9° 30'
Trail.....	42 mm (1.65 in)
Toe-in.....	2 mm (0.08 in)
Steering angle.....	45° (right & left)
Turning radius.....	2.6 m (8.5 ft)
Front brake	Disc brake, twin
Rear brake	Drum brake
Front tire	AT22 × 7-11, tubeless
Rear tire	AT22 × 10- 9, tubeless

ELECTRICAL

Ignition type	Electronic ignition (CDI)
Ignition timing.....	5° B.T.D.C. at 1500 r/min
Spark plug.....	NGK DR7EA or DENSO X22ESR-U
Battery	12V 36.0 kC (10 Ah)/10 HR
Generator.....	Three-phase A.C. generator
Main fuse	20A
Headlight.....	12V 30/30W × 2
Brake/Tail light	12V 21/5W
Neutral indicator light	12V 3W
Reverse indicator light	12V 3W

CAPACITIES

Fuel tank, including reserve	9.7 L (2.6/2.1 US/Imp gal)
reserve.....	2.1 L (0.6/0.5 US/Imp gal)
Engine oil, oil change	2200 ml (2.3/1.9 US/Imp qt)
with filter change.....	2300 ml (2.4/2.0 US/Imp qt)
overhaul.....	2500 ml (2.6/2.2 US/Imp qt)
Final gear oil.....	190 ml (6.4/6.7 US/Imp oz)

SERVICE DATA**VALVE + GUIDE**

Unit: mm (in)

ITEM	STANDARD		LIMIT
Valve diam.	IN.	32 (1.3)	—
	EX.	28 (1.1)	—
Valve clearance (when cold)	IN.	0.03 – 0.08 (0.001 – 0.003)	—
	EX.	0.08 – 0.13 (0.003 – 0.005)	—
Valve guide to valve stem clearance	IN.	0.010 – 0.037 (0.0004 – 0.0015)	—
	EX.	0.030 – 0.057 (0.0012 – 0.0024)	—
Valve guide I.D.	IN. & EX.	5.500 – 5.512 (0.2165 – 0.2170)	—
Valve stem O.D.	IN.	5.475 – 5.490 (0.2156 – 0.2161)	—
	EX.	5.455 – 5.470 (0.2148 – 0.2154)	—
Valve stem deflection	IN. & EX.	—	0.35 (0.014)
Valve stem runout	IN. & EX.	—	0.05 (0.002)
Valve head thickness	IN. & EX.	—	0.5 (0.02)
Valve stem end length	IN. & EX.	—	2.5 (0.10)
Valve seat width	IN. & EX.	0.88 – 1.08 (0.035 – 0.043)	—
Valve head radial runout	IN. & EX.	—	0.03 (0.001)
Valve spring free length	IN. & EX.	—	43.0 (1.69)
Valve spring tension	IN. & EX.	256 – 294 N (25.6 – 29.4 kgf, 56.4 – 64.8 lbs) at length 36.6 mm (1.44 in)	—

CAMSHAFT + CYLINDER HEAD

Unit: mm (in)

ITEM	STANDARD		LIMIT
Cam height	IN.	33.780 – 33.820 (1.3299 – 1.3315)	33.480 (1.3181)
	EX.	32.990 – 33.030 (1.2988 – 1.3004)	32.690 (1.2870)
Camshaft journal oil clearance	0.036 – 0.066 (0.0014 – 0.0026)		0.150 (0.0059)
Camshaft journal holder I.D.	22.012 – 22.025 (0.8666 – 0.8671)		—
Camshaft journal O.D.	21.959 – 21.976 (0.8645 – 0.8652)		—
Camshaft runout	—		0.10 (0.004)
Rocker arm I.D.	IN. & EX.	12.000 – 12.018 (0.4724 – 0.4731)	—
Rocker arm shaft O.D.	IN. & EX.	11.977 – 11.995 (0.4715 – 0.4722)	—
Cylinder head distortion	—		0.05 (0.002)
Cylinder head cover distortion	—		0.05 (0.002)

CYLINDER + PISTON + PISTON RING

Unit: mm (in)

ITEM	STANDARD			LIMIT
Compression pressure	Approx. 1 400 kPa (14 kgf/cm ² , 199 psi)			1 200 kPa (12 kgf/cm ² , 171 psi)
Piston to cylinder clearance	0.040 – 0.050 (0.0016 – 0.0020)			0.120 (0.0047)
Cylinder bore	66.000 – 66.015 (2.5984 – 2.5990)			66.090 (2.6020)
Piston diam.	65.955 – 65.970 (2.5966 – 2.5972) Measure at 18 mm (0.71 in) from the skirt end.			65.880 (2.5937)
Cylinder distortion	—			0.05 (0.002)
Piston ring free end gap	1st	R	Approx. 8.7 (0.34)	7.0 (0.28)
	2nd	R	Approx. 9.0 (0.35)	7.2 (0.28)
Piston ring end gap	1st	0.10 – 0.25 (0.004 – 0.010)		0.50 (0.020)
	2nd	0.10 – 0.25 (0.004 – 0.010)		0.50 (0.020)
Piston ring to groove clearance	1st	—		0.180 (0.0071)
	2nd	—		0.150 (0.0059)
Piston ring groove width	1st	1.01 – 1.03 (0.0398 – 0.0406)		—
	2nd	1.21 – 1.23 (0.0476 – 0.0484)		—
	Oil	2.01 – 2.03 (0.0791 – 0.0799)		—

ITEM	STANDARD		LIMIT
Piston ring thickness	1st	0.97 – 0.99 (0.038 – 0.039)	—
	2nd	1.17 – 1.19 (0.046 – 0.047)	—
Piston pin bore	16.002 – 16.008 (0.6300 – 0.6302)		16.030 (0.6311)
Piston pin O.D.	15.992 – 16.000 (0.6296 – 0.6299)		15.980 (0.6291)

CONROD + CRANKSHAFT

Unit: mm (in)

ITEM	STANDARD	LIMIT
Conrod small end I.D.	16.006 – 16.014 (0.6302 – 0.6305)	16.040 (0.6315)
Conrod deflection	—	3.0 (0.12)
Conrod big end side clearance	0.10 – 0.45 (0.004 – 0.018)	1.0 (0.04)
Conrod big end width	17.95 – 18.00 (0.707 – 0.709)	—
Crank web to web width	53.0 ± 0.1 (2.087 ± 0.004)	—
Crankshaft runout	—	0.08 (0.003)

OIL PUMP

ITEM	STANDARD	LIMIT
Oil pressure (at 60 °C, 140 °F)	Above 50 kPa (0.50 kgf/cm ² , 7.1 psi) Below 80 kPa (0.80 kgf/cm ² , 11.3 psi) at 3 000 r/min	—

CLUTCH

Unit: mm (in)

ITEM	STANDARD	LIMIT
Clutch release screw	1/16 – 1/8 turn back	—
Drive plate thickness	2.7 – 2.9 (0.106 – 0.114)	2.4 (0.094)
Drive plate claw width	11.8 – 12.0 (0.46 – 0.47)	11.0 (0.43)
Driven plate distortion	—	0.10 (0.004)
Clutch spring free length	27.0 (1.06)	25.7 (1.01)
Clutch wheel I.D.	116.00 – 116.15 (4.567 – 4.573)	116.5 (4.59)
Clutch shoe	—	No groove at any part
Clutch engagement r/min	1 700 – 2 100 r/min	—
Clutch lock-up r/min	3 100 – 3 600 r/min	—

DRIVE TRAIN

Unit: mm (in) Except ratio

ITEM		STANDARD	LIMIT
Primary reduction ratio		3.250 (65/20)	—
Secondary reduction ratio		1.235 (21/17)	—
Final reduction ratio		3.200 (32/10)	—
Transmission gear ratio	Low	3.083 (37/12)	—
	2nd	1.933 (29/15)	—
	3rd	1.388 (25/18)	—
	4th	1.095 (23/21)	—
	Top	0.913 (21/23)	—
	Reverse	2.833 (29/12 × 34/29)	—
Shift fork to groove clearance		0.10 – 0.30 (0.004 – 0.012)	0.50 (0.020)
Shift fork groove width		4.50 – 4.60 (0.177 – 0.181)	—
Shift fork thickness		4.30 – 4.40 (0.169 – 0.173)	—
Gearshift lever height		17 (0.7)	—
Secondary bevel gear backlash		0.03 – 0.15 (0.001 – 0.006)	—
Rear drive (final) bevel gear backlash		0.05 – 0.30 (0.002 – 0.012)	—

CARBRETOR

ITEM	SPECIFICATION		
	E-24	E-17	E-28, 33
Carburetor type	MIKUNI BS29	←	←
Bore size	29 mm	←	←
I.D. No.	05G0	05G2	05G1
Idle r/min	1 500 ± 100 r/min	←	←
Float height	17.1 ± 1.0 mm (0.67 ± 0.04 in)	←	←
Main jet (M.J.)	#137.5	←	#137.5
Jet needle (J.N.)	4DJ24-1st	←	←
Needle jet (N.J.)	P-0M	←	P-0M
Throttle valve (Th.V.)	#100	←	←
Pilot jet (P.J.)	#17.5	←	#17.5
Pilot screw (P.S.)	2 and 7/8 turns back	←	PRE-SET
Throttle cable play	3 – 5 mm (0.12 – 0.20 in)	←	←
Starter (enricher) cable play	0.5 – 1.0 mm (0.02 – 0.04 in)	←	←

ELECTRICAL

Unit: mm (in)

ITEM		SPECIFICATION		NOTE
Spark plug	Type	NGK: DR7EA DENSO: X22ESR-U		
	Gap	0.6 – 0.7 (0.024 – 0.028)		
Spark performance		Over 8 (0.3) at 1 atm.		
Ignition coil resistance	Primary	0.05 – 1.0 Ω		Terminal – Terminal
	Secondary	10 – 20 k Ω		Plug cap – Ground
Ignition coil primary peak voltage		More than 120 V		⊕: B/W ⊖: W/BI
Generator coil resistance	Pick-up	80 – 155 Ω		B/Y – G/W
	Charging	0.5 – 1.5 Ω		Y – Y
Pick-up coil peak voltage		More than 4.0 V		⊕: G/W ⊖: B/Y
Generator no-load voltage (When engine is cold)		More than 60 V (AC)		
Generator Max. output		Approx. 150 W at 5 000 r/min		
Regulated voltage		14.0 – 15.5 V at 5 000 r/min		
Starter relay resistance		3 – 6 Ω		
Battery	Type designation	YTX12-BS		
	Capacity	12 V 36.0 kC (10 Ah)/10 HR		
Fuse size		20 A		

WATTAGE

Unit: W

ITEM		SPECIFICATION		
		E-28, 33	E-24	E-17
Headlight	HI	30 × 2 pcs.	←	←
	LO	30 × 2 pcs.	←	←
Brake light/Taillight		21/5	←	←
Backup light				21
Reverse indicator light		3	←	←
Neutral indicator light		3	←	←
High beam indicator light				3

BRAKE + WHEEL

Unit: mm (in)

ITEM	STANDARD/SPECIFICATION		LIMIT
Rear brake cable play	3 – 5 (0.12 – 0.20)		—
Rear brake pedal free travel	20 – 30 (0.79 – 1.18)		—
Brake disc thickness	Front	3.3 – 3.7 (0.130 – 0.146)	3.0 (0.12)
Brake disc runout	Front	—	0.30 (0.012)
Brake drum I.D.	Rear	—	140.7 (5.54)
Master cylinder bore	Front	14.000 – 14.043 (0.5512 – 0.5529)	—
Master cylinder piston diam.	Front	13.957 – 13.984 (0.5495 – 0.5506)	—
Brake caliper cylinder bore	Front	32.030 – 32.080 (1.2610 – 1.2630)	—
Brake caliper piston diam.	Front	31.948 – 31.998 (1.2578 – 1.2598)	—
Brake fluid type	DOT 4		—
Turning radius	2.6 m (8.5 ft)		—
Toe-in (with 75 kg, 165 lbs)	2 ± 4 (0.08 ± 0.16)		—
Camber	0°		—
Caster	9° 30'		—
Wheel rim size	Front	11 × 5.5 AT	—
	Rear	9 × 8.0 AT	—
Tire size	Front	AT22 × 7-11☆	—
	Rear	AT22 × 10-9☆	—
Tire tread depth	Front	—	4.0 (0.16)
	Rear	—	4.0 (0.16)
Wheel axle runout	Rear	—	3.0 (0.12)

TIRE PRESSURE

COLD INFLATION TIRE PRESSURE	kPa	kgf/cm ²	psi
FRONT	25	0.25	3.6
REAR	20	0.20	2.9

VEHICLE LOAD CAPACITY LIMIT: 132 kg (291 lbs)

FUEL + OIL

TEM	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.		E-28, 33
	Gasoline used should be graded 91 octane or higher. An unleaded gasoline is recommended.		E-17, 24
Fuel tank capacity including reserve	9.7 L (2.6/2.1 US/Imp gal)		
reserve	2.1 L (0.6/0.5 US/Imp gal)		
Engine oil type	SAE 10W-40, API SF/SG or SH/SJ with JASO MA		
Engine oil capacity	Change	2 200 ml (2.3/1.9 US/Imp qt)	
	Filter change	2 300 ml (2.4/2.0 US/Imp qt)	
	Overhaul	2 500 ml (2.6/2.2 US/Imp qt)	
Rear drive (final) gear oil type	Hypoid gear oil SAE #90, API grade GL-5		
Rear drive (final) gear oil capacity	190 ml (6.4/6.7 US/Imp oz)		

TIGHTENING TORQUE ENGINE

ITEM	N·m	kgf-m	lbf-ft
Cylinder head cover bolt	10	1.0	7.0
Cam chain sprocket bolt	11	1.1	8.0
Cylinder head nut (8 mm)	23	2.3	16.5
Cylinder head nut (6 mm)	10	1.0	7.0
Cylinder base nut (6 mm)	10	1.0	7.0
Cam chain tension adjuster bolt	10	1.0	7.0
Cam chain tension adjuster spring holder bolt	8	0.8	6.0
Spark plug	18	1.8	13.0
Valve clearance adjuster lock-nut	14	1.4	10.0
Crankcase bolt	11	1.1	8.0
T.D.C. plug	23	2.3	16.5
Clutch shoe nut	140	14.0	101.5
Clutch sleeve hub nut	100	10.0	72.5
Generator rotor nut	160	16.0	115.5
Starter clutch bolt	26	2.6	19.0
Starter cup nut	33	3.3	24.0
Gearshift cam stopper bolt	10	1.0	7.0
Gearshift cam plate bolt	10	1.0	7.0
Exhaust pipe nut	23	2.3	16.5
Muffler mounting bolt	23	2.3	16.5
Muffler connecting bolt	23	2.3	16.5
Engine oil drain plug	21	2.1	15.0
Drive/driven bevel gear nut	100	10.0	72.5
Engine mounting nut	55	5.5	40.0
Engine mounting bracket bolt	23	2.3	16.5
Starter motor lead wire nut	6	0.6	4.5
Starter motor mounting bolt	10	1.0	7.0

DRIVE TRAIN

ITEM	N·m	kgf-m	lbf-ft
Front propeller shaft flange coupling bolt	45	4.5	32.5
Rear drive shaft housing nut	23	2.3	16.5
Rear propeller shaft flange coupling bolt	30	3.0	21.5
Rear drive gear case bolt	23	2.3	16.5
Rear drive gear oil filler plug	33	3.3	24.0
Rear drive gear oil drain plug	33	3.3	24.0
Rear axle housing/swingarm (RH)	60	6.0	43.5
Rear axle housing/final gear case (RH)	50	5.0	36.0
Swingarm (LH)/final gear case (LH)	50	5.0	36.0

CHASSIS

ITEM	N-m	kgf-m	lbf-ft
Handlebar clamp bolt	26	2.6	19.0
Steering shaft holder bolt	23	2.3	16.5
Steering shaft nut	49	4.9	35.5
Steering knuckle nut (Upper & Lower)	29	2.9	21.0
Tie rod end nut	29	2.9	21.0
Tie rod lock-nut	29	2.9	21.0
Front shock absorber mounting nut (Upper)	55	5.5	40.0
bolt (Lower)	55	5.5	40.0
Wishbone arm pivot nut	65	6.5	47.0
Wheel hub nut (Front)	75	7.5	54.0
nut (Rear)	110	11.0	79.5
Wheel set nut (Front & Rear)	60	6.0	43.5
Brake master cylinder mounting bolt	10	1.0	7.0
Brake hose union bolt	23	2.3	16.5
Front brake air bleeder valve	6.0	0.6	4.4
Front brake disc bolt	23	2.3	16.5
Front brake caliper mounting bolt	26	2.6	19.0
Front brake pad mounting bolt	18	1.8	13.0
Front brake caliper holder pin	18	1.8	13.0
Front brake caliper holder slide pin	23	2.3	16.5
Footrest bolt 8 mm	26	2.6	19.0
10 mm	55	5.5	40.0
Rear brake pedal nut	12	1.2	8.5
Rear brake cam lever nut	11	1.1	8.0
Rear brake panel	60	6.0	43.5
Rear shock absorber mounting bolt (Upper)	60	6.0	43.5
nut (Lower)	60	6.0	43.5
Rear swingarm pivot nut	102	10.2	74.0
Headlight mounting bolt	5	0.5	3.5
Headlight beam adjusting screw	3	0.3	2.0