Features & Specifications
2018 RM85

RM85L8

YU1: Champion Yellow

New Features

- New, competition inspired body panel colors, graphics and seat colors match the 2018 RM-Z450.

Engine Features

- The high-revving 84.7cc, 2-stroke, liquid-cooled, reed-valve, single-cylinder engine has a bore and stroke of 48.0 x 46.8mm.
- The cylinder features Suzuki Composite Electrochemical Material (SCEM) for durability, low weight and effective heat transfer for superior class performance.
- The exhaust valves are made of aluminum to best match the expansion rate of the cylinder, improving sealing for better engine performance.
- The exhaust valve governor and actuator help provide good throttle response and overall tractability.
- Precise Keihin™ PE28 carburetor provides smooth throttle response, and is designed for simplified maintenance and tuning.
- Digital CDI mapping helps create strong engine performance at high RPM.
- The large-capacity radiator provides efficient engine cooling at all engine speeds.

Transmission Features

- The RM85 is equipped with a smooth shifting six-speed transmission plus a precise rack and pinion activated clutch.
- The long clutch lever makes it easy to accurately locate and work the engagement point during starts and driving off of corners.
- This durable transmission features a refined shift mechanism with a strong detent spring and needle bearing on the left side of the shift drum.
- A knurled shift-pedal tip delivers excellent grip and shift feel for precise gear selection.

Chassis Features

- A tubular steel frame with aluminum beam swingarm provide class-leading performance on the track, especially in the corners. Designed for rigidity, durability and straight-line performance, the frame features large diameter tubing in key areas and a large front reinforcement plate.
- SHOWA 37mm inverted front forks are completely adjustable for rider weight, style and ability. The forks feature a cartridge system with fully-adjustable rebound damping and 20-way adjustable compression damping (also included are guards to protect the inner fork tubes). The forks have 275mm (10.8-inches) of travel.
- A SHOWA large diameter rear shock absorber is valved to produce a plush feel and resistance to bottoming. The shock provides 277mm (10.9-inches) of wheel travel and features adjustable compression and rebound damping force adjustment.
- A twin-piston caliper front brake with 220mm (8.7-inches) large-diameter disc and a rear brake with 200mm (7.9-inches) disc to provide excellent braking performance.
- The light, narrow-diameter front and rear brake hoses improve feel and feedback to the rider. The font hose is routed behind the fork leg, eliminating the need for a brake hose cover.
- A rigid rear brake caliper provides reliable braking performance, long pad life and is easy to maintain. The caliper's plastic guard reduces the possibility of damage and saves weight.
- The forged aluminum-alloy rear brake pedal is light and strong while providing the rider accurate braking feel.
- High-quality footpegs are made of cast chrome-molybdenum steel, instead of stamped steel, which makes them more durable with better grip.
- Champion Yellow bodywork with new graphics design, new yellow rear fender, plus black fork protectors and guards provide a professional race look.
- Each side of the new color seat has textured surface for better knee gripping.
- The RM85's wheel sizes meet AMA 85cc class regulations (Front: 70/100-17; Rear: 90/100-14).

Additional Features

- A variety of Genuine Suzuki Accessories for RM85 owners are available including a large selection of Suzuki logo apparel.
- Learn more about Suzuki's industry leading contingency, The RM ARMY and Amateur Support programs at www.SuzukiCycles.com/Racing.
- For more details, please visit www.suzukicycles.com.

Specifications RM85L8
E-03: USA, E-33: California

DIMENSIONS

Overall length	1 805 mm (71.1 in)
Overall width	735 mm (28.9 in)
Overall height	1 100 mm (43.3 in)
Wheelbase	1 240 mm (48.8 in)
Ground clearance	325 mm (12.8 in)
Seat height	850 mm (33.5 in)

ENGINE

Type	Two-stroke, liquid-cooled
Intake system	Crankcase reed valve
Number of cylinders	1
Bore	48.0 mm (1.890 in)
Stroke	46.8 mm (1.843 in)
Displacement	84.7 cm^3 (5.2 cu. in)
Corrected compression ratio	9.5 : 1 (EX VALVE OPEN)
	10.9 : 1 (EX VALVE CLOSE)
Carburetor	KEIHIN PE28, Single
Air cleaner	Polyurethane foam element
Starter system	Primary kick
Lubrication system	Fuel/oil premixture of 30 : 1

DRIVE TRAIN

Clutch	Wet multi-plate type
Transmission	6-speed constant mesh
Gearshift pattern	1-down, 5-up
Primary reduction ratio	3.444 (62/18)
Gear ratios, Low	2.545 (28/11)
2nd	1.933 (29/15)
3rd	1.571 (22/14)
4th	1.333 (20/15)
5th	1.166 (21/18)
Top	1.045 (23/22)
Final reduction ratio	3.357 (47/14)
Drive chain	D.I.D 428DS, 118 links

Specifications RM85L8
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CHASSIS

Front suspension	Telescopic, pneumatic/coil spring, oil damped
Rear suspension	Link type, oil damped
Front fork stroke	275 mm (10.8 in)
Rear wheel travel	277 mm (10.9 in)
Caster	28° 30’
Trail	87 mm (3.4 in)
Steering angle	45°
Turning radius	1.9 m (6.2 ft)
Front brake	Disc brake, hydraulically operated
Rear brake	Disc brake, hydraulically operated
Front tire size	70/100-17 40M
Rear tire size	90/100-14 49M

ELECTRICAL

Ignition type	Electronic Ignition (CDI)
Ignition timing	15° B.T.D.C. at 11 000 rpm
Spark plug	NGK BR10ES

CAPACITIES

Fuel tank	5.0 L (1.3/1.1 US/Imp gal)
Transmission oil	650 ml (1.4/1.1 US/Imp pt)
Engine coolant	570 ml (1.2/1.0 US/Imp pt)
Front fork oil	351 ml (11.86/12.36 US/Imp oz)

CYLINDER + PISTON + PISTON RING

Unit: mm (in)

ITEM	STANDARD	LIMIT
Piston to cylinder clearance	0.040 – 0.050 (0.0016 – 0.0020)	0.120 (0.0047)
Cylinder bore	48.000 – 48.015 (1.8898 – 1.8904) Measure 15 (0.59) from the top surface.	Nicks or scratches
Piston diam.	47.955 – 47.970 (1.8880 – 1.8886) Measure 16 (0.63) from the skirt end.	47.880 (1.8850)
Cylinder distortion	———	0.05 (0.002)
Cylinder head distortion	———	0.05 (0.002)
Piston ring free end gap	N: Approx. 4.0 (0.16)	3.2 (0.13)
Piston ring to groove clearance	0.020 – 0.060 (0.008 – 0.0024)	———
Piston ring end gap	0.20 – 0.40 (0.008 – 0.016)	0.80 (0.031)
Piston pin bore	14.002 – 14.008 (0.5513 – 0.5515)	14.030 (0.5524)
Piston pin O.D.	13.995 – 14.000 (0.5510 – 0.5512)	13.980 (0.5504)
Reed valve clearance	———	0.2 (0.008)

CONROD + CRANKSHAFT

Unit: mm (in)

ITEM	STANDARD	LIMIT
Conrod small end I.D.	18.003 – 18.011 (0.7088 – 0.7091)	18.040 (0.7102)
Crank web to web width	44.9 – 45.1 (1.767 – 1.775)	———
Crankshaft runout	———	0.05 (0.002)

CLUTCH

Unit: mm (in)

ITEM	STANDARD	LIMIT
Clutch lever play	10 – 15 (0.4 – 0.6)	———
Drive plate thickness	2.7 – 2.9 (0.106 – 0.114)	2.4 (0.094)
Driven plate distortion	———	0.10 (0.004)
Clutch spring free length	41.5	39.4 (1.55)

RADIATOR

ITEM	STANDARD	LIMIT
Radiator cap valve opening pressure	110 kPa (1.1 kgf/cm^2, 16 psi)	———

TRANSMISSION

Unit: mm (in) Except ratio

ITEM		STANDARD		LIMIT
Primary reduction ratio		3.444 (62/18)		———
Final reduction ratio		3.357 (47/14)		———
Gear ratios	Low	2.545 (28/11)		———
	2nd	1.933 (29/15)		———
	3rd	1.571 (22/14)		———
	4th	1.333 (20/15)		———
	5th	1.166 (21/18)		———
	Top	1.045 (23/22)		———
Shift fork to groove clearance		No.1, No.2 & No.3	0.05 – 0.25 (0.002 – 0.010)	0.45 (0.018)
Shift fork groove width		No.1	3.95 – 4.05 (0.156 – 0.159)	———
		No.2 & No.3	4.45 – 4.55 (0.175 – 0.179)	———
Shift fork thickness		No.1	3.80 – 3.90 (0.150 – 0.154)	———
		No.2 & No.3	4.30 – 4.40 (0.169 – 0.173)	———

DRIVE CHAIN

Unit: mm (in)

ITEM	STANDARD		LIMIT
Drive chain	Type	D.I.D 428DS	———
	Links	118	———
	20-pitch length	———	259 (10.2)
Drive chain slack	40 – 50 (1.6 – 2.0)		———

CARBURETOR

ITEM		SPECIFICATION
Carburetor type		KEIHIN PE28
Bore size		28 mm
I.D. No.		03B3
Float height		19.0 ± 0.5 mm (0.75 ± 0.02 in)
Main jet	(M.J.)	#128
Jet needle	(J.N.)	24NAAH-3rd
Slow jet	(S.J.)	#50
Air screw	(P.A.S.)	2 turns out
Throttle cable play		2 – 4 mm (0.08 – 0.16 in) at the throttle grip

ELECTRICAL

Unit: mm (in)

ITEM	SPECIFICATION		NOTE
Spark plug	Type	NGK: BR10ES	
	Gap	0.7 – 0.8 (0.028 – 0.031)	
Spark performance	Over 8 (0.3) at 1 atm.		
Ignition coil resistance	Primary	0.2 – 1.0 Ω	W/Bl – Ground
	Secondary	12 – 20 kΩ	Plug cap – Ground
Magneto coil resistance	100 – 160 Ω		B/R – R/W
	140 – 230 Ω		R/W – B/W
	240 – 380 Ω		B/R – B/W
Ignition coil primary peak voltage	200 V and more		⊕: Ground ⊖: W/Bl

BRAKE + WHEEL

Unit: mm (in)

ITEM	STANDARD		LIMIT
Brake lever play	5 – 20 (0.20 – 0.79)		———
Brake disc thickness	Front	2.8 – 3.2 (0.110 –0.126)	2.5 (0.10)
	Rear	2.85 – 3.15 (0.112 – 0.124)	2.5 (0.10)
Brake disc runout	———		0.30 (0.012)
Master cylinder bore	Front	11.000 – 11.043 (0.4331 – 0.4348)	———
	Rear	12.700 – 12.743 (0.5000 – 0.5017)	———
Master cylinder piston diam.	Front	10.957 – 10.984 (0.4314 – 0.4324)	———
	Rear	12.657 – 12.684 (0.4983 – 0.4994)	———
Brake caliper cylinder bore	Front	30.230 – 30.306 (1.1902 – 1.1931)	———
	Rear	27.000 – 27.076 (1.0630 – 1.0660)	———
Brake caliper piston diam.	Front	30.150 – 30.200 (1.1870 – 1.1890)	———
	Rear	26.920 – 26.970 (1.0600 – 1.0618)	———
Wheel rim runout	Axial	———	2.0 (0.08)
	Radial	———	2.0 (0.08)
Wheel axle runout	Front	———	0.25 (0.010)
	Rear	———	0.25 (0.010)
Tire size	Front	70/100-17 40M	———
	Rear	90/100-14 49M	———

SUSPENSION

Unit: mm (in)

ITEM	STANDARD		LIMIT
Front fork stroke	275 (10.8)		———
Front fork spring free length	———		444 (17.48)
Front fork spring rate (each leg)	2.8 N/mm (0.28 kgf/mm)		———
Front fork oil level	124 (4.88)		———
Front fork damping force adjuster	Rebound	1 and 1/2 turns out	———
	Compression	7 clicks out	———
Front fork air pressure	0 kPa (0 kgf/cm^2, 0 psi)		———
Rear shock absorber gas pressure	1 000 kPa (10 kgf/cm^2, 142 psi)		———
Rear shock absorber spring pre-set length	3.1 mm (0.12 in) compressed from spring free length		———
Rear shock absorber damping force adjuster	Rebound	2 turns out	———
	Compression	3/4 turns out	———
Rear shock absorber spring rate	46 N/mm (4.6 kgf/mm)		
Rear wheel travel	277 (10.9)		———
Swingarm pivot shaft runout	———		0.3 (0.01)

TIRE PRESSURE

Front & Rear	70 – 110 kPa (0.7 – 1.1 kgf/cm^2, 10 – 16 psi)

FUEL + OIL + COOLANT

ITEM	SPECIFICATION		NOTE
Fuel type	Use only unleaded gasoline of at least 90 pump octane ($\frac{R+M}{2}$ method).		
Fuel tank capacity	5.0 L (1.3/1.1 US/Imp gal)		
Engine oil type	SUZUKI CCI SUPER 2-CYCLE MOTOR LUBRICANT or equivalent Two Cycle Racing Lubricant		
Air cleaner element oil type	MOTUL AIR FILTER OIL or equivalent filter oil		
Engine coolant type	Use an anti-freeze & Summer engine coolant compatible with aluminum radiator, mixed with distilled water only, at the ratio of 50:50.		
Engine coolant tank capacity	570 ml (1.20/1.00 US/Imp pt)		
Transmission oil type	SAE 10W-40, API SF/SG or SH/SJ with JASO MA		
Transmission oil capacity	Change	550 ml (1.16/0.97 US/Imp pt)	
	Overhaul	650 ml (1.37/1.14 US/Imp pt)	
Brake fluid type	DOT 4		
Front fork oil type	SUZUKI FORK OIL SS-05 or an equivalent fork oil		
Front fork oil capacity (each leg)	351 ml (11.86/12.36 US/Imp oz)		
Rear shock absorber oil type	SUZUKI REAR SUSPENSION OIL SS-25 or an equivalent rear suspension oil		
Rear shock absorber oil capacity	195 ml (6.6/6.9 US/Imp oz)		