

800R E-TEC MODELS

ENGINE			
Engine type		Rotax 797 E-TEC	
Number of cylinder		2	
Bore		82 mm (3.228 in)	
Stroke		75.7 mm (2.98 in)	
Displacement		799.5 cm³ (48.79 in³)	
Compression ratio		12.30 ± 0.3	
Combustion chamber volume		35.39 cc ± 0.93	
Maximum power engine speed		7900 ± 100 RPM	
3D RAVE spring	Compression spring	Color	Red
		Wire diameter	0.8 mm (.031 in)
		Minimum free length	45 mm (1.772 in)
	Valve springs	Color	Red
		Wire diameter	0.7 mm (.0276 in)
		Minimum free length	35 mm (1.378 in)
Piston ring type		Semi-trapezoidal	
Ring end gap	New	0.4 mm to 0.6 mm (.016 in to .024 in)	
	Wear limit	1 mm (.039 in)	
Ring/piston groove clearance	New	0.06 mm to 0.1 mm (.0024 in to .0039 in)	
	Wear limit	0.2 mm (.0079 in)	
Piston/cylinder wall clearance	New	0.148 mm ± 0.013 mm (.0058 in ± .0005 in)	
	Wear limit	0.2 mm (.0079 in)	
Piston projection		1.82 mm - 1.92 mm (.072 in - .076 in)	
Piston skirt wear	Wear limit	0.15 mm (.006 in)	
Cylinder head warpage	Wear limit	0.5 mm (.0197 in)	
Cylinder taper	New (max.)	0.05 mm (.002 in)	
	Wear limit	0.1 mm (.0039 in)	
Cylinder out of round	New (max.)	0.010 mm (.0004 in)	
	Wear limit	0.08 mm (.0031 in)	
Crankshaft end play	New	MIN.: 0.10 mm (.0039 in) MAX.: 0.30 mm (.0118 in)	
Crankshaft deflection	Max.	MAG: 0.05 mm (.002 in) CENTER: 0.04 mm (.0016 in) PTO: 0.06 mm (.0024 in)	
Connecting rod big end axial play	New	0.23 mm to 0.617 mm (.0091 in to .0243 in)	
	Wear limit	1.2 mm (.0472 in)	

Section 08 TECHNICAL SPECIFICATIONS

Subsection 01 (800R E-TEC MODELS)

COOLING SYSTEM			
Coolant	Type		Ethyl glycol and distilled water (50%/50%). Use BRP LONG LIFE ANTIFREEZE (P/N 219 702 685) or coolant specifically formulated for aluminum engines
	Quantity	163"	5.31 L (179.6 U.S. oz)
		174"	5.50 L (186 U.S. oz)
Thermostat opening temperature			37°C (99°F)
Radiator cap opening pressure			90 kPa (13 PSI)
LUBRICATION SYSTEM			
Oil injection pump type			Electronic oil injection pump
Injection oil	Type		XPS synthetic 2-stroke oil (P/N 293 600 132)
	Quantity		3.7 L (125.1 U.S. oz)
FUEL SYSTEM			
Fuel delivery			E-TEC direct injection
Throttle body			Dell'Orto 52 mm
Fuel pump			In-tank electrical fuel pump
Idle speed (not adjustable)			1200 ± 200 RPM
Fuel	Type		Premium unleaded gasoline (fuel which may contain up to 10% MAX ethanol
	Octane rating	Inside North America	91 Pump Posted AKI (R+M)/2)
		Outside North America	95 (RON)
Fuel tank capacity			40 L (10.6 U.S. gal.)
ELECTRICAL SYSTEM			
Lighting system output			1340 W @ 6000 RPM
Ignition type			Inductive
Spark plug	Make and type		NGK PFR7AB (engine and spark plug threads are indexed)
	Gap		Not adjustable 0.75 mm ± 0.05 mm (.03 in ± .002 in)
Ignition timing BTDC @ 3500 RPM			28°
			5.63 mm (.222 in)
Crankshaft position sensor (CPS)			190 to 290 Ω
Stator			0.63 ± 0.03 Ω
Battery			12 V, 18 A●h
Headlamp			2 x 60/55 W (H-4)
Taillight and stoplight			2.6 W / 139mW LED
Fuses	RER		5 A
	Fuel level sensor		0.25 A
	Main		25 A
DRIVE SYSTEM			
Chaincase oil	Type		XPS synthetic chaincase oil (P/N 413 803 300)
	Quantity		350 ml (12 U.S. oz)

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DRIVE SYSTEM			
Chain drive ratio		163"	21/51
		174"	19/49
Chain	Pitch		9.530 mm (.375 in)
	Type		Silent
	Links qty/ plate qty	163"	112/13
		174"	110/13
Drive pulley type			TRA VII
Drive pulley calibration	Clutch engagement		3800 ± 100 RPM
	Spring color		Purple/Pink
	Spring length	Purple/Pink	101.8 mm (4.008 in)
Drive pulley calibration	Pin		Threaded long
	Ramp		413
Drive pulley calibration	Screw position		3
Driven pulley type	Type		QRS
	Spring color		Blue
	Spring preload		0
	Cam angle		40°
Pulley distance	Z		Not adjustable 20.9 mm (.823 in)
	X		Not adjustable 39.4 mm ± 1.8 mm (1.551 in ± .071 in)
Offset	Y - X	New	Not adjustable 3 mm (.118 in)
		After break-in	Not adjustable 2 mm ± .5 mm (.079 in ± .02 in)
Drive belt	Width		38.3 mm (1.508 in)
	Wear limit		35.9 mm (1.413 in)
Track	Width		406.4 mm (16 in)
	163"		4.14 m (163 in)
	174"		4.42 m (174 in)
	Profile height		76.2 mm (3 in)
Track adjustment	Deflection		3.2 cm (1.26 in)
	Force		6.0 kgf to 8.5 kgf (13 lbf to 19 lbf)

BRAKE SYSTEM		
Brake lining minimum thickness		1 mm (.039 in)
Brake disk minimum thickness		4.5 mm (.177 in)
Brake fluid	Type	DOT 4
	Quantity	65 ml (2.2 U.S. oz)

SUSPENSION	
<i>FRONT</i>	
Suspension type	RAS 2
Suspension maximum travel	200 mm (8 in)
Shock absorber type	HPG Plus
Stabilizer bar type	Link

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SUSPENSION		
<i>REAR</i>		
Suspension type		tMotion
Suspension maximum travel		419 mm (16.5 in)
Shock absorber type	Center	HPG Plus
	Rear	HPG Plus
Stroke limiter standard position		3
STEERING SYSTEM		
Ski type		Pilot DS 3
Toe-out		5 mm (.197 in)
Camber		0°
WEIGHT AND DIMENSIONS		
Mass (dry)	163"	208 kg (459 lb)
	174"	210 kg (463 lb)
Overall length	163"	344.5 cm (135.6 in)
	174"	357.9 cm (140.9 in)
Overall width		108.1 cm or 112.6 cm (42.6 in or 44.3 in)
Overall height		134.6 cm (53 in)
Ski stance		90.7 cm or 95 cm (35.7 in or 37.4 in)
MATERIAL		
Frame		Aluminum
Side bottom pan, front hull cover, gauge support, gauge support cover, side panel XM, center hood, and front console		Polypropylene
Lateral hood rear console, and XS top side panel		Polypropylene or TPE