



Motorcycle
2012 Model: DR-Z125/LL2
Date: May 2011

MSRP \$2,999



Champion Yellow No.2 (YU1)

Key Features

1. 124cm³, 4-stroke, air-cooled engine produces just the right amount yet strong low-to-mid range power that can be easily handled.
2. MIKUNI VM20SS carburetor contributes to excellent throttle response.
3. Precise digital CDI ignition system with an ignition-timing map tuned to optimize the engine's power characteristics.
4. 5-speed transmission with link-type gear shifting system built for highly reliable operation along with superb feel.
5. Lightweight, high rigidity steel pipe frame and rear swingarm are designed specifically to create a compact, fully-sized off road machine.

6. Telescopic front forks and link-type rear suspension provide long wheel travel and smooth, progressive action for enhancing enjoyable, comfortable ride.
7. Front fork boot adding race inspired styling.
8. Rear shock absorber spring preload is fully adjustable allowing to make various setting under a wide range of riding conditions.
9. The seat and bodywork compress a smooth, almost seamless surface for rider to move around easily.
10. Lightweight plastic slid plate helps protecting the bottom of engine.
11. Lightweight aluminum rims contribute to the reduction in the unsprung weight.
12. The DR-Z125 features 17-inch front/14-inch rear tires, 775mm (30.5 in) seat height and front/rear drum brakes.
13. Race inspired styling inherited from its big brother the RM-Z250 and RM-Z450.

DR-Z125L
MSRP \$3,099



The DR-Z125L features larger 19-inch front/16-inch rear tires, 805mm (32.0 in) seat height and front disc/rear drum brakes.

SPECIFICATIONS**MODEL: DR-Z125/LL2****DIMENSIONS AND CURB MASS**

Overall length.....	1835 mm (72.2 in).....DR-Z125
	1885 mm (74.2 in).....DR-Z125L
Overall width.....	770 mm (30.3 in)
Overall height.....	1085 mm (42.7 in)..... DR-Z125
	1110 mm (43.7 in).....DR-Z125L
Wheelbase.....	1245 mm (49.0 in).....DR-Z125
	1270 mm (50.0 in).....DR-Z125L
Ground clearance.....	260 mm (10.2 in).....DR-Z125
	290 mm (11.4 in).....DR-Z125L
Seat height.....	775 mm (30.5 in).....DR-Z125
	805 mm (32.0 in).....DR-Z125L
Curb mass.....	88 kg (194 lbs).....DR-Z125
	89 kg (196 lbs).....DR-Z125L

ENGINE

Type.....	4-stroke, air-cooled, OHC
Number of cylinders.....	1
Bore.....	57.0 mm (2.244 in)
Stroke.....	48.8 mm (1.921 in)
Displacement.....	124 cm ³ (7.6 cu. in)
Compression ratio.....	9.5 : 1
Carburetor.....	MIKUNI VM20SS
Air cleaner.....	Polyurethane foam element
Starter system.....	Primary Kick
Lubrication system.....	Wet sump
Idle speed.....	1700 ± 100 r/min

DRIVE TRAIN

Clutch.....	Wet multi-plate type
Transmission.....	5-speed constant mesh
Gearshift pattern.....	1-down, 4-up
Primary reduction ratio.....	3.470 (59/17)
Gear ratios, Low.....	3.000 (33/11)
2nd.....	1.857 (26/14)
3rd.....	1.368 (26/19)
4th.....	1.095 (23/21)
Top.....	0.923 (24/26)
Final reduction ratio.....	3.642 (51/14).....DR-Z125
	4.071 (57/14).....DR-Z125L
Drive chain.....	DID 428HG, 122 links..DR-Z125
	DID 428HG, 130 links..DR-Z125L

CHASSIS

Front suspension.....	Telescopic, coil spring, oil damped
Rear suspension.....	Link type, coil spring, oil damped
Front suspension stroke.....	180 mm (7.1 in)
Rear wheel travel.....	160 mm (6.3 in).....DR-Z125
	170 mm (6.7 in).....DR-Z125L
Caster.....	28°DR-Z125
	27° 30'.....DR-Z125L
Trail.....	88 mm (3.46 in).....DR-Z125
	99 mm (3.90 in).....DR-Z125L
Steering angle.....	45° (right & left)
Turning radius.....	1.9 m (6.2 ft).....DR-Z125
	2.0 m (6.6 ft).....DR-Z125L
Front brake.....	Drum brake.....DR-Z125
	Disc brake.....DR-Z125L

Rear brake.....	Drum brake
Front tire.....	70/100-17 40M, tube type.DR-Z125 70/100-19 42M, tube type.DR-Z125L
Rear tire.....	90/100-14 49M, tube type.DR-Z125 90/100-16 52M, tube type.DR-Z125L

ELECTRICAL

Ignition type.....	Electronic ignition (CDI)
Ignition timing.....	13° B.T.D.C. at 1700 r/min
Spark plug.....	NGK DR8EA or DENSO X24ESR-U
Generator.....	Single-phase A.C. generator

CAPACITIES

Fuel tank, including reserve.....	4.8 L (1.3/1.1 US/Imp gal)
reserve.....	1.1 L (0.3/0.3 US/Imp gal)
Engine oil, oil change.....	850 ml (0.9/0.7 US/Imp qt)
with filter change.....	950 ml (1.0/0.8 US/Imp qt)
overhaul.....	1100 ml (1.2/1.0 US/Imp qt)

SERVICE DATA

VALVE + GUIDE

Unit: mm (in)

ITEM	STANDARD		LIMIT
Valve diam.	IN.	30 (1.2)	—
	EX.	26 (1.0)	—
Valve clearance (when cold)	IN.	0.08 – 0.13 (0.003 – 0.005)	—
	EX.	0.13 – 0.18 (0.005 – 0.007)	—
Valve guide to valve stem clearance	IN.	0.010 – 0.037 (0.0004 – 0.0015)	—
	EX.	0.030 – 0.057 (0.0012 – 0.0022)	—
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 (0.014)
Valve stem end length	IN. & EX.	—	2.5 (0.10)
Valve seat width	IN. & EX.	0.9 – 1.1 (0.035 – 0.043)	—
Valve head radial runout	IN. & EX.	—	0.03 (0.001)
	IN. & EX.	—	0.03 (0.001)
Valve spring free length (IN. & EX.)	INNER	—	36.0 (1.42)
	OUTER	—	39.3 (1.55)
Valve spring tension (IN. & EX.)	INNER	76 – 90 N (7.8 – 9.2 kgf, 17.2 – 20.3 lbs) at length 32.5 mm (1.28 in)	—
	OUTER	186 – 219 N (18.9 – 22.3 kgf, 41.7 – 49.2 lbs) at length 36.0 mm (1.42 in)	—

CAMSHAFT + CYLINDER HEAD

Unit: mm (in)

ITEM	STANDARD		LIMIT
Cam height	IN. & EX.	33.13 – 33.17 (1.304 – 1.306)	32.83 (1.29)
Camshaft journal oil clearance	IN. & EX.	0.032 – 0.066 (0.0013 – 0.0026)	0.150 (0.0059)
Camshaft journal holder I.D.	IN. & EX.	22.012 – 22.025 (0.8666 – 0.8671)	—
Camshaft journal O.D.	IN. & EX.	21.959 – 21.980 (0.8645 – 0.8654)	—
Camshaft runout	IN. & EX.	—	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	1 200 – 1 600 kPa (12 – 16 kgf/cm ² , 171 – 228 psi)		1 000 kPa (10 kgf/cm ² , 142 psi)	
Piston to cylinder clearance	0.020 – 0.030 (0.0008 – 0.0012)		0.120 (0.0047)	
Cylinder bore	57.000 – 57.015 (2.2440 – 2.2447)		57.110 (2.2484)	
Piston diam.	56.975 – 56.990 (2.2431 – 2.2437) Measure at 12 mm (0.5 in) from the skirt end.		56.880 (2.2394)	
Cylinder distortion	—		0.05 (0.002)	
Piston ring free end gap	1st	R	Approx. 7.0 (0.28)	5.6 (0.22)
	2nd	R	Approx. 8.5 (0.33)	6.8 (0.27)
Piston ring end gap	1st	0.10 – 0.25 (0.004 – 0.010)		0.5 (0.02)
	2nd	0.10 – 0.25 (0.004 – 0.010)		0.5 (0.02)
Piston ring to groove clearance	1st	—		0.18 (0.007)
	2nd	—		0.15 (0.006)
Piston ring groove width	1st	1.21 – 1.23 (0.047 – 0.048)		—
	2nd	1.21 – 1.23 (0.047 – 0.048)		—
	Oil	2.51 – 2.53 (0.099 – 0.100)		—

ITEM	STANDARD		LIMIT
Piston ring thickness	1st	1.175 – 1.190 (0.0463 – 0.0469)	—
	2nd	1.170 – 1.190 (0.0461 – 0.0469)	—
Piston pin bore	14.002 – 14.008 (0.5513 – 0.5515)		14.030 (0.5524)
Piston pin O.D.	13.994 – 14.002 (0.5509 – 0.5513)		13.980 (0.5504)

CONROD + CRANKSHAFT

Unit: mm (in)

ITEM	STANDARD	LIMIT
Conrod small end I.D.	14.004 – 14.012 (0.5513 – 0.5517)	14.040 (0.5528)
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	15.95 – 16.00 (0.628 – 0.630)	—
Crank web to web width	53.0 ± 0.1 (2.09 ± 0.004)	—
Crankshaft runout	—	0.08 (0.003)

OIL PUMP

ITEM	STANDARD	LIMIT
Oil pressure (at 60°C, 140°F)	Above 15 kPa (0.15 kgf/cm ² , 2.1 psi) Below 35 kPa (0.35 kgf/cm ² , 4.9 psi) at 3 000 r/min	—

CLUTCH

Unit: mm (in)

ITEM	STANDARD	LIMIT
Clutch lever play	10 – 15 (0.4 – 0.6)	—
Drive plate thickness	2.90 – 3.10 (0.114 – 0.122)	2.60 (0.102)
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	32.6 (1.28)	31.0 (1.22)

DRIVE TRAIN + DRIVE CHAIN

Unit: mm (in) Except ratio

ITEM		STANDARD		LIMIT
Primary reduction ratio		3.470 (59/17)		—
Final reduction ratio		DR-Z125	3.642 (51/14)	—
		DR-Z125L	4.071 (57/14)	—
Gear ratios	Low	3.000 (33/11)		—
	2nd	1.857 (26/14)		—
	3rd	1.368 (26/19)		—
	4th	1.095 (23/21)		—
	Top	0.923 (24/26)		—
Shift fork to groove clearance		0.10 – 0.30 (0.004 – 0.012)		0.50 (0.02)
Shift fork groove width		No. 1	5.0 – 5.1 (0.196 – 0.201)	—
		No. 3	5.5 – 5.6 (0.217 – 0.224)	—
Shift fork thickness		No. 1	4.8 – 4.9 (0.189 – 0.193)	—
		No. 3	5.3 – 5.4 (0.209 – 0.213)	—
Countershaft length (Low to 2nd)		88.0 ^{+0.1} ₋₀ (3.46 ^{+0.004} ₋₀)		—
Drive chain	Type	D.I.D. 428HG		—
	Links	DR-Z125	122	—
		DR-Z125L	130	—
	20-pitch length	—		259.0 (10.20)
Drive chain slack		35 – 45 (1.4 – 1.8)		—
Gearshift lever height		-5 – 5 (-0.2 – 0.2)		—

CARBURETOR

ITEM		SPECIFICATION
Carburetor type		MIKUNI VM20SS
Bore size		20 mm (0.8 in)
I.D. No.		08G0
Idle r/min		1 700 ± 100 r/min
Float height		18.9 ± 1.0 mm (0.74 ± 0.04 in)
Main jet	(M.J.)	#102.5
Jet needle	(J.N.)	5HGM74-1
Needle jet	(N.J.)	N-6M
Pilot jet	(P.J.)	#17.5
Pilot screw	(P.S.)	PRE-SET (2 and 1/4 turns back)
Throttle cable play		2.0 – 4.0 mm (0.08 – 0.16 in)

ELECTRICAL

ITEM	SPECIFICATION		NOTE
Spark plug	Type	DENSO: X24ESR-U NGK: DR8EA	
	Gap	0.6 – 0.8 mm (0.024 – 0.031 in)	
Spark performance	Over 8 mm (0.3 in) at 1 atm.		
Ignition coil resistance	Primary	0.1 – 0.8 Ω	W/BI – B/W
	Secondary	13 – 18 k Ω	Plug cap – W/BI
Generator coil resistance	Charging	13 – 22 Ω	Y – Y/R
	Pick-up coil	140 – 230 Ω	G – B/W
Pick-up coil peak voltage	More than 2.0 V		⊕: G, ⊖: B/W
Ignition coil primary peak voltage	More than 150 V		⊕: B/W, ⊖: W/BI

BRAKE + WHEEL

Unit: mm (in)

ITEM		STANDARD/SPECIFICATION		LIMIT
Brake lever play	DR-Z125	15 – 25 (0.6 – 1.0)		—
	DR-Z125L	0.1 – 0.3 (0.004 – 0.012)		—
Rear brake pedal free travel	20 – 30 (0.8 – 1.2)		—	
Rear brake pedal height	-10 – 0 (-0.4 – 0)		—	
Brake drum I.D.	Front	DR-Z125	—	110.7 (4.36)
	Rear		—	110.7 (4.36)
Brake disc thickness	Front	DR-Z125L	3.5 ± 0.2 (0.14 ± 0.008)	3.0 (0.12)
Brake disc runout	Front	DR-Z125L	—	0.30 (0.012)
Master cylinder bore	Front	DR-Z125L	11.000 – 11.043 (0.4331 – 0.4348)	—
Master cylinder piston diam.	Front	DR-Z125L	10.957 – 10.984 (0.4314 – 0.4324)	—
Brake caliper cylinder bore	Front	DR-Z125L	30.230 – 30.306 (1.1902 – 1.1931)	—
Brake caliper piston diam.	Front	DR-Z125L	30.150 – 30.200 (1.1870 – 1.1890)	—
Brake fluid type	Front	DR-Z125L	DOT 4	—
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)

ITEM		STANDARD/SPECIFICATION		LIMIT
Wheel rim size	Front	DR-Z125	J17 × 1.40	—
		DR-Z125L	J19 × 1.40	—
	Rear	DR-Z125	J14 × 1.60	—
		DR-Z125L	J16 × 1.60	—
Tire size	Front	DR-Z125	70/100-17 40M	—
		DR-Z125L	70/100-19 42M	—
	Rear	DR-Z125	90/100-14 49M	—
		DR-Z125L	90/100-16 52M	—
Tire tread depth	Front	—		4.0 (0.16)
	Rear	—		4.0 (0.16)

SUSPENSION

Unit: mm (in)

ITEM	STANDARD/SPECIFICATION		LIMIT
Front fork stroke	180 (7.1)		—
Front fork spring free length	599.1 (23.59)		587 (23.1)
Front fork oil level	173 (6.8)		—
Front fork oil type	SUZUKI FORK OIL SS-08 (#10) or an equivalent fork oil		—
Front fork oil capacity (each leg)	172 ml (4.3/4.5 US/Imp oz)		—
Front fork inner tube O.D.	30 (1.2)		—
Rear shock absorber spring pre-set length	DR-Z125	240.5 (9.47)	—
	DR-Z125L	241.1 (9.49)	—
Rear wheel travel	DR-Z125	160 (6.3)	—
	DR-Z125L	170 (6.7)	—
Swingarm pivot shaft runout	—		0.6 (0.02)

TIRE PRESSURE

COLD INFLATION TIRE PRESSURE	kPa	kgf/cm ²	psi
FRONT	100	1.0	14
REAR	100	1.0	14

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	including reserve	4.8 L (1.3/1.1 US/Imp gal)	
	reserve	1.1 L (0.3/0.3 US/Imp gal)	
Engine oil type	SAE 10W-40, API SF/SG or SH/SJ with JASO MA		
Engine oil capacity	Change	850 ml (0.9/0.7 US/Imp qt)	
	Filter change	950 ml (1.0/0.8 US/Imp qt)	
	Overhaul	1 100 ml (1.2/1.0 US/Imp qt)	

TIGHTENING TORQUE ENGINE

ITEM	N-m	kgf-m	lbf-ft
Cylinder head cover bolt	10	1.0	7.0
Spark plug	11	1.1	8.0
Cylinder head bolt	Initial	10	7.0
	Final	27	19.5
Cylinder nut	10	1.0	7.0
Primary drive gear nut	50	5.0	36.0
Generator rotor nut	55	5.5	40.0
Clutch sleeve hub nut	50	5.0	36.0
Cam chain tension adjuster mounting bolt	10	1.0	7.0
Engine oil drain plug	28	2.8	20.5
Crankcase bolt	10	1.0	7.0
Engine mounting nut	40	4.0	29.0
Engine mounting bracket nut	40	4.0	29.0
Exhaust pipe bolt	23	2.3	16.5
Muffler connecting bolt	23	2.3	16.5
Muffler mounting bolt	23	2.3	16.5
Engine sprocket bolt	25	2.5	18.0
Fuel valve mounting bolt	4.4	0.44	3.0
Camshaft sprocket bolt	11	1.1	8.0
Camshaft tension adjuster lock nut	12	1.2	8.5

CHASSIS

ITEM	N·m	kgf·m	lbf·ft
Front axle nut (DR-Z125)	42	4.2	30.5
(DR-Z125L)	49	4.9	35.5
Front fork cap bolt	23	2.3	16.5
Front fork damper rod bolt	20	2.0	14.5
Front fork lower clamp bolt	33	3.3	24.0
Front fork upper clamp bolt	29	2.9	21.0
Steering stem head nut	65	6.5	47.0
Handlebar clamp bolt	23	2.3	16.5
Front brake lever holder mounting bolt (DR-Z125)	6.5	0.65	4.7
Front brake master cylinder mounting bolt (DR-Z125L)	10	1.0	7.0
Front brake caliper mounting bolt (DR-Z125L)	23	2.3	16.5
Front brake hose union bolt (DR-Z125L)	23	2.3	16.5
Air bleeder valve (DR-Z125L)	7.5	0.75	5.5
Brake disc mounting nut (DR-Z125L)	8.5	0.85	6.0
Clutch lever holder mounting bolt	6.5	0.65	4.7
Front footrest bolt	55	5.5	40.0
Brake pedal boss nut/bolt	29	2.9	21.0
Swingarm pivot nut	65	6.5	47.0
Rear shock absorber mounting bolt/nut (Upper & Lower)	50	5.0	36.0
Rear cushion lever bolt (Front)	55	5.5	40.0
Rear cushion lever nut (Center)	80	8.0	58.0
Rear cushion rod nut	80	8.0	58.0
Rear axle nut	54	5.4	39.0
Rear sprocket mounting nut	27	2.7	19.5
Brake cam lever nut	7.7	0.77	5.5
Spork nipple	4.5	0.45	3.0
Side stand bolt	50	5.0	36.0
Side stand nut	55	5.5	40.0