

SERVICE DATA

SPECIFICATIONS

AREA CODE:

E: U.K. G: Germany SW: Switzerland AR: Austria IT: Italy U: Australia SD: Sweden
 SP: Spain ED: Europe F: France B: Belgium FI: Finland N: Norway

ITEM		
DIMENSIONS	Overall length	2,045 mm (80.5 in)
		G, SW, AR, FI, N 2,085 mm (82.1 in)
	Overall width	700 mm (27.6 in)
	Overall height	1,100 mm (43.3 in)
	Wheel base	1,410 mm (55.5 in)
	Ground clearance	130 mm (5.1 in)
	Dry weight	185 kg (407.8 lbs)
	Curb weight	208 kg (458.6 lbs)
FRAME	Type	Backbone
	Front suspension, travel	Telescopic fork, 120 mm (4.7 in)
	Rear suspension, travel	Swing arm, 130 mm (5.1 in)
	Vehicle capacity load	114 kg (250 lbs)
	Front tire size	120/70V17—V270
		SW 120/70VR17—V270
	Rear tire size	170/60VR15—V270
	Cold tire pressure	250 kPa (2.5 kg/cm ² , 36 psi)
		Front 290 kPa (2.9 kg/cm ² , 42 psi)
		Rear
	Front brake	Double disc brake
	Rear brake	Single disc brake
	Fuel capacity	18 liters (4.8 U.S. gal., 4.0 Imp. gal)
	Fuel reserve capacity	3.5 liters (1.2 U.S. gal., 1.0 Imp. gal)
	Caster angle	24°50'
	Trail	91 mm (3.6 in)

ITEM		
ENGINE	Type	Water cooled 4-stroke
	Cylinder arrangement	4 cylinders 90°—V
	Bore and stroke	70.0 x 48.6 mm (2.76 x 1.91 in)
	Displacement	748 cc (45.6 cu-in)
	Compression ratio	11.0
	Valve train	Gear drive
	Intake valve	25° BTDC
		45° ABDC } at 1 mm lift
	Exhaust valve	50° BBDC
		20° ATDC
	Valve clearance (Below 35°C/95°F)	0.18 mm (0.008 in)
		0.30 mm (0.012 in)
	Lubrication system	Forced pressure and wet sump
	Oil capacity	3.8 liters (4.02 U.S. qt., 3.34 Imp. qt) after disassembly
	Coolant capacity	2.7 liters (2.85 U.S. qt., 2.38 Imp. qt) after disassembly
	Air filtration	Paper filter
	Engine weight	79 kg (174.2 lbs)
CARBURETION	Carburetor manufacturer/type	Keihin VD
	Throttle bore	38 mm (1.50 in)
	Identification number	VDH0A
	Fuel required	Low lead gasoline with 91 octane number or higher
	Idle speed	1,200 ± 100 min ⁻¹ (rpm)
DRIVE TRAIN	Clutch	Wet, multi-plate
	Transmission	6-speed constant-mesh
	Primary reduction ratio	1.939 (64/33)
	Gear ratio	2.400 (36/15)
	1st	1.941 (33/17)
	2nd	1.631 (31/19)
	3rd	1.434 (33/23)
	4th	1.291 (31/24)
	5th	1.192 (31/26)
	6th	2.500 (40/16)
	Final reduction ratio	

ITEM		
ELECTRICAL	Ignition	CDI
	Ignition timing (Initial)	15° BTDC
	Spark plug	10° BTDC
	Standard	NGK
		ND
	Spark plug gap	CR9EH-9 –
	Firing order	U27FER9
	Starting system	0.8—0.9 mm (0.031—0.035 in)
	Alternator	1 4 3 2
	Battery capacity	Starting motor
	Fuse	374 W/5,000 min ⁻¹ (rpm)
		12 V—8 Ah
		30 A (Main) 20 A x 1, 10 A x 4 (Sub)
LIGHTS	Headlight	12 V—60/55 W x 2
		G 12 V—60/55 W, 12 V—60 W
		IT 12 V—35/35 W x 2
		SW 12 V—60/55 W
	Tail/stop light	12 V—5/21 W x 2
		U 12 V—5/18 W x 2
	Turn signal light	12 V 21 W x 4
		U 12 V—15 W x 4
	Meter light	12 V—1.7 W x 5
	Indicator light	12 V—1.7 W x 4
	Position light	12 V—4 W
		E,U 12 V 3.4 W
	License light (Except U)	12 V—5 W
		SW 12 V 8 W

TORQUE VALUES

Engine

Item	Q'ty	Thread Dia. (mm)	Torque N·m (kg-m, ft-lb)	Remarks
Cylinder head cover bolt	8	6	10 (1.0, 7)	
Camshaft holder bolt	32	7	12 (1.2, 9)	
Cam holder base bolt	4	6	12 (1.2, 9)	
Spark plug	4	10	12 (1.2, 9)	
Cylinder head bolt	6	6	12 (1.2, 9)	
	16	9	45 (4.5, 33)	— Apply oil to the seat.
Flywheel rotor bolt	1	10	85 (8.5, 61)	
Primary drive gear bolt	1	12	90 (9.0, 65)	
Clutch lock nut	1	22	90 (9.0, 65)	
Crankcase bolt	2	10	40 (4.0, 29)	
	8	9	32 (3.2, 23)	— Apply oil to the seat.
	1	8	23 (2.3, 17)	
	15	6	12 (1.2, 9)	
Gearshift return spring pin	1	8	25 (2.5, 18)	
Drive sprocket bolt	1	10	52 (5.2, 38)	
Starter clutch cover bolt	6	8	16 (1.6, 12)	— Apply locking agent to the threads.
Temperature sensor	1	—	10 (1.0, 7)	☐ Apply 3-Bond Sealant, or its equivalent, to the threads.
Oil pressure switch	1	—	12 (1.2, 9)	
Neutral switch	1	10	12 (1.2, 9)	
Drain plug	1	12	38 (3.8, 27)	
Connecting rod nuts	8	8	34 (3.4, 25)	— Apply oil to the seat and threads.
Clutch slave cylinder bleed valve	1	8	9 (0.9, 7)	
Timing hole cover	1	45	18 (1.8, 13)	— Apply oil to the O-ring and apply molybdenum disulfide grease to the threads.
Cam drive gear case bolt	2	8	27 (2.7, 20)	
	8	6	12 (1.2, 9)	
Carburetor insulator band	8	5	1 (0.1, 0.7)	
Gearshift drum center bolt	1	8	23 (2.3, 17)	— Apply locking agent to the threads.
Starter motor terminal nut	1	6	4.5 (0.45, 3.3)	
Oil filter	1	20	10 (1.0, 7)	
Oil pump mounting bolt	3	6	12 (1.2, 9)	— Apply locking agent to the threads; 5.5—7.5 mm from the tip.
Oil cooler bolt	1	20	55 (5.5, 40)	☐
Oil pump driven sprocket bolt	1	6	18 (1.8, 13)	

Chassis

Item	Q'ty	Thread Dia. (mm)	Torque N·m (kg-m, ft-lb)	Remarks
Sub-frame bolt	4	8	27 (2.7, 20)	
Engine hanger bolt	6	10	40 (4.0, 29)	
Engine hanger adjuster	2	22	11 (1.1, 8)	
Engine hanger adjuster lock nut	2	22	55 (5.5, 40)	
Handlebar pinch bolt	4	6	12 (1.2, 9)	
Front brake disc bolt	12	6	15 (1.5, 11)	
Front axle nut	1	20	80 (8.0, 58)	
Front axle holder nut	2	12	60 (6.0, 43)	
Fork bottom socket bolt	2	10	28 (2.8, 20)	— Apply locking agent to the threads.
Fork bolt	2	—	23 (2.3, 17)	— See page 169
Steering adjustment nut	1	35	50 (5.0, 36)	
Steering stem nut	1	33	140 (14.0, 101)	
Fork top bridge bolt	2	8	28 (2.8, 20)	
Fork bottom bridge bolt	4	8	28 (2.8, 20)	
Fork damping adjuster	4	—	18 (1.8, 13)	
Handle master cylinder bolt	4	6	12 (1.2, 9)	
Driven sprocket nut	6	8	35 (3.5, 25)	
Rear brake disc nut	4	6	12 (1.2, 9)	
Rear axle nut	1	38	165 (16.5, 119)	
Rear shock absorber mounting bolt	2	10	45 (4.5, 33)	
Shock link-to-frame bolt	1	10	45 (4.5, 33)	
Shock arm-to-link bolt	1	10	45 (4.5, 33)	
Shock arm-to-swing arm bolt	1	10	45 (4.5, 33)	
Rear wheel nut	1	18	110—130 (11.0—13.0, 80—94)	
Rear brake torque rod bolt	4	10	35 (3.5, 25)	
Rear axle bearing holder nut	1	76	55 (5.5, 40)	
Rear axle bearing holder pinch bolt	1	16	75 (7.5, 54)	
Rear wheel drive pin bolt	4	7	15 (1.5, 11)	
Rear shock absorber bracket bolt	4	8	27 (2.7, 20)	

Item	Q'ty	Thread Dia. (mm)	Torque N·m (kg·m, ft-lb)	Remarks
Rear shock absorber spring adjuster lock nut	1	52	90 (9.0, 65)	
Swing arm pivot nut	1	18	95 (9.5, 69)	
Swing arm pivot adjuster	1	30	15 (1.5, 11)	
Swing arm pivot adjuster lock nut	1	30	80 (8.0, 58)	
Clutch hose bolt	2	10	30 (3.0, 22)	
Clutch lever pivot nut	1	6	6 (0.6, 4)	
Clutch reservoir screw	1	4	1.8 (0.18, 1.3)	
Clutch switch	1	4	1.2 (0.12, 0.9)	
Drive chain slider screw	4	5	4.5 (0.45, 3.3)	
Front brake caliper bolt	8	8	23 (2.3, 17)	Apply locking agent to the threads.
Front brake caliper mounting bolt	4	8	27 (2.7, 20)	
Brake hose bolt	2	10	30 (3.0, 22)	
Brake hose joint	3	10	30 (3.0, 22)	
Brake hose joint nut	3	10	14 (1.4, 10)	
Brake caliper bleed valve	3	7	6 (0.6, 4.3)	
Rear brake caliper bolt	2	8	27 (2.7, 20)	
Rear brake pad pin	1	10	18 (1.8, 13)	
Rear brake caliper pad pin plug	1	10	2.5 (0.25, 1.8)	
Rear brake caliper pin bolt	1	8	13 (1.3, 9)	
	1	10	23 (2.3, 17)	Apply locking agent to the threads.
Front brake caliper pad pin spring screw	2	4	1.5 (0.15, 1)	
Foot peg stay bolt	4	8	27 (2.7, 20)	
Exhaust pipe joint nut	8	6	12 (1.2, 9)	

Item	Q'ty	Thread Dia. (mm)	Torque N·m (kg-m, ft-lb)	Remarks
Side stand bracket bolt	2	8	35 (3.5, 25)	Apply sealant to the threads.
Foot peg pivot bolt	2	10	45 (4.5, 33)	
Rear brake master cylinder bolt	2	6	12 (1.2, 9)	
Sub frame bolt	4	8	27 (2.7, 20)	
Ignition switch mounting bolt	2	8	25 (2.5, 18)	
Thermostatic switch	1	16	23 (2.3, 17)	

Torque specifications listed above are for important fasteners. Others should be tightened to standard torque values listed below.

Standard Torque Values

Item	Torque Values N·m (kg-m, ft-lb)	Item	Torque Values N·m (kg-m, ft-lb)
5 mm bolt and nut	5 (0.5, 4)	5 mm screw	4 (0.4, 3)
6 mm bolt and nut	10 (1.0, 7)	6 mm screw and 6 mm flange bolt with 8 mm head	9 (0.9, 7)
8 mm bolt and nut	22 (2.2, 16)	6 mm flange bolt and nut	12 (1.2, 9)
10 mm bolt and nut	35 (3.5, 25)	8 mm flange bolt and nut	27 (2.7, 20)
12 mm bolt and nut	55 (5.5, 40)	10 mm flange bolt and nut	40 (4.0, 29)

TOOLS

Special Tool

TOOL NAME	TOOL NUMBER	REMARKS	REF. PAGE
Oil pressure gauge	07506-3000000	or equivalent tool	57
Oil pressure gauge attachment	07510-4220100		57
Compression gauge	07305-0010000	or equivalent tool	45
Pilot screw wrench	07908-4730001		43
Oil filter wrench	0711AA-PJ70100		42
Snap ring pliers	07914-3230001	or equivalent tool	94, 203, 205
Fork seal driver	07947-KA50100		160
Fork seal driver attachment	07947-KA40200		160
Bearing remover	07936-3710300		
Bearing remover handle	07936-3710100		186
Remover weight	07741-0010201		
Bearing remover set	07936-3710001		
—remover handle	07936-3710100		
—remover set	07936-3710600		192
—remover weight	07741-0010201		
Spherical bearing driver	07946-KA30200		187, 188
	07HMF-KS60100		182, 188
Driver shaft	07946-MJ00100		192
Valve compressor attachment	07959-KM30101		72, 80
Driver attachment B	07946-KM90200	2 required	
Driver shaft assembly	07946-KM90300		
Bearing remover B	07946-KM90500		167, 168
Assembly base	07946-KM90600		
Compression gauge attachment	07GMJ-KT70100		45
Needle bearing remover	07HMC-MR70100		192
Steering stem socket	07HMA-MR70100		165, 169
Valve guide reamer, 4.5 mm	07HMH-ML00100		75, 76
Valve guide driver, 4.5 mm	07HMD-ML00100		75, 76
Steering stem driver attachment	07HMD-MR70100	Newly designed for this model	166
Tappet hole protector	07HMG-MR70000		72, 80
Lock nut wrench	07HMA-MR70200		54, 55, 56, 190, 196
Lock nut wrench	07HMA-MR70300		174, 178

Common Tool

TOOL NAME	TOOL NUMBER	REMARKS	REF. PAGE
Float level gauge	07401-0010000		138
Torx driver socket	07703-0010200	or equivalent tool	98, 103
Lock nut wrench, 26 x 30 mm	07716-0020203		99, 102
Extension bar	07716-0020500		99, 102
Flywheel holder	07725-0040000		216, 217
Rotor puller	07733-0020001		216
Attachment, 24 x 26 mm	07746-0010700		186, 187
Attachment, 37 x 40 mm	07746-0010200		193
Attachment, 42 x 47 mm	07746-0010300		153, 176
Attachment, 52 x 55 mm	07746-0010400		176, 177
Attachment, 62 x 68 mm	07746-0010500		177
Pilot, 17 mm	07746-0040400		186, 187
Pilot, 20 mm	07746-0040500		153, 193
Pilot, 28 mm	07746-0041100		193
Pilot, 40 mm	07746-0040900		176
Driver	07746-0030100		113, 166
Attachment, 25 mm I.D.	07746-0030200		113
Driver	07746-0020100		69
Attachment, 17 mm I.D.	07746-0020300		69
Bearing remover shaft	07746-0050100		153
Bearing remover head, 20 mm	07746-0050600		153
Driver	07749-0010000		153, 176, 177, 186, 187, 193
Valve spring compressor	07757-0010000		72, 80
Gear holder	07724-0010100	or equivalent tool	97, 104
Valve seat cutter, 45°	07780-0010300	Intake, 29 mm	77, 78
Valve seat cutter, 45°	07780-0010200	Exhaust, 27.5 mm	77, 78
Valve seat cutter, 60°	07780-0014000	Intake, 30 mm	77, 78
Valve seat cutter, 60°	07780-0014500	Exhaust, 26 mm	77, 78
Valve seat cutter, 32°	07780-0012200	Intake, 30 mm	77, 78
Valve seat cutter, 32°	07780-0012100	Exhaust, 28 mm	77, 78
Cutter holder	07781-0010600	Newly designed for this model	77, 78

TOOL NAME	TOOL NUMBER	REMARKS	REF. PAGE
Digital circuit tester	07411-0020000	or TH-5H	214, 215, 220, 221, 222 224, 227, 228, 229, 231
Circuit tester	07308-0020000		214, 215, 220, 221, 222 224, 227, 228, 229, 231
Vacuum gauge set	07404-0030000		42, 43

SERVICE DATA

Engine

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT	
				FOR NORMAL USE	FOR RACE USE
LUBRICATION SYSTEM	Engine oil capacity	After draining	2.9 l (2.55 imp. qt)	—	—
		After disassembly	3.8 l (3.34 imp. qt)	—	—
	Oil pressure (at oil pressure switch)		470—570 kPa (4.7—5.7 kg/cm ² , 67—81 psi)/5,000 min ⁻¹ (rpm) at 80°C (176°F)	—	—
	Oil pump delivery (at 5,000 min ⁻¹ (rpm))		54.0 l (11.88 imp. gal)/min.	—	—
	Oil pump rotor tip clearance		0.15 (0.006)	0.20 (0.008)	0.20 (0.008)
	Oil pump body clearance		0.15—0.22 (0.006—0.009)	0.35 (0.014)	0.35 (0.014)
	Oil pump end clearance		0.02—0.07 (0.001—0.003)	0.10 (0.004)	0.10 (0.004)
COOLING SYSTEM	Coolant capacity	Radiator and engine	2.4 l (2.11 imp. qt)	—	—
		Reserve tank	0.3 l (0.26 imp. qt)	—	—
		Total system	2.7 l (2.38 imp. qt)	—	—
	Coolant freezing point (Distilled water/ethylene glycol)	55 : 45	-32°C (-25°F)	—	—
		50 : 50	-37°C (-34°F)	—	—
		45 : 55	-44.5°C (-48°F)	—	—
	Radiator cap relief pressure		95—125 kPa (0.95—1.25 kg/cm ² , 13.5—17.8 psi)	—	—
	Thermostat	Begins to open	80°—84°C (176°—183°F)	—	—
		Valve lift	Minimum of 8 mm at 95°C (0.31 in at 203°F)	—	—
CYLINDER HEAD	Cylinder compression pressure		1,250 ± 200 kPa (12.5 ± 2.0 kg/cm ² , 178 ± 28 psi)	—	—
	Valve clearance	IN	0.15—0.21 (0.006—0.008)	—	—
		EX	0.27—0.33 (0.011—0.013)	—	—
	Camshaft	Cam lobe height	34.12—34.28 (1.343—1.350)	34.0 (1.34)	34.0 (1.34)
		Runout	—	0.03 (0.001)	0.03 (0.001)

Unit: mm (in)

ITEM				STANDARD	SERVICE LIMIT	
					FOR NORMAL USE	FOR RACE USE
CYLINDER HEAD	Valve	Valve stem O.D.	IN	4.475—4.490 (0.1762—0.1768)	4.47 (0.176)	4.47 (0.176)
			EX	4.455—4.470 (0.1754—0.1760)	4.45 (0.175)	4.45 (0.175)
		Valve guide I.D. (IN/EX)		4.500—4.515 (0.1772—0.1778)	4.55 (0.179)	4.55 (0.179)
		Stem-to-guide clearance	IN	0.010—0.040 (0.0004—0.0016)	0.08 (0.003)	0.08 (0.003)
			EX	0.030—0.060 (0.0012—0.0024)	0.10 (0.004)	0.10 (0.004)
		Valve seat width		1.0—1.3 (0.04—0.05)	1.5 (0.06)	1.5 (0.06)
	Valve spring	Free length	Outer	—	37.7 (1.48)	37.7 (1.48)
			Inner	—	40.9 (1.61)	40.9 (1.61)
	Valve lifter	Valve lifter O.D.		25.978—25.993 (1.0228—1.0233)	25.97 (1.022)	25.97 (1.022)
		Valve lifter bore I.D.		26.010—26.026 (1.0240—1.0246)	26.04 (1.025)	26.04 (1.025)
	Cylinder head warpage			—	0.10 (0.004)	0.10 (0.004)
	Valve timing (At 1 mm lift)	IN	Opens	25° BTDC	—	—
			Closes	45° ABDC	—	—
		EX	Opens	50° BBDC	—	—
			Closes	20° ATDC	—	—
CLUTCH SYSTEM	Master cylinder	Cylinder I.D.		14.000—14.043 (0.5512—0.5529)	14.06 (0.554)	14.06 (0.554)
		Piston O.D.		13.957—13.984 (0.5495—0.5506)	13.94 (0.549)	13.94 (0.549)
	Clutch fluid			DOT 4 brake fluid	—	—
	Outer guide I.D.			24.995—25.012 (0.9841—0.9847)	25.08 (0.987)	25.08 (0.987)
	Clutch spring free height			—	3.2 (0.126)	3.2 (0.126)
	Clutch center (B) I.D.			74.404—74.430 (2.9293—2.9303)	74.46 (2.931)	74.46 (2.931)
	One way clutch inner O.D.			57.800—57.813 (2.2756—2.2761)	57.77 (2.274)	57.77 (2.274)
	Clutch disc thickness			2.92—3.08 (0.115—0.121)	2.5 (0.01)	2.5 (0.01)
	Clutch plate warpage			—	0.30 (0.012)	0.30 (0.012)
	Starter driven gear O.D.			45.657—45.673 (1.7975—1.7981)	45.64 (1.797)	45.64 (1.797)

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT	
				FOR NORMAL USE	FOR RACE USE
SHIFT FORK	Shift fork	Claw thickness	6.43—6.50 (0.253—0.256)	6.10 (0.240)	6.10 (0.240)
		Left and right fork I.D.	14.016—14.034 (0.5518—0.5525)	14.05 (0.553)	14.05 (0.553)
	Fork shaft O.D.		13.973—13.984 (0.5501—0.5506)	13.90 (0.547)	13.90 (0.547)
TRANSMISSION	Gear I.D.	M5, M6	28.000—28.021 (1.1024—1.1032)	28.04 (1.104)	28.04 (1.104)
		C2, C3, C4	31.000—31.016 (1.2205—1.2211)	31.04 (1.222)	31.04 (1.222)
		M5, M6	27.959—27.980 (1.1007—1.1016)	27.94 (1.100)	27.94 (1.100)
	Gear bushing O.D.	C3, C4	30.950—30.975 (1.2185—1.2195)	30.93 (1.218)	30.93 (1.218)
		C2	30.970—30.995 (1.2193—1.2203)	30.95 (1.219)	30.95 (1.219)
		M5	24.985—25.006 (0.9837—0.9845)	25.03 (0.985)	25.03 (0.985)
	Gear bushing I.D.	C2	28.000—28.021 (1.1024—1.1032)	28.04 (1.104)	28.04 (1.104)
	Mainshaft O.D. (At M5)		24.959—24.980 (0.9826—0.9835)	24.95 (0.982)	24.95 (0.982)
	Countershaft O.D. (At C2)		27.967—27.980 (1.1011—1.1016)	27.96 (1.101)	27.96 (1.101)
	Gear-to-bushing clearance	M5, M6	0.020—0.062 (0.0008—0.0024)	0.10 (0.004)	0.10 (0.004)
		C3, C4	0.025—0.066 (0.0010—0.0026)	0.11 (0.004)	1.11 (0.004)
		C2	0.005—0.046 (0.0002—0.0018)	0.09 (0.004)	0.09 (0.004)
CRANKSHAFT, PISTON	Bushing to shaft clearance	M5	0.005—0.047 (0.0002—0.0019)	0.06 (0.002)	0.06 (0.002)
		C2	0.020—0.054 (0.0008—0.0021)	0.06 (0.002)	0.06 (0.002)
	Connecting rod big end side clearance		0.028—0.268 (0.0011—0.011)	0.40 (0.016)	0.35 (0.014)
	Crankshaft	Runout	—	0.03 (0.001)	0.02 (0.001)
		Crankpin oil clearance	0.030—0.052 (0.0012—0.0020)	0.08 (0.003)	0.030—0.052 (0.0012—0.0020)
		Main journal oil clearance	0.023—0.045 (0.0009—0.0018)	0.06 (0.002)	0.023—0.045 (0.0009—0.0018)

CRANK - MAIN O/D

1
2
3

P.O.D ID (mm)

1
2
3

39.000 - 39.006

39.006 - 39.012

39.012 - 39.018

254 CRANK - P.O.D O/D

A
B
C

CRANKCASE Bore ID

A
B
C

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT	
				FOR NORMAL USE	FOR RACE USE
CRANKSHAFT PISTON	Cylinder	I.D.	70.000—70.015 (2.7559—2.7566)	70.10 (2.760)	70.10 (2.760)
		Taper	—	0.10 (0.004)	0.10 (0.004)
		Out of round	—	0.10 (0.004)	0.10 (0.004)
		Warping across top	—	0.10 (0.004)	0.10 (0.004)
	Piston ring end gap	Top	0.20—0.30 (0.008—0.012)	0.45 (0.018)	0.35 (0.014)
		Oil (Side rail)	0.20—0.70 (0.008—0.028)	0.90 (0.035)	0.80 (0.031)
	Ring-to-groove clearance (Top)		0.015—0.050 (0.0006—0.0020)	0.10 (0.004)	0.08 (0.003)
	Piston	O.D.	69.970—69.999 (2.7547—2.7559)	69.85 (2.750)	69.90 (2.752)
		Pin bore I.D.	17.002—17.008 (0.6694—0.6696)	17.02 (0.670)	17.02 (0.670)
	Piston-to-cylinder clearance		0.001—0.045 (0.00004—0.0018)	0.10 (0.004)	0.10 (0.004)
	Piston pin O.D.		16.994—17.000 (0.6691—0.6693)	16.98 (0.669)	16.98 (0.669)
	Piston-to-pin clearance		0.002—0.014 (0.0001—0.0006)	0.04 (0.001)	0.03 (0.001)
	Connecting rod small end I.D.		17.020—17.038 (0.6701—0.6708)	17.045 (0.6711)	17.045 (0.6711)
	Piston pin-to-connecting rod clearance		0.020—0.044 (0.0008—0.0017)	0.06 (0.002)	0.06 (0.002)

Frame

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT	
				FOR NORMAL USE	FOR RACE USE
FRONT WHEEL	Axle runout		—	0.2 (0.01)	0.2 (0.01)
	Wheel rim runout	Radial	—	2.0 (0.08)	2.0 (0.08)
		Axial	—	2.0 (0.08)	2.0 (0.08)
FORK	Fork spring free length		—	240.0 (9.45)	240.0 (9.45)
	Fork tube runout		—	0.2 (0.01)	0.2 (0.01)
	Fork fluid capacity		486 cc (17.06 Imp. oz)	—	—
	Fork fluid level		98.0 (3.86)	—	—
REAR WHEEL	Axle runout		—	0.2 (0.01)	0.2 (0.01)
	Wheel rim runout	Radial	—	2.0 (0.08)	2.0 (0.08)
		Axial	—	2.0 (0.08)	2.0 (0.08)

Unit: mm (in)

ITEM				STANDARD	SERVICE LIMIT	
					FOR NORMAL USE	FOR RACE USE
REAR SHOCK ABSORBER	Damping compression			15.4—20.0 kg (33.95—44.10 lb)	12.0 kg (26.46 lb)	120 kg (26.46 lb)
	Spring free length			—	167.5 (6.59)	167.5 (6.59)
	Spring installed length			160 (6.3)	153—170 (6.0—6.7)	153—170 (6.0—6.7)
HYDRAULIC BRAKES	Brake disc	Thickness	Front	5.6—6.0 (0.22—0.24)	5.0 (0.20)	5.0 (0.20)
			Rear	6.8—7.2 (0.27—0.28)	6.0 (0.24)	6.0 (0.24)
		Runout		—	0.3 (0.01)	0.3 (0.01)
	Master cylinder I.D.		Front	15.870—15.913 (0.6248—0.6265)	15.925 (0.6270)	15.925 (0.6270)
			Rear	14.0000—14.043 (0.5512—0.5529)	14.055 (0.5533)	14.055 (0.5533)
	Master piston O.D.		Front	15.827—15.854 (0.6231—0.6242)	15.815 (0.6226)	15.815 (0.6226)
			Rear	13.957—13.984 (0.5495—0.5506)	13.945 (0.5491)	13.945 (0.5491)
	Caliper cylinder I.D.		Front	A 30.230—30.280 (1.1902—1.1921)	30.29 (1.193)	30.29 (1.193)
				B 32.030—32.080 (1.2610—1.2630)	32.09 (1.263)	32.09 (1.263)
			Rear	25.400—25.450 (1.0000—1.0020)	25.46 (1.002)	25.46 (1.002)
	Caliper piston O.D.		Front	A 30.148—30.198 (1.1869—1.1889)	30.14 (1.187)	30.14 (1.187)
				B 31.948—31.998 (1.2578—1.2598)	31.94 (1.257)	31.94 (1.257)
			Rear	25.318—25.368 (0.9968—0.9987)	25.31 (0.996)	25.31 (0.996)
	Brake fluid			DOT 4	—	—

Electrical

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT	
				FOR NORMAL USE	FOR RACE USE
BATTERY/ CHARGING SYSTEM	Battery	Capacity	12 V—8 AH	—	—
		Charging current	0.9 A	—	—
		Charging time	5 hours	—	—
		Voltage (20°C/68°F)	13.0—13.2 V	—	—
	Regulator/rectifier	Type	Three phase/full wave rectify	—	—
		Regulated voltage	13.0—15.0 V/5,000 min ⁻¹ (rpm)	—	—

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT		
				FOR NORMAL USE	FOR RACE USE	
BATTERY/ CHARGING SYSTEM	Alternator	Type	Three-phase AC	—	—	
		Output	374 W/5,000 min ⁻¹ (rpm)	—	—	
		Resistance (20°C/68°F)	1.0—2.0 Ω (Y-Y)	—	—	
IGNITION SYSTEM	Ignition timing	Initial "F" mark	15° BTDC at idle speed	—	—	
		SW	10° BTDC at idle speed	—	—	
	Ignition coil resistance (20°C/68°F)	Primary coil	0.3—0.5 Ω	—	—	
		Secondary coil	With plug cap	15—20 kΩ	—	—
			Without plug cap	6.7—8.3 kΩ	—	—
	Pulse generator coil resistance		400—500 Ω (20°C/68°F)	—	—	
STARTER MOTOR	Brush length		12.0—13.0 (0.47—0.51)	6.5 (0.26)	6.5 (0.26)	
SENSORS	Coolant temperature sensor resistance	60° (140°F)	93—115 Ω	—	—	
		85° (185°F)	39—49 Ω	—	—	
		110° (230°F)	18—23 Ω	—	—	
		120° (248°F)	14—18 Ω	—	—	

Carburetor Specifications

Identification number	VDH0A
Throttle bore	38 mm (1.50 in)
Float level	8.8 mm (0.35 in)

Main jet (front/rear)	#110/#108
Slow jet	#38
Pilot screw opening	2 1/2
Idle speed	1,200 ± 100 min ⁻¹ (rpm)