SERVICE DATA

VALVE + GUIDE

Unit: mm (in)

ITEM	STANDARD		LIMIT
Valve diam.	IN.	33 (1.3)	—
	EX.	28 (1.1)	—
Valve clearance (when engine is cold)	IN.	0.08—0.13 (0.003—0.005)	—
	EX.	0.17—0.22 (0.0067—0.0087)	—
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 stem deflection	IN. & EX.	—	0.35 (0.014)
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 runout	IN. & EX.	—	0.05 (0.002)
Valve head thickness	IN. & EX.	—	0.5 (0.02)
Valve stem end length	IN. & EX.	—	2.7 (0.11)
Valve seat width	IN. & EX.	0.9—1.1 (0.035—0.043)	—
Valve head radial runout	IN. & EX.	—	0.03 (0.001)
Valve spring free length (IN. & EX.)	INNER	—	34.4 (1.35)
	OUTER	—	38.1 (1.50)
Valve spring tension (IN. & EX.)	INNER	5.9—6.7 kg (13.0—14.8 lbs) at length 27.5 mm (1.1 in)	—
	OUTER	13.8—15.8 kg (30.4—34.8 lbs) at length 31.0 mm (1.2 in)	—

CAMSHAFT + CYLINDER HEAD

Unit: mm (in)

ITEM	STANDARD		LIMIT
Cam height	IN.	33.710—33.750 (1.3272—1.3287)	33.410 (1.3154)
	EX.	33.700—33.740 (1.3268—1.3283)	33.400 (1.3150)
Camshaft journal oil clearance	Right & Center	0.032—0.066 (0.0013—0.0026)	0.150 (0.0059)
	Left	0.028—0.059 (0.0011—0.0023)	0.150 (0.0059)
Camshaft journal holder I.D.	Right & Center	22.012—22.025 (0.8666—0.8671)	——
	Left	17.512—17.525 (0.6894—0.6900)	——
Camshaft journal O.D.	Right & Center	21.959—21.980 (0.8645—0.8654)	——
	Left	17.466—17.484 (0.6877—0.6883)	——
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.	11.973—11.984 (0.4714—0.4718)	——
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
Piston to cylinder clearance	0.020—0.030 (0.0008—0.0012)			0.120 (0.0047)
Cylinder bore	100.000—100.015 (3.937—3.9376)			Nicks or Scratches
Piston diam.	99.975—99.990 (3.9360—3.9366) Measure at 21 mm (0.8 in) from the skirt end.			99.880 (3.9323)
Cylinder distortion	——			0.05 (0.002)
Piston ring free end gap	1st	R	Approx. 13.5 (0.53)	10.8 (0.43)
	2nd	R	Approx. 11.4 (0.45)	9.1 (0.36)
Piston ring end gap	1st		0.30—0.45 (0.012—0.018)	0.50 (0.020)
	2nd		0.45—0.60 (0.018—0.024)	1.00 (0.039)
Compression pressure (Automatic decomp. actuated)	Approx. 850 kPa (8.5 kg/cm², 120 psi)			——

ITEM	STANDARD		LIMIT
Piston ring to groove clearance	1st	—	0.180 (0.0071)
	2nd	—	0.150 (0.0059)
Piston ring groove width	1st	1.230—1.250 (0.048—0.049)	—
	2nd	1.210—1.230 (0.047—0.048)	—
	Oil	2.810—2.830 (0.110—0.111)	—
Piston ring thickness	1st	1.170—1.190 (0.0461—0.0469)	—
	2nd	1.150—1.170 (0.0453—0.0461)	—
Piston pin bore	23.002—23.008 (0.9056—0.9058)		23.030 (0.9067)
Piston pin O.D.	22.996—23.000 (0.9054—0.9055)		22.980 (0.9047)

CONROD + CRANKSHAFT

Unit: mm (in)

ITEM	STANDARD	LIMIT
Conrod small end I.D.	23.006—23.014 (0.9057—0.9061)	23.040 (0.9071)
Conrod deflection		3.0 (0.12)
Conrod big end side clearance	0.10—0.65 (0.004—0.026)	1.00 (0.039)
Conrod big end width	24.95—25.00 (0.982—0.984)	—
Crankshaft runout		0.05 (0.002)
Crank web to web width	71.0 ± 0.1 (2.795 ± 0.004)	

OIL PUMP

ITEM	STANDARD	LIMIT
Oil pump reduction ratio	1.633 (61/28 x 30/20 x 15/30)	
Oil pressure (at 60°C,140°F)	Above 30 kPa (0.3 kg/cm^2, 4.3 psi) Below 70 kPa (0.7 kg/cm^2, 10.0 psi) at 3 000 r/min.	

CLUTCH

Dragging Clutch? Slipping Clutch?

Unit: mm (in)

ITEM	STANDARD		LIMIT
Clutch lever play	10—15 (0.4—0.6)		———
Drive plate thickness	No.1 & No.2	2.9—3.1 (0.11—0.12)	2.6 (0.10)
Driven plate distortion	———		0.10 (0.004)
Clutch spring free length	———		33.0 (1.30)

TRANSMISSION + DRIVE CHAIN

Unit: mm (in) Except ratio

ITEM		STANDARD		LIMIT
Primary reduction ratio		2.178 (61/28)		———
Final reduction ratio	E-03,28,33	2.800 (42/15)		———
	The others	2.733 (41/15)		———
Gear ratios	Low	2.416 (29/12)		———
	2nd	1.625 (26/16)		———
	3rd	1.238 (26/21)		———
	4th	1.000 (21/21)		———
	Top	0.826 (19/23)		———
Shift fork to groove clearance		0.10—0.30 (0.004—0.012)		0.50 (0.020)
Shift fork groove width		5.0—5.1 (0.197—0.200)		———
Shift fork thickness		4.8—4.9 (0.189—0.193)		———
Drive chain		Type	DAIDO:DID525V9	———
		Links	110	———
		20-pitch length	———	319.4 (12.57)
Drive chain slack		30—45 (1.2—1.8)		———