

SS0ZE-05

1HD-FTE ENGINE SUP (RM896E)

SERVICE SPECIFICATIONS – ENGINE MECHANICAL

Camshaft	Thrust clearance	STD	0.10 – 0.20 mm (0.0039 – 0.00 in.)
		Maximum	0.30 mm (0.0118 in.)
	Standard oil clearance	STD No.1	0.022 – 0.074 mm (0.0009 – 0.0029 in.)
		Other	0.023 – 0.075 mm (0.0009 – 0.0030 in.)
		Maximum	0.10 mm (0.0039 in.)
	Journal diameter	No.1	34.969 – 34.985 mm (1.3767 – 1.3774 in.)
		Other	27.986 – 28.002 mm (1.1018 – 1.1024 in.)
	Cam lobe height	STD Intake	48.203 – 48.303 mm (1.8978 – 1.9017 in.)
Exhaust		50.734 – 50.834 mm (1.9974 – 2.0013 in.)	
Minimum Intake		47.998 mm (1.8897 in.)	
Exhaust		50.234 mm (1.9777 in.)	
	Circle runout		0.10 mm (0.0039 in.)
Manifold	Warpage	Maximum	0.40 mm (0.0157 in.)
Cylinder block	Cylinder head surface warpage	Maximum	0.20 mm (0.0079 in.)
	Cylinder bore diameter	STD Mark "1"	94.000 – 94.010 mm (3.7001 – 3.7012 in.)
		Mark "2"	94.010 – 94.020 mm (3.7012 – 3.7016 in.)
		Mark "3"	94.020 – 94.030 mm (3.7016 – 3.7020 in.)
		Maximum STD	94.23 mm (3.7098 in.)
		O/S 0.50	94.73 mm (3.7295 in.)
	Main bearing cap stud bolt		
	Tension portion diameter	STD	11.80 – 12.00 mm (0.4646 – 0.4724 in.)
Minumum		11.50 mm (0.4528 in.)	
Piston and piston ring	Piston diameter	STD Mark "1"	93.870 – 93.880 mm (3.69566 – 3.69606 in.)
		Mark "2"	93.881 – 93.890 mm (3.69609 – 3.69645 in.)
		Mark "3"	93.891 – 93.900 mm (3.69649 – 3.69684 in.)
		O/S 0.50	94.370 – 94.400 mm (3.71535 – 3.71653 in.)
	Piston oil clearance	STD	0.070 – 0.090 mm (0.0028 – 0.0035 in.)
		Maximum	0.090 mm (0.0035 in.)
	Piston ring grove clearance	No.1 STD	0.070 – 0.110 mm (0.0028 – 0.0043 in.)
		Maximum	0.20 mm (0.0079 in.)
		No.2 STD	0.040 – 0.080 mm (0.0016 – 0.0031 in.)
		Maximum	0.20 mm (0.0079 in.)
		Oil ring STD	0.030 – 0.070 mm (0.0012 – 0.0028 in.)
		Maximum	0.20 mm (0.0079 in.)
	Piston ring end gap	No.1 STD	0.270 – 0.330 mm (0.0106 – 0.0130 in.)
		Maximum	0.850 mm (0.0335 in.)
		No.2 STD	0..400 – 0.550 mm (0.0157 – 0.0119 in.)
		Maximum	0.900 mm (0.0354 in.)
		Oil ring STD	0.200 – 0.500 mm (0.0079 – 0.0157 in.)
		Maximum	0.880 mm (0.0346 in.)

Connecting rod	Rod bend maximum per 100 mm (3.94 in.)		0.03 mm (0.0012 in.)
	Rod twist maximum per 100 mm (3.94 in.)		0.15 mm (0.0059 in.)
	Bushing inside diameter		33.008 – 33.020 mm (1.2995 – 1.3000 in.)
	Piston pin diameter		33.000 – 33.012 mm (1.2992 – 1.2997 in.)
	Bushing oil clearance	STD	0.004 – 0.012 mm (0.0002 – 0.0005 in.)
		Maximum	0.030 mm (0.0012 in.)
Crankshaft	Main journal diameter	STD	66.982 – 67.000 mm (2.6371 – 2.6378 in.)
		U/S 0.25	66.745 – 66.755 mm (2.6278 – 2.6281 in.)
		U/S 0.50	66.495 – 66.505 mm (2.6179 – 2.6183 in.)
	Main bearing center wall thickness (Reference)	Mark "3"	1.982 – 1.985 mm (0.07803 – 0.07815 in.)
		Mark "4"	1.985 – 1.988 mm (0.07815 – 0.07827 in.)
		Mark "5"	1.988 – 1.991 mm (0.07827 – 0.07839 in.)
		Mark "6"	1.991 – 1.994 mm (0.07839 – 0.07850 in.)
		Mark "7"	1.994 – 1.997 mm (0.07850 – 0.07862 in.)
		Mark "8"	1.997 – 2.000 mm (0.07862 – 0.07874 in.)
	Circle runout		0.06 mm (0.0024 in.)
	Main journal taper and out-of-round		0.02 mm (0.0008 in.)