

Unit: mm (in)

Cylinder Head

Item	Standard	Service Limit
Cylinder compression	981-1373 kPa (10.0-14.0 kg/cm ² , 142-199 psi)/250 min ⁻¹ (rpm)	—
Cylinder compression synchronization difference	—	392kPa (4.0kg/cm ² , 57psi)
Valve clearance IN	—	—
EX	—	—
Cylinder head warpage	—	0.10 (0.004)
Cam lobe height ① IN	32.252-32.412 (1.2697-1.2760)	32.17 (1.266)
IN (California model)	32.252-32.412 (1.2697-1.2760)	32.17 (1.266)
EX	32.136-32.296 (1.2651-1.2714)	3.05 (0.907)
EX (California model)	32.136-32.296 (1.2651-1.2714)	32.05 (0.907)
Camshaft runout ②	—	0.10 (0.004)
Camshaft oil clearance A	0.020-0.062 (0.0007-0.0024)	0.09 (0.003)
B	0.055-0.097 (0.0021-0.0038)	0.12 (0.004)

Camshaft journal O.D. (A)	25.959-25.980 (1.0220-1.0228)	—
(B)	25.929-25.950 (1.0208-1.0216)	—
Camshaft holder I.D. (A)	26.000-26.033 (1.0236-1.0249)	—
(B)	26.010-26.031 (1.0240-1.0248)	—
Valve stem O.D. IN	4.975-4.990 (0.1959-0.1965)	4.97 (0.195)
EX	4.955-4.970 (0.1951-0.1957)	4.94 (0.194)
Valve guide I.D. IN	5.000-5.012 (0.1969-0.1973)	5.04 (0.198)
EX	5.000-5.012 (0.1969-0.1973)	5.04 (0.198)
Stem-to-guide clearance IN	0.010-0.037 (0.0006-0.0017)	0.07 (0.003)
EX	0.030-0.057 (0.0012-0.0022)	0.09 (0.004)
Valve guide projection above cylinder head IN	—	—
EX	—	—
Before guide installation:		
1. Chill the valve guides in the freezer section of a refrigerator for about an hour.		
2. Heat the cylinder head to 100-150°C (212-300°F)		
Valve seat width	0.9-1.1	1.5 (0.06)
Valve spring free length IN	43.7 (1.720)	42.2 (1.66)
EX	43.7 (1.720)	42.2 (1.66)
inner IN	—	—
inner EX	—	—
outer IN	—	—
outer EX	—	—
Rocker arm I.D. IN	—	—
EX	—	—
Sub-rocker arm I.D. IN	—	—
EX	—	—
Rocker arm shaft O.D. IN	—	—
EX	—	—
Sub-rocker arm shaft O.D. IN	—	—
EX	—	—
Rocker arm-to-rocker arm shaft clearance	—	—
Sub-rocker arm-to-rocker arm shaft clearance	—	—
Valve lifter O.D.	—	—
Valve lifter bore I.D.	—	—
Hydraulic lash adjuster assist spring free length	—	—
Hydraulic lash adjuster compression stroke with kerosene	0-0.2 (0-0.008)	—