

General

Manufacturer	TOYOTA		
Model/Year	2L	1983 – 7/1988	ROCKER CAM
L/(CID)	2,446cc DIESEL	No. of Cylinders	4
Bore & Stroke	92.0mm X 92.0mm		
Firing Order	1 – 3 – 4 – 2		
Compression Ratio	22.3 : 1	Idle Speed	700 rpm
Comp. Pressure @ RPM	3.2 MPa @ 250 rpm	2.0 MPa min.	<490 kPa diff.
Oil Pressure	29 kPa min at idle	Oil Capacity & Grade	6.5 ltr dry CC-CD
Injection Timing	Plunger stroke at TDC:	1.06 – 1.22mm w/o ACSD	0.82 – 0.98mm (ACSD)

Block

Bore Diameter Standard	92.000 – 92.030 mm
Maximum Overbore	1.00 mm
Liner Flange Height & Fit	N/A Repair liners are available.
Crankshaft Housing Bore	66.000 – 66.020 mm
Camshaft Housing Bore	38.015 – 38.027 mm
Block Deck Height	0.20 mm warp limit

Pistons & Rings

Piston to Bore Clearance	0.05 – 0.07 mm @ 23 mm up from bottom of skirt
Piston Protrusion	0.56 – 0.66 mm
Gudgeon Pin Diameter	27.000 – 27.012 mm
Gudgeon Pin Clearance	0.004 – 0.012 mm Limit: 0.05 mm
Ring Equipment	Top: 2.0 mm (½K), 2 nd : 2.0 mm; Oil: 4.0 mm.
Piston Ring End Gap	Top: 0.35 – 0.62 mm; 2 nd : 0.20 – 0.47 mm; Oil: 0.20 – 0.52 mm.
Ring to Groove Clearance	Top: 0.02 – 0.065 mm; 2 nd : 0.04 – 0.10 mm; Oil: 0.03 – 0.07 mm.

Connecting Rods

Big End Bore	56.000 – 56.020 mm
Pin End Bore	30.000 – 30.021 mm
Centre to Centre	147 mm
Big End Width	
Bush ID Finished	27.008 – 27.020 mm
Rod Side Clearance	0.080 – 0.200 mm Limit: 0.30 mm
Bend/Twist	0.05 mm/100mm bend 0.15 mm/100 mm twist

Camshaft

Journal Diameters	34.969 – 34.985 mm		
End Play	0.055 – 0.155 mm Limit: 0.3 mm		
Oil Clearance	0.022 – 0.074 mm Limit: 0.10 mm		
Minimum Lobe Height	Inlet 46.76 mm	Exhaust	47.25 mm
Bend Limit	0.10 mm circle runout		

Crankshaft

Main Journal Standard	61.985 – 62.000 mm		
Conrod Journal Standard	52.988 – 53.000 mm		
Harmonic Balancer Diam.			
Crank Gear Diameter			
Seal Diameter			
Thrust Thickness	2.430 – 2.480 mm		
Main Bearing Clearance	0.034 – 0.065 mm std. Limit: 0.10 mm		
Conrod Bearing Clearance	0.036 – 0.064 mm std. Limit: 0.10 mm		
Crankshaft End Play	0.040 – 0.250 mm Limit: 0.30 mm		
Journal Radius	Main Undercut	Conrod Undercut	

Cylinder Head

Tappet Clearance	Inlet	0.27 mm Cold	Exhaust	0.38 mm Cold
Head Height	New	102 mm	Warp	0.2 mm Limit
Valve Seat Angle	Inlet	45°	Exhaust	45°
Valve Seat Width	Inlet	1.2 – 1.6 mm	Exhaust	1.2 – 1.6 mm
Valve Head Recess	Inlet	1.1 – 1.2 mm	Exhaust	1.3 – 1.4 mm
Valve Head Margin	Inlet	0.9 mm min.	Exhaust	1.0 mm min.
Valve Face Angle	Inlet	44.5°	Exhaust	44.5°
Valve Length	Inlet	122.95 mm	Exhaust	122.75 mm
Valve Stem Diameter	Inlet	8.473 – 8.489 mm	Exhaust	8.454 – 8.470 mm
Valve Guide Height	Inlet	16.3 – 16.7 mm	Exhaust	16.3 – 16.7 mm
Valve Guide Clear. Std.	Inlet	0.021 – 0.057 mm	Exhaust	0.040 – 0.076 mm
Valve Guide Clear. Limit	Inlet	0.10 mm	Exhaust	0.12 mm
Valve Spring Pressure	Inlet	29.2 kg	Exhaust	29.2 kg
Valve Spring Free Length	Inlet	47.98 mm	Exhaust	47.98 mm
Valve Spring Install. Height	Inlet	39.3 mm	Exhaust	39.3 mm
Precom. Chamber Protrus.		0.01 – 0.07 mm		

Torque Specifications

Main Bolts	10.5 kgf.m OILED			
Conrod Bolts	6.0 kgf.m OILED			
Head Bolts	12.0 kgf.m OILED			
Cam Cap Bolts	1.95 kgf.m OILED			
Manifold Bolts	Inlet	2.4 kgf.m	Exhaust	4.0 kgf.m
Flywheel Bolts	12.5 kgf.m OILED			
Harmonic Balancer	14.0 kgf.m			

Torque Sequences

