5.4L SOHC ENGINE MECHANICAL SPECIFICATIONS

Description	English Specifications	Metric Specifications
Camshaft		
Lobe lift		
Intake	0.2594 in.	6.59mm
Exhaust	0.2594 in.	6.59mm
Lobe wear limit (all)	0.005 in.	0.127mm
Theoretical valve lift @ zero lash (all)	0.472 in.	12.0mm
End-play	0.00098-0.0065 in.	0.027-0.190mm
End-play wear limit	0.0075 in.	0.190mm
Bearing-to-journal clearance	0.00098-0.003 in.	0.025-0.076mm
Bearing-to-journal clearance service limit	0.003 in.	0.076mm
Journal diameter	1.061-1.060 in.	26.962-26.936mm
Bearing journal inside diameter	1.063-1.0625 in.	27.012-26.987mm
Run-out	0.004 in.	0.09mm
Cylinder Block		
Cylinder bore diameter		
Grade 1	3.5512-3.5516 in.	90.20-90.21mm
Grade 2	3.5516-3.5520 in.	90.21-90.22mm
Grade 3	3.5520-3.5524 in.	90.22-90.23mm
Out-of-round	0.0006 in.	0.015mm
Out-of-round (service limit)	0.00079 in.	0.020mm
Taper limit	0.00023 in.	0.006mm
Main bearing bore	2.85-2.851 in.	72.400-72.424mm
Crankshaft		
Main bearing journal diameter	2.65-2.657 in.	67.483-67.503mm
Main bearing journal taper	0.0007 in.	0.02mm
Main bearing journal run-out	0.002 in.	0.05mm
Main bearing-to-crankshaft clearance	0.0011-0.0026 in.	0.027-0.065mm
Bearing wall thickness	0.095-0.10 in.	2.436-2.545mm
Connecting rod bearing journal diameter	2.087-2.867 in.	52.988-53.003mm
Crankshaft free end-play	0.130-0.301 in.	0.075-0.377mm
Crankshaft runout-to-rear face of the block	0.002 in.	0.05mm
Connecting Rod		
Connecting rod bearing-to-crankshaft clearance	0.001-0.0027 in.	0.027-0.069mm
Connecting rod bearing wall thickness	0.096-0.0965 in.	2.444-2.452mm
Connecting rod main bearing bore diameter	2.234-2.24 in.	56.756-56.876mm
Connecting rod length (center-to-center)	6.65 in.	169.1mm
Connecting rod-to-crank side clearance (standard)	0.0006-0.0177 in.	0.015-0.45mm
Connecting rod-to-crank side clearance (maximum)	0.02 in.	0.5mm
Connecting rod main bearing journal taper	0.0005 in.	0.015 mm
Pistons		
Piston diameter	3.550 in.	90.180mm +/- 0.005mm
Piston-to-bore clearance	0.0005-0.001 in.	0.012-0.026mm
Piston pin bore diameter	0.864-0.865 in.	22.015-22.04mm
Piston pin bore length	2.44-2.443 in.	61.93-62.05mm
Piston pin-to-rod clearance	0.0006-0.00157 in.	0.015-0.040mm
Piston pin-to-piston clearance	0.0002-0.0004 in.	0.005-0.010mm
Piston ring side clearance		
Upper compression ring	0.0012-0.0031 in.	0.030-0.080mm
Lower compression ring	0.0012-0.0031 in.	0.030-0.080mm
Oil control ring	0.0010-0.0077 in.	0.027-0.196mm
Piston ring groove width		
Upper compression ring	0.060-0.0610 in.	1.530-1.550mm
Lower compression ring	0.060-0.0602 in.	1.520-1.530mm
Oil control ring	0.1192-0.1201 in.	3.030-3.050mm
Piston ring gap		
Upper compression ring	0.005-0.011 in.	0.13-0.28mm
Lower compression ring	0.01-0.02 in.	0.23-0.49mm
Oil control ring	0.006-0.026 in.	0.15-0.66mm

5.4L DOHC ENGINE MECHANICAL SPECIFICATIONS

Description	English Specifications	Metric Specifications
General Information		
Type	Liquid Cooled, Overhead Camshafts	
Displacement	330 cid	5.4L
Number of cylinders	8	
Bore	3.55 in.	90.2mm
Stroke	4.17 in.	105.8mm
Compression ratio	9.0:1	
Firing order	1-3-7-2-6-5-4-8	
Oil Pressure	40-70 psi @ 1500 RPM (engine hot)	