4.2L ENGINE MECHANICAL SPECIFICATIONS

Description	English Specifications	Metric Specifications
General Information		
Type	Liquid Cooled, Overhead Valve	
Displacement	256 cid	4.2L
Number of cylinders	6	
Bore	3.81 in.	96.83mm
Stroke	3.74 in.	95.0mm
Compression ratio	9.3:1	
Firing order	1-4-2-5-3-6	
Oil Pressure	40-125 psi @ 2500 RPM (engine hot)	
Cylinder Head and Valve Train		
Valve guide bore diameter	0.3443-0.3433 in.	8.745-8.720
Valve seat width (intake and exhaust)	0.06-0.08 in.	1.5-2.0mm
Valve seat angle	44.75 degrees	
Valve seat run-out	0.003 in.	0.076mm
Valve stem-to-guide clearance		
Intake	0.00078-0.00272 in.	0.020-0.069mm
Exhaust	0.00177-0.00374 in.	0.045-0.095mm
Valve head diameter		
Intake	1.86 in.	47.27mm
Exhaust	1.46 in.	37.1mm
Valve face run-out limit	0.001 in.	0.05mm
Valve face angle	45.675 degrees	
Valve stem diameter		
Intake	0.3423-0.3415 in.	8.694-8.674mm
Exhaust	0.3418-0.3410 in.	8.682-8.662mm
Free length		
Intake	1.99 in.	50.5mm
Exhaust	1.99 in.	50.5mm
Valve spring assembled length	1.566-1.637 in.	39.8-41.6mm
Camshaft		
Lobe lift		
Intake	0.245 in.	6.22mm
Exhaust	0.259 in.	6.57mm
Lobe wear limit (all)	0.005 in.	0.127mm
End-play wear limit	0.001-0.006 in.	0.025-0.150mm
Bearing-to-journal clearance	0.0001-0.0006 in.	0.025-0.0150mm
Journal diameter	2.0515-2.0505 in.	52.108-52.082mm
Run-out	0.002 in.	0.05mm
Out-of-round limit	0.001 in.	0.025mm
Cylinder Block		
Cylinder bore diameter		
Standard	3.81 in.	96.80mm
Out-of-round	0.002 in.	0.050mm
Taper limit	0.002 in.	0.050mm
Cylinder head gasket surface flatness per 0.003 in. (0.08mm)	6.0 in.	152.0mm
Crankshaft		
Main bearing journal diameter (standard)	2.5190-2.5198 in.	62.968-62.992mm
Main bearing journal diameter (0.010 in. (0.25mm) undersize)	2.5182-2.5190 in.	62.963-62.983mm
Main bearing journal taper limit	0.0006 in.	0.016mm
Main bearing journal out-of-round limit	0.0012 in.	0.3mm
Main bearing journal run-out limit	0.002 in.	0.05mm
Crankshaft free end-play	0.00003-0.00787 in.	0.007-0.20mm
Connecting Rod		
Connecting rod bearing journal diameter (standard)	2.3103-2.3111 in.	58.682-58.702mm
Connecting rod bearing journal diameter (0.010 in. (0.25mm) undersize)	2.3095-2.3103 in.	58.662-58.682mm
Connecting rod bearing journal diameter (0.020 in. (0.50mm) undersize)	2.3083-2.3091 in.	58.632-58.652mm
Connecting rod bearing journal taper limit	0.0006 in.	0.016mm
Connecting rod bearing journal out-of-round limit	0.0012 in.	0.3mm
Bend for each 1.97 in. (25mm)	0.04 in.	0.0015mm
Side clearance (max)	0.0047-0.01929 in.	0.11-0.49mm
Pistons		
Piston diameter	3.81 in.	96.795mm
Piston-to-bore clearance	0.000709-0.00173 in.	0.018-0.044mm
Piston ring side clearance (all)	0.00122-0.00315 in.	0.030-0.080mm
Piston ring gap		
Upper compression ring	0.00098-0.00161 in.	0.25-0.41mm
Lower compression ring	0.00149-0.0025 in.	0.38-0.64mm
Oil control ring	0.0059-0.0064 in.	0.15-0.65mm
Oil Pump		
Oil pump gear radial clearance (idler and drive)	0.0055-0.002 in.	0.125-0.050mm
Oil pump gear end height (extends below the housing)	0.0033-0.0004 in.	0.085-0.010mm