5.8L ENGINE MECHANICAL SPECIFICATIONS

Description		English Specifications	Metric Specifications
Pistons			
Diameter	9		
Coded red:		3.9978-3.9984	101.544-101.560
Coded blue:		3.9990-3.9996	101.575-101.590
.003 oversize:		4.0002-4.0008	101.605-101.620
Piston to bore clearance selective fit			
Standard engine:		0.0018-0.0026	0.0457-0.0660
Lightning engine:		0.0015-0.0023	0.0381-0.0584
Piston pin bore diameter:		0.9123-0.9126	23.172-23.180
Ring groove width compression			
Top:		0.080-0.081	2.032-2.057
Bottom:		0.080-0.081	2.032-2.057
Oil:		0.188-0.189	4.775-4.801
Piston pins			
Length:		3.010-3.040	76.45-77.21
Diameter			
Standard:		0.9119-0.9124	23.162-23.174
.001 oversize:		0.9130-0.9133	23.190-23.197
.002 oversize:		0.9140-0.9143	23.215-23.223
To piston pin bore clearance (selective fit):		0.0003-0.0005	0.0076-0.0127
To connecting rod bushing clearance: Interference fit			
Piston rings			
Ring width			
Top Compression:		0.077-0.087	1.9558-2.2098
Bottom compression:		0.077-0.087	1.9558-2.2098
Side clearance	10		
Piston rings (cont'd)			
Top compression:		0.002-0.004	0.051-0.102
Bottom compression:		0.002-0.004	0.051-0.102
Oil: snug			
Ring gap			
Top compression:		0.010-0.020	0.254-0.508
Bottom compression:		0.010-0.020	0.254-0.508
Oil (steel rail):		0.015-0.040	0.381-1.016
Camshaft			
Lobe lift	11		
Intake:		0.2780	7.0610
Exhaust:		0.2830	7.1880
End-play			
Standard:		0.001-0.007	0.0254-0.178
Maximum:		0.0090	0.2280
Camshaft journal to bearing clearanc	12	0.001-0.003	0.0254-0.076
Camshaft drive			
Journal diameter (standard)	13		
No. 1:		2.0815	52.8700
No. 2:		2.0655	52.4600
No. 3:		2.0515	51.1810
No. 4:		2.0365	51.7270
No. 5:		2.0215	51.3460
Bearing inside diameter			
No. 1:		2.0835	52.9210
No. 2:		2.0685	52.5400
No. 3:		2.0535	52.1590
No. 4:		2.0385	51.7780
No. 5:		2.0235	51.3970
Camshaft front bearing location	14	0.005-0.020	0.127-0.508
Oil pump and oil capacity			
Relief valve spring pressure @ specified length:		18.2-20.2 lbs. @ 2.49 in.	8.26-9.16 kg @ 63.25mm
Driveshaft to housing clearance:		0.0015-0.003	0.0381-0.076
Relief valve to housing clearance:		0.0015-0.003	0.0381-0.076
Rotor assembly end clearance:		0.004 maximum	0.100 maximum
Outer race to housing clearance:		0.001-0.003	0.0254-0.0762
Engine oil capacity			
U.S. quarts: 5			
Imperial quarts: 4.2			
Litres: 4.7			

1 Unless otherwise specified with a different measurement (for example, psi, kPa, lbs., N, etc.)
2 Compression pressure (PSI) of the lowest cylinder must be at least 75 percent of the highest to be within specification
3 Valve seat angle: 45 degrees
4 Service limit: 0.005 in. (0.127mm)
5 Time required for plunger to leak down 0.625 in. (15.87mm) under load of 50 lbs. (22.5 kg) using leak down fluid in tappet