

# ENGINE SPECIFICATIONS

## GENERAL SPECIFICATIONS

Application	Specification
Displacement	152 Cu. In. (2.5L)
Bore	3.78" (96.0 mm)
Stroke	3.402" (86.41 mm)
Compression Ratio	9.4:1
Fuel System	SFI

## CYLINDER HEAD SPECIFICATIONS

Application	Specification
Maximum Warpage <sup>(1)</sup>	.003" (.08 mm)
Valve Seats	
Intake Valve	
Seat Angle	45°
Seat Width	.068-.088" (1.73-2.24 mm)
Maximum Seat Runout	.0016" (.041 mm)
Exhaust Valve	
Seat Angle	45°
Seat Width	.070-.090" (1.78-2.29 mm)
Maximum Seat Runout	.0016" (.041 mm)
Valve Guides	
Intake Valve	
Bore Diameter	.2761-.2773" (7.013-7.043 mm)
Valve Stem-To-Guide Oil Clearance	
Standard	.0008-.0027" (.020-.069 mm)
Service Limit	.004" (.102 mm)
Exhaust Valve	
Bore Diameter	.2761-.2773" (7.013-7.043 mm)
Valve Stem-To-Guide Oil Clearance	
Standard	.0018-.0037" (.046-.094 mm)
Service Limit	.004" (.102 mm)
(1) Specification listed is taken within a 6" (152 mm) area. Overall warpage is .006" (.15 mm). DO NOT machine more than .010" (.25 mm) from original gasket surface.	

## CYLINDER BLOCK SPECIFICATIONS

Application	In. (mm)
Cylinder Bore	
Standard Diameter	3.7795-3.7810 (95.999-96.037)
Maximum Out-Of-Round	.0015 (.038)
Maximum Taper	.010 (.25)
Maximum Deck Warpage <sup>(1)</sup>	.003 (.08)

(1) Specification listed is taken within a 6" (152 mm) area. Overall warpage is .006" (.15 mm). DO NOT machine more than .010" (.25 mm) from original gasket surface.

### CAMSHAFT SPECIFICATIONS

Application	In. (mm)
Camshaft End Play	
Standard	.001-.007 (.03-.18)
Service Limit	.009 (.23)
Journal Diameter	1.7713-1.7720 (44.991-45.009)
Lobe Lift	.2163 (5.494)
Camshaft Oil Clearance	
Standard	.001-.003 (.03-.08)
Service Limit	.001 (.03)

### CRANKSHAFT, MAIN & CONNECTING ROD BEARINGS SPECIFICATIONS

Application	In. (mm)
Crankshaft End Play	
Desired	.003-.008 (.08-.20)
Service Limit	.009 (.23)
Main Bearings	
Journal Diameter	2.2051-2.2059 (56.009-56.030)
Journal Out-Of-Round Limit	.0006 (.015)
Journal Taper Limit <sup>(1)</sup>	.0006 (.015)
Oil Clearance	
Desired	.0008-.0015 (.020-.038)
Allowable	.0008-.0026 (.020-.066)
Connecting Rod Bearings	
Journal Diameter	2.0464-2.0472 (51.979-51.998)
Journal Out-Of-Round Limit	.0006 (.015)
Journal Taper Limit <sup>(1)</sup>	.0005 (.013)
Oil Clearance	
Desired	.0008-.0015 (.020-.038)
Allowable	.0008-.0026 (.020-.066)
(1) Specification listed is per 1" (25.4 mm).	

### CONNECTING RODS SPECIFICATIONS

Application	In. (mm)
Bore Diameter	
Pin Bore	.9096-.9112 (23.104-23.145)
Center-To-Center Length	5.4558-5.4591 (138.577-138.661)
Maximum Bend	.0016 (.041)
Maximum Twist	.0030 (.076)

Side Play	
Standard	.0035-.0115 (.089-.292)
Service Limit	.014 (.36)

### VALVE LASH ADJUSTERS SPECIFICATIONS

Application	In. (mm)
Adjuster Diameter	.8422-.8427 (21.392-21.405)
Bore Diameter	.8430-.8449 (21.412-24.000)
Collapsed Lash Adjuster Clearance	
Desired	.040-.050 (1.02-1.27)
Allowable	.035-.055 (.89-1.40)
Oil Clearance	.0007-.0027 (.018-.069)

### VALVES & VALVE SPRINGS SPECIFICATIONS

Application	Specification
Intake Valves	
Face Angle Limit	44°
Head Diameter	1.730-1.740" (43.94-44.20 mm)
Stem Diameter	.2746-.2754" (6.975-6.995 mm)
Exhaust Valves	
Face Angle Limit	44°
Head Diameter	1.49-1.51" (37.8-38.4 mm)
Stem Diameter	.2736-.2744" (6.949-6.970 mm)
Valve Springs	
Free Length (Approx.)	2.02" (51.3 mm)
Installed Height	1.54-1.58" (39.1-40.1 mm)
Out-Of-Square Limit	.078" (1.98 mm)
<b>Lbs. @ In. (kg @ mm)</b>	
Valve Spring Pressure	
Valve Closed	57-63 @ 1.56 (26-29 @ 39.6)
Valve Open	118-132 @ 1.16 (54-60 @ 29.5)

### PISTONS, PINS & RINGS SPECIFICATIONS

Application	In. (mm)
Pistons	
Clearance	.0012-.0022 (.030-.056)
Diameter <sup>(1)</sup>	
Blue	3.7800-3.7895 (96.012-96.025)
Red	3.7795-3.7800 (96.000-96.012)
Yellow	3.7805-3.7810 (96.025-96.037)
Pins	

Diameter <sup>(2)</sup>	.9121-.9122 (23.167-23.170)
Piston Fit	.00043-.00067 (.011-.017)
Rod Fit	Interference Fit
Rings	
No. 1	
End Gap	.008-.018 (.20-.47)
Side Clearance	.0014-.0030 (.035-.076)
No. 2	
End Gap	.013-.023 (.32-.59)
Side Clearance	.0014-.0030 (.035-.076)
No. 3 (Oil)	
End Gap (Steel Rail)	.010-.035 (.25-. 88)
Side Clearance	Snug Fit
(1) Piston diameter is measured at 1.00" (25.4 mm) from oil ring groove, at 90-degrees to piston pin. To select correct pistons, see <b><u>CYLINDER BLOCK ASSEMBLY</u></b> under OVERHAUL.	
(2) Standard diameter listed. Available in .001" (.02 mm) and .002" (.05 mm) oversize.	