3.0L 6-CYL & 3.0L 6-CYL TURBO - VIN [M]
Selected Block

1993 Toyota Supra

For Lextreme Powertrain 2020 S. Hacienda Blvd. # D Hacienda Heights California 91745

Sunday, May 25, 2003 11:00AM

GENERAL ENGINE SPECIFICATIONS

GENERAL ENGINE SPECIFICATIONS TABLE

Application	Specification
Displacement	183 Cu. In. (3.0L)
Bore	3.39" (86.1 mm)
Stroke	3.39" (86.1 mm)
Compression Ratio	
Non-Turbo	10.0:1
Turbo	8.5:1
Fuel System	PFI
Horsepower @ RPM	
Non-Turbo	220 @ 5800
Turbo	320 @ 5600
Torque Ft. Lbs. @ RPM	
Non-Turbo	210 @ 4800
Turbo	315 @ 4000

CRANKSHAFT, MAIN & CONNECTING ROD BEARINGS SPECS

CRANKSHAFT, MAIN & CONNECTING ROD BEARINGS SPECS TABLE

Application	In. (mm)
Crankshaft	
End Play	
Standard	.0008-.0087 (.020-.220)
Wear Limit	.0118 (.300)
Runout	.0024 (.060)
Main Bearings	
Journal Diameter (1)	
Size Mark "0"	2.44086-2.44094 (61.9980-62.0000)
Size Mark "1"	2.44078-2.44086 (61.9960-61.9980)
Size Mark "2"	2.44070-2.44078 (61.9940-61.9960)
Size Mark "3"	2.44063-2.44070 (61.9920-61.9940)
Size Mark "4"	2.44055-2.44063 (61.9900-61.9920)
Size Mark "5"	2.44047-2.44055 (61.9880-61.9900)
Size Mark "6"	2.44039-2.44047 (61.9860-61.9880)
Size Mark "7"	2.44031-2.44039 (61.9840-61.9860)
Journal Out-Of-Round	.0008 (.020)
Journal Taper	.0008 (.020)
Oil Clearance	
Standard Crankshaft	
Standard	.0010-.0016 (.025-.040)
Wear Limit	.0024 (.060)
.010" (.25 mm) Undersize Crankshaft	

Standard	.0010-.0024 (.025-.060)
Wear Limit	.0031 (.080)
Connecting Rod Bearings	
Journal Diameter (2)	
Size Mark "0"	2.0470-2.0472 (51.994-52.000)
Size Mark "1"	2.0468-2.0470 (51.988-51.994)
Size Mark "2"	2.0465-2.0468 (51.982-51.988)
Journal Out-Of-Round	.0008 (.020)
Journal Taper	.0008 (.020)
Oil Clearance	
Standard Crankshaft	
Standard	.0014-.0021 (.035-.053)
Wear Limit	.0031 (.080)
.010" (.25 mm) Undersize Crankshaft	
Standard	.0016-.0030 (.040-.078)
Wear Limit	.0035 (.090)

(1) - Main bearing journal diameter is determined by size mark stamped on crankshaft. See Fig. 49.
(2) - Rod journal diameter is determined by size mark stamped on crankshaft. See Fig. 47.

CONNECTING RODS SPECIFICATIONS

CONNECTING RODS SPECIFICATIONS TABLE

Application	In. (mm)
Bore Diameter	
Pin Bushing Bore	.8663-.8667 (22.005-22.014)
Crankpin Bore (1)	
Size Mark "1"	2.1663-2.1666 (55.025-55.031)
Size Mark "2"	2.1666-2.1668 (55.031-55.037)
Size Mark "3"	2.1668-2.1670 (55.037-55.043)
Maximum Bend	.0020 Per 3.94 (.050 Per 100.1)
Maximum Twist	.0059 Per 3.94 (.150 Per 100.1)
Side Play	
Standard	.0098-.0158 (.250-.402)
Wear Limit	.0197 (.500)

(1) - Bore diameter is determined by size mark stamped on connecting rod cap. See Fig. 47.

PISTONS, PINS & RINGS SPECIFICATIONS

PISTONS, PINS & RINGS SPECIFICATIONS TABLE

~~3.0L 6-CYL & 3.0L 6-CYL TURBO~~ - VIN [M]Selected

Application	In. (mm)
Pistons	
Clearance	
Non-Turbo	
Standard	.0022-.0031 (.055-.078)
Wear Limit	.0039 (.099)
Turbo	
Standard	.0029-.0038 (.073-.096)
Wear Limit	.0047 (.120)
Diameter	
Non-Turbo	3.3833-3.3837 (85.935-85.945)
Turbo	3.3826-3.3830 (85.917-85.927)
Pins	
Diameter	.8660-.8664 (21.997-22.006)
Piston Fit	(1)
Rod Fit	
Standard	.0002-.0004 (.005-.011)
Wear Limit	.002 (.05)
Rings	
No. 1	
End Gap	
Non-Turbo	
Standard	.0118-.0185 (.300-.470)
Wear Limit	.0421 (1.070)
Turbo	
Standard	.0118-.0157 (.300-.400)
Wear Limit	.0394 (1.000)
Side Clearance	
Non-Turbo	.0004-.0028 (.011-.070)
Turbo	.0016-.0031 (.040-.080)
No. 2	
End Gap	
Non-Turbo	
Standard	.0138-.0205 (.350-.520)
Wear Limit	.0441 (1.120)
Turbo	
Standard	.0138-.0178 (.350-.450)
Wear Limit	.0413 (1.050)
Side Clearance	
Non-Turbo & Turbo	.0012-.0028 (.030-.070)
No. 3 (Oil)	
End Gap	
Non-Turbo	
Standard	.0051-.0177 (.130-.450)
Wear Limit	.0413 (1.050)
Turbo	
Standard	.0051-.0150 (.130-.380)
Wear Limit	.0386 (.980)

(1) - With piston at 176°F (80°C), piston pin should be able to be pressed into piston using thumb pressure.

CYLINDER BLOCK SPECIFICATIONS

CYLINDER BLOCK SPECIFICATIONS TABLE

Application	In. (mm)
Cylinder Bore	
Standard Diameter	3.3858-3.3863 (86.000-86.013)
Maximum Diameter	3.3866 (86.020)
Main Bearing Bore Inside Diameter (1)	
Size Mark "0"	2.59921-2.59929 (66.0200-66.0220)
Size Mark "1"	2.59929-2.59936 (66.0220-66.0240)
Size Mark "2"	2.59936-2.59944 (66.0240-66.0260)
Size Mark "3"	2.59944-2.59952 (66.0260-66.0280)
Size Mark "4"	2.59952-2.59960 (66.0280-66.0300)
Size Mark "5"	2.59960-2.59968 (66.0300-66.0320)
Size Mark "6"	2.59968-2.59976 (66.0320-66.0340)
Size Mark "7"	2.59976-2.59984 (66.0340-66.0360)
Maximum Deck Warpage	.0028 (.070)

(1) - Cylinder block main bearing bore inside diameter is determined by size mark stamped on cylinder block. See Fig. 49.

VALVES & VALVE SPRINGS SPECIFICATIONS

VALVES & VALVE SPRINGS SPECIFICATIONS TABLE

Application	Specification
Intake Valves	
Face Angle	44.5°
Minimum Margin	.020" (.50 mm)
Minimum Refinish Length	3.8657" (98.190 mm)
Stem Diameter	.2350-.2356" (5.970-5.985 mm)
Exhaust Valves	
Face Angle	44.5°
Minimum Margin	.020" (.50 mm)
Minimum Refinish Length	3.8874" (98.740 mm)
Stem Diameter	.2348-.2354" (5.965-5.980 mm)
Valve Springs	
Free Length	
Blue Paint Mark	1.6433" (41.740 mm)

Yellow Paint Mark	1.6417" (41.700 mm)
Out-Of-Square	.079" (2.00 mm)
	Lbs. @ In. (kg @ mm)
Pressure	
Intake & Exhaust	42-46 @ 1.358 (19-21 @ 34.50)

CYLINDER HEAD SPECIFICATIONS

CYLINDER HEAD SPECIFICATIONS TABLE

Application	Specification
Maximum Warpage	
Cylinder Block Surface	.0039" (.099 mm)
Manifold Surface	.0039" (.099 mm)
Valve Seats	
Intake Valve	
Seat Angle	45°
Seat Width	.039-.055" (.99-1.40 mm)
Exhaust Valve	
Seat Angle	45°
Seat Width	.047-.063" (1.20-1.60 mm)
Valve Guides	
Intake Valve	
Valve Guide Cylinder Head Bore I.D.	
Standard Valve Guide	.4325-.4333" (10.985-11.006 mm)
Oversize Valve Guide	.4344-.4353" (11.035-11.056 mm)
Valve Guide I.D.	.2366-.2374" (6.010-6.030 mm)
Valve Guide Installed Height	.484-.500" (12.30-12.70 mm)
Valve Stem-To-Guide Oil Clearance	
Standard	.0010-.0024" (.025-.060 mm)
Wear Limit	.0031" (.080 mm)
Exhaust Valve	
Valve Guide Cylinder Head Bore I.D.	
Standard Valve Guide	.4344-.4348" (11.033-11.044 mm)
Oversize Valve Guide	.4363-.4368" (11.082-11.094 mm)
Valve Guide I.D.	.2366-.2374" (6.010-6.030 mm)
Valve Guide Installed Height	.449-.465" (11.40-11.80 mm)
Valve Stem-To-Guide Oil Clearance	
Standard	.0012-.0026" (.030-.065 mm)
Wear Limit	.0039" (.099 mm)

CAMSHAFT SPECIFICATIONS

CAMSHAFT SPECIFICATIONS TABLE

3.0L 6-CYL & 3.0L 6-

Application	In. (mm)
End Play	
Standard	.0031-.0075 (.080-.190)
Wear Limit	.0118 (.300)
Journal Diameter	1.1397-1.1404 (28.949-28.965)
Journal Runout	.0031 (.080)
Lobe Height	
Intake	
Standard	1.7547-1.7587 (44.570-44.670)
Wear Limit	1.7488 (44.420)
Exhaust	
Standard	1.7626-1.7665 (44.770-44.870)
Wear Limit	1.7567 (44.620)
Oil Clearance	
Standard	.0014-.0028 (.035-.072)
Wear Limit	.0039 (.099)

VALVE LIFTERS SPECIFICATIONS

VALVE LIFTERS SPECIFICATIONS TABLE

Application	In. (mm)
Bore Diameter	1.2205-1.2211 (31.000-31.016)
Lifter Diameter	1.2191-1.2195 (30.966-30.976)
Oil Clearance	
Standard	.0009-.0020 (.024-.050)
Wear Limit	.0028 (.070)

END OF ARTICLE