

Nissan TD42 SPECIFICATIONS

ENGINE ASSEMBLY

Type	6 cylinder OHV diesel with indirect injection
Model	TD42
Capacity	4169 cc
Stroke	96 mm
Bore	96 mm
Firing order	1 – 4 – 2 – 6 – 3 – 5
Compression ratio	22.7:1
Compression pressure:	
Standard	2942 kPa
Minimum	2452 kPa
Maximum variation between cylinders	294 kPa

NOTE: Specifications regarding engine tuning are listed in the Lubrication and Maintenance section.

CYLINDER HEAD

Type	One piece
Material	Cast iron
Cylinder head distortion limit	0.2 mm
Cylinder head height minimum	89.7 mm
Pre-combustion chamber protrusion	- 0.05 - 0.10 mm
Valve head to cylinder head distance: Standard -	
Inlet	0.275 – 0.675mm
Exhaust	0.305 – 0.695mm
Limit	1.25 mm
Valve seat width	2.1 mm
Valve seat angle	45Deg
Valve guide type	Renewable
Valve seat type	Renewable
Valve guide protrusion	13mm

VALVES AND SPRINGS

Valve stem diameter:	
Inlet	7.962 – 7.977mm
Exhaust	7.945 – 7.960 mm
Valve stem to guide clearance: Standard -	
Inlet	0.023 – 0.53 mm

Exhaust	0.040 – 0.70 mm
Limit -	
Inlet	0.15 mm
Exhaust	0.20 mm
Valve head margin limit	1.0 mm
Valve face angle	45.0° - 45°30'
Valve length:	
Standard	117 mm
Minimum	116.8 mm
Valve spring free length: Color code -	
Red	52.15 mm
Yellow	53.0 mm
Valve spring squareness limit	2.0 mm

ROCKER ARMS AND SHAFT

Rocker shaft outside diameter	19.979 – 20.000 mm
Rocker arm inner diameter	20.014 – 20.035 mm
Rocker arm to shaft clearance:	
Standard	0.014 – 0.56 mm
Limit	0.15 mm

CAMSHAFT

Number of bearings	7
Bend limit	0.06 mm
End float limit	0.5 mm
Bearing oil clearance:	
Standard	0.02 – 0.109 mm
Limit	0.15 mm

Journal diameter:

Front	50.721 – 50.740 mm
Second	50.521 – 50.540 mm
Third	50.32 – 50.340 mm
Fourth	50.121 – 50.140 mm
Fifth	49.921 – 49.940 mm
Sixth	49.721 – 49.740 mm
Rear	49.521 – 49.540 mm

Cam lobe height:

Standard -	
Inlet	41.71 – 41.75 mm

Exhaust	41.88 – 41.92 mm
Limit -	
Inlet	41.20 mm
Exhaust	41.30 mm

VALVE LIFTERS AND PUSHRODS

Diameter of lifter	24.960 – 24.970 mm
Lifter hole diameter in crankcase	25.000 – 25.033 mm
Lifter to hole clearance:	
Standard	0.030 – 0.073 mm
Limit	0.2 mm
Pushrod bend limit	0.5 mm

CYLINDER BLOCK

Type	6 cylinder in line
Material	Cast iron
Block face distortion limit	0.2 mm
Bore diameter - factory cylinder liners:	
Grade 1	96.00 – 96.01 mm
Grade 2	96.01 – 96.02 mm
Grade 3	96.02 – 96.03 mm
Bore diameter - service cylinder liners	96.025 – 96.070 mm
Bore wear limit	0.20 mm
Maximum ovality	0.07 mm
Maximum taper	0.20 mm
Cylinder liner protrusion:	
Standard	0.02 – 0.09 mm
Maximum variation between cylinders	0.05 mm

CRANKSHAFT AND MAIN BEARINGS

Number of main bearings	7
Crankshaft end float:	
Taken at	No 6 main bearing
Maximum end float	0.40 mm
Main bearing journal diameter - standard	70.907 – 70.920 mm
Crankpin journal diameter - standard	56.919 – 56.926 mm
Maximum taper and ovality	0.020 mm
Maximum crankshaft bend	0.10 mm

*Main bearing oil clearance:

Standard	0.035 – 0.087 mm
Limit	0.15 mm
Main bearing undersizes available	0.25/0.5/0.75/1.0 mm
Maximum flywheel run out	0.15 mm
Maximum drive plate run out	0.5 mm

CONNECTING RODS AND BEARINGS

Maximum connecting rod bend	0.05 mm per 100 mm
Maximum connecting rod twist	0.05 mm per 100 mm
Connecting rod centre distance	156.975 – 157.025 mm

Connecting rod side clearance.

Standard	0.10 – 0.22 mm
Limit	0.22 mm

*Connecting rod bearing oil clearance:

Standard	0.035 – 0.081 mm
Limit	0.15 mm
Connecting rod bearing undersizes	0.25/0.50/0.75/1.0 mm

PISTONS AND GUDGEON PINS

Piston diameter - standard:

Grade 1	95.940 – 95.950 mm
Grade 2	95.950 – 95.960 mm
Grade 3	95.960 – 95.970 mm
Measuring point	70.0 mm from top of piston

Gudgeon pin hole diameter:

Pre November 1989	27.992 – 28.000 mm
November 1989 on	27.997 – 28.005 mm

Gudgeon pin fit in piston:

Pre November 1989	- 0.008 - 0.007 mm
November 1989 on	-0.003 - 0.012 mm

Gudgeon pin oil clearance in connecting rod	0.025 – 0.045 mm
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Piston skirt to cylinder bore clearance:

Factory cylinder liners	0.05 – 0.09 mm
Service cylinder liners	0.09 – 0.13 mm

PISTON RINGS

Number:

Compression	2
Oil control	1
Piston ring end gap:	

Factory cylinder liners

Top ring	0.30 – 0.45 mm
Second ring	0.50 – 0.65 mm
Oil ring	0.30 – 0.50 mm
Maximum	1.5 mm

Service cylinder liners -

Top ring	0.40 – 0.60 mm
Second ring	0.60 – 0.80 mm
Oil ring	0.40 – 0.60 mm
Maximum	1.5 mm
Piston ring side clearance: Standard-Top ring	0.06 – 0.10 mm
Second ring	0.04 – 0.08 mm
Oil ring	0.02 – 0.06 mm
Maximum-Top ring	0.50 mm
Second ring	0.30 mm
Oil ring	0.15 mm

LUBRICATION

Oil pressure at idle speed	More than 78 kPa
Oil pressure at 3 000 rpm	294 – 392 kPa
Oil pump clearance:	
Gear side clearance	Less than 0.13 mm
Gear backlash	Less than 0.30 mm
Shaft bush clearance	Less than 0.15 mm

Lubricant

SAE 20W-40 or 20W-50
CD

Sump capacity	
With filter	10.2 litres
Without filter	9.0 litres
Cooling system:	16 – 21 Nm
Capacity	Approximately 13 litres
Coolant type	Ethylene glycol inhibitor
Coolant ratio -	15 – 20 Nm
Down to - 15°C	30% inhibitor to 70% soft water

Down to - 35 °C	50% inhibitor to 50% soft water
Manual transmission:	43 – 50 Nm
Lubricant -	1 – 2 Nm
Normal temperatures	SAE 75W-90 GL4
Over 40°C	SAE 140 GL4
Capacity	3.9 litres
Automatic transmission:	16 – 21 Nm
Lubricant	Matic D
Capacity -	78 – 83 Nm
Series 1	8.5 litres
Series II	11.8 litres
NOTE: Matic D is the Australian equivalent to Japanese Dexron II. Use of Australian Dexron II may cause damage to the automatic transmission.	16 – 21 Nm
Transfer case:	54 – 59 Nm
Lubricant —	16 – 21 Nm
Series I	SAE 80W-90 GL4
Series II	Dexron II
Capacity	2.2 litres
Front differential:	16 – 21 Nm
Lubricant	SAE 80W-90 GL5
Capacity -	
Leaf spring suspension	4.3 litres
Coil spring suspension	5.4 litres
Rear differential:	
Models with leaf spring suspension	
Lubricant	SAE 80W-90 GL5
Models with coil spring suspension	
Lubricant	SAE LS80W/90 GL5
Capacity -	
Models with leaf spring suspension	4.7 litres
Models with coil spring suspension	3.0 litres
Brake and clutch fluid type	DOT 3
Steering:	
Fluid type	Dexron II
Capacity	0.9 – 1.0 litres
Chassis grease type	NLG1 #2 lithium soap base
*Use LS140 GL5 in conditions over 40°C	
NOTE: The lubricant capacities shown are approximate only. The correct lubricant level should be checked at the filler plug or dipstick.	

TUNE-UP

Valve clearance (inlet and exhaust engine warm and stationary)	0.35 mm
Drive belt deflection at 98N applied pressure:	
Alternator -	
New	9 – 11 mm
Used	11 – 13 mm
Limit	20 mm
Air conditioner compressor -	
New	5-6 mm
Used	6-7 mm
Limit	10.5 mm
Power steering pump -	
New	10.5 – 11.5 mm
Used	11.5 – 13.0 mm
Limit	20 mm
Idle speed:	
Air conditioner on	800 – 850 rpm
Air conditioner off	700 – 750 rpm