



The **Toyota 1KZ-TE** is a 3.0 l (2,982 cc, 181.97 cu-in) four cylinders, four-stroke cycle water-cooled turbocharged internal combustion diesel engine, manufactured by the Toyota Motor Corporation. The 1KZ-TE engine has a cast iron block with 96.0 mm (3.78 in) cylinder bores and a 103.0 mm (4.06 in) piston stroke for a capacity of 3.0 l. Compression ratio rating is 21.2:1.

The breakdown of the engine code is as follows:

- 1** – 1st generation engine
- KZ** – Engine family
- T** – Turbocharged
- E** – Electronic fuel injection

ENGINE SPECIFICATIONS

Engine code	1KZ-TE
Layout	Straight-4, vertical
Fuel type	Diesel
Production	1993-2006
Displacement	3.0 L, 2,982 cm ³ (181.97 cu in)
Injection pump	Electronically controlled
Power adder	Toyota CT12B
Horsepower net	130 PS (96 KW; 129 HP) at 3,600 rpm 140 PS (103 KW; 138 HP) at 3,600 rpm 147 PS (108 KW; 145 HP) at 3,600 rpm
Torque output	289 Nm (29.5 kg·m; 213.3 ft·lb) at 2,000 rpm 295 Nm (30.0 kg·m; 217.7 ft·lb) at 2,400 rpm 232 Nm (23.7 kg·m; 171.2 ft·lb) at 2,000 rpm 334 Nm (34.0 kg·m; 246.5 ft·lb) at 2,000 rpm 343 Nm (35.0 kg·m; 253.1 ft·lb) at 2,000 rpm
Firing (enjection) order	1-3-4-2

MAINTENANCE DATA

Valve clearance (Cold)

Intake valve	0.20-0.30 mm (0.008-0.012 in)
Exhaust valve	0.25-0.35 mm (0.010-0.014 in)
Compression pressure	
Standard	31.0 kg/m ² (3,040 kPa, 441 psi)
Minimum	20.0 kg/m ² (1,961 kPa, 284 psi)
Compression differential limit between cylinders	5.0 kg/m ² (490 kPa, 71 psi)
Oil system	
Recommended engine oil	10W-30 or 10W-40 (“CF”, “CE”, “CD”)
Engine oil capacity	Dry fill: 7.5 L (7.9 US qt, 6.6 Imp. qt) With oil filter change: 7.0 L (7.4 US qt, 6.2 Imp. qt) Without oil filter change: 6.4 L (6.8 US qt, 5.6 Imp. qt)
Oil pressure	Idle speed: 0.3 kgf/cm ² (29 kPa, 4.3 psi) At 3,000 rpm: 2.5 kgf/cm ² (245 kPa, 33 psi)
Fuel system	
Injection nozzle opening pressure	New nozzle: 151-159 kgf/cm ² (14,800-15,590 kPa, 2,150-2,260 psi)
	Reused nozzle: 146-154 kgf/cm ² (14,300-15,100 kPa, 2,080-2,190 psi)
	Adjusted pressure*: 145-155 kgf/cm ² (14,220-15,200 kPa, 2,060-2,200 psi)
* - Varying the adjusting shim thickness by 0.025 mm (0.0010 in) changes the injection pressure by about 4.8 kgf/cm ² (470 kPa, 68 psi).	

ATTENTION! We try to use verified sources and official documentation, however, differences between sources or errors in entering information may occur. We do not provide advice on technical issues related to the engines operation or repair. We do not recommend using provided information for engines repairing engines or spare parts ordering, use only official service manuals and spare-parts catalogs.