

TOYOTA

Corolla 1.6 4x4 (AE95)

1988 to 1991

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Automotive Technical
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Engine and cooling system

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1988 to 1991

Type		4A-F (DOHC 16V)
Capacity (cm ³) / number of cylinders		1587 / 4
Compression ratio / pressure	bar	9.5 / ≥9.8
Oil pressure	bar	[2.5 to 5.0]
Oil temperature	°C	80
Valve clearance - inlet	mm	0.15 to 0.25
- exhaust	mm	0.20 to 0.30
Firing order		1-3-4-2
No 1 cylinder position		TBE
Thermostat opening temperature	°C	80 to 84
Radiator cap pressure	bar	0.74 to 1.03

Fuel system

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Idle speed - manual [auto]	rpm	800
Fast idle speed - manual [auto]	rpm	3000±200
CO @ idle speed [3000 rpm] - see page VI	%	1.0 to 2.0
HC @ idle speed [3000 rpm] - see page VI	ppm	≤1200
CO2 @ idle speed [3000 rpm] - see page VI	%	—
O2 @ idle speed [3000 rpm] - see page VI	%	—
Carburettor / fuel injection		Aisan
Type / ref		2V, 21100-16300
Main jet / needle		—
Injection pressure	bar	—
Pump pressure	bar	—
Octane rating	RON	95[E 95 RON]

Ignition system

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Type		Electronic
Ignition coil		—
Primary resistance	ohms	1.3 to 1.5
Ballast resistor	ohms	—
Voltage - Tmnl 15(+) to earth	V	—
Distributor		—
Points gap (air gap)	mm	[0.20 to 0.40]
Dwell angle	° (%)	—
Condenser capacity	µF	—
Rotation		—
Ignition timing - basic [static	° Crankshaft @ rpm	10 BTDC @ 900
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Centrifugal check.	° Crankshaft @ rpm	0 to 3 @ 1600 ¹
	° Crankshaft @ rpm	11.4 to 14.4 @ 3300 ¹
	° Crankshaft @ rpm	19.4 to 23.4 @ 6600 ¹
Vacuum range check	mbar	133 to 560 ²
Maximum vacuum advance	° Crankshaft	13 to 17 ²
Spark plugs		NGK/Champion
Type		BCRE 527Y / RC9YCC
Electrode gap	mm	0.80

Electrical system

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Battery	V / CC / RC	12 / 50Ah
Alternator voltage / full load current / engine rpm		13.5 to 15.1 / _ / 3000
Starter motor current / voltage - cranking	A / V	—
- locked	A / V	—

Running gear

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Brakes -		
Front (min. friction material thickness)	mm	1.0
Rear (min. friction material thickness)	mm	1.0

Tyres		
Saloon	Size	—
Estate / Van	Size	165x13: 185/70x13
Pressure - front / rear - Saloon	bar	—
- Estate / Van	bar	1.9 / 1.9

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	+1.0±2.0
Camber		+10'±30'
Castor		+1°15±30'
King pin inclination		+12°05'±30'

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	+1.0±1.0
Camber		—

Torque wrench settings

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Cylinder head - stage 1	Nm	60 in several stages
- stage 2	Nm	—
- stage 3	Nm	—
- stage 4	Nm	—
Big-end bearings	Nm	49
Main bearings	Nm	60
Clutch cover	Nm	19
Flywheel [driveplate]	Nm	78
Front hubs	Nm	186 ³
Rear hubs	Nm	WSM
Wheel nuts / bolts	Nm	103
Spark plugs	Nm	18

Capacities

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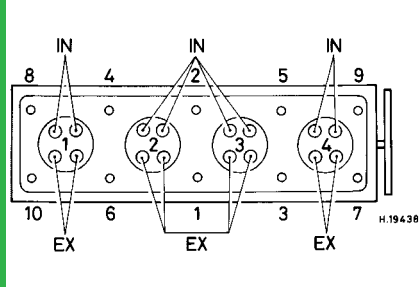
Engine oil & filter	litres	3.3
Gearbox - 4-speed [5-speed]	litres	5.0 ⁴
Automatic transmission - refill	litres	—
Final drive	litres	Rear: 1.1
Cooling system	litres	6.2
Fuel tank	litres	50

Notes and Illustrations

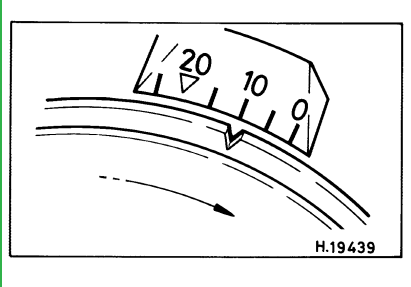
- ¹Distributor 19020-16110: 0.4 to 3.4 @ 1800, 16 to 19 @ 3700, 26.4 to 30.4 @ 6600
- ²Distributor 19020-16110: 133 to 573 @ 20 to 24°
- ³If noisy, retighten to 273
- ⁴Transfer box: 0.7

1: Idle speed

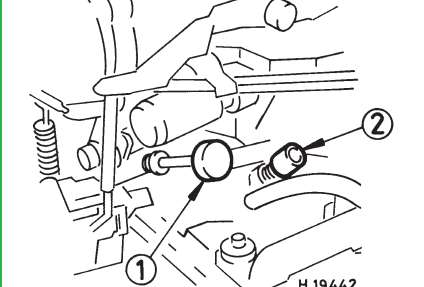
2: CO / Mixture



1587 cm³, 16V



1587 cm³, 4A-F



Aisan 2V