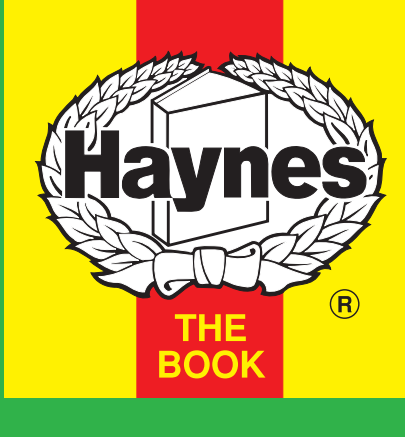


Engine & Cooling	Fuel	Ignition	Electrical	Running gear	Torque settings	Capacities	Notes & Illustrations
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Automotive Technical
DATA BOOK

Click on one of the buttons above to view data for this car. To return to this screen and make another choice, click anywhere on the data screen.

MENU	HELP
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Engine and cooling systemPicnic 2.01997

Type		3S-FE DOHC 16V 96EC 94kW
Capacity (cm³) / number of cylinders		1998 / 4
Compression ratio / pressure	bar	9.5 / ≥9.5
Oil pressure	bar	0.3 (2.5 to 5.0)
Oil temperature	°C	80
Valve clearance - inlet	mm	0.19 to 0.29
- exhaust	mm	0.28 to 0.38
Firing order		1-3-4-2
No 1 cylinder position		TBE
Thermostat opening temperature	°C	80 to 84
Radiator cap pressure	bar	0.7 to 1.03

Fuel systemPicnic 2.01997

Idle speed - manual [auto]	rpm	700±50 N/A
Fast idle speed - manual [auto]	rpm	—
CO @ idle speed [3000 rpm] - see page VI	%	≤0.5 N/A
HC @ idle speed [3000 rpm] - see page VI	ppm	≤200
CO2 @ idle speed [3000 rpm] - see page VI	%	—
O2 @ idle speed [3000 rpm] - see page VI	%	—
Carburettor / fuel injection		—Toyota
Type / ref		MPI
Main jet / needle		—
Injection pressure	bar	—
Pump pressure	bar	2.7 to 3.1
Octane rating	RON	95[U]

Ignition systemPicnic 2.01997

Type		DIS
Ignition coil		—
Primary resistance	ohms	0.36 to 0.65
Ballast resistor	ohms	—
Voltage - Tmnl 15(+) to earth	V	—
Distributor		—
Points gap (air gap)	mm	—
Dwell angle	° (%)	—
Condenser capacity	µF	—
Rotation		—
Ignition timing - basic [static	° Crankshaft @ rpm	10° BTDC @ 700±50
V = Vacuum NV = No Vacuum		—
Total ignition advance	° Crankshaft @ rpm	Computer control
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Centrifugal check.	° Crankshaft @ rpm	Computer control
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Vacuum range check	mbar	Computer control
Maximum vacuum advance	° Crankshaft	—
Spark plugs		Nippon Denso/NGK
Type		K20R-U11 / BKR6EYA11
Electrode gap	mm	1.10

Electrical systemPicnic 2.01997

Battery	V / CC / RC	—
Alternator voltage / full load current / engine rpm		—
Starter motor current / voltage - cranking	A / V	—
- locked	A / V	—

Running gearPicnic 2.01997

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

Tyres		
Saloon	Size	—
Estate / Van	Size	195/65x14
Pressure - front / rear - Saloon	bar	—
- Estate / Van	bar	Refer to vehicle

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	—
Camber		—
Castor		—
King pin inclination		—

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

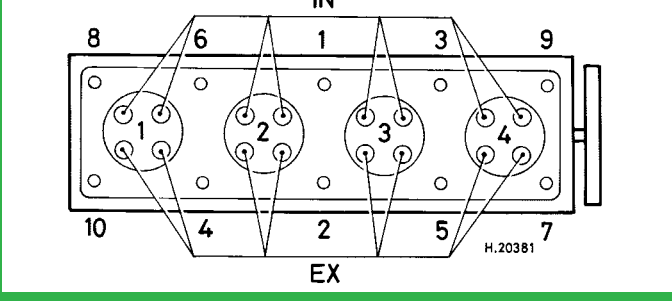
Torque wrench settingsPicnic 2.01997

Cylinder head - stage 1	Nm	29
- stage 2	Nm	49
- stage 3	Nm	+90°
- stage 4	Nm	—
Big-end bearings	Nm	25 +90°
Main bearings	Nm	59
Clutch cover	Nm	19
Flywheel [driveplate]	Nm	88 (83)
Front hubs	Nm	—
Rear hubs	Nm	—
Wheel nuts / bolts	Nm	—
Spark plugs	Nm	18

CapacitiesPicnic 2.01997

Engine oil & filter	litres	3.9
Gearbox - 4-speed [5-speed]	litres	—
Automatic transmission - refill	litres	—
Final drive	litres	WT
Cooling system	litres	5.8 A/T: 5.7
Fuel tank	litres	60

Notes and Illustrations



1998 cm³ 16V