Haynes THE BOOK

Automotive Technical DATA BOOK

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Engine and cooling system

		Starlet (EP80) 1990 to 1993
Type		1E-L SOHC 12V
Capacity (cm³) / number of cylinders		999 / 4
Compression ratio / pressure	bar	9.0 / ≥9.8
Oil pressure	bar	[2.5 to 4.9]
Oil temperature	ºC	80
Valve clearance - inlet	mm	0.20 H
- exhaust	mm	0.20 H
Firing order		1-3-4-2
No 1 cylinder position		TBE
Thermostat opening temperature	ºC	80 to 84
Radiator cap pressure	bar	0.75 to 1.00

Fuel system

		Starlet (EP80) 1990 to 1993
Idle speed - manual [auto]	rpm	800±50 [850±50]
Fast idle speed - manual [auto]	rpm	4800±200
CO @ idle speed [3000 rpm] - see page VI	%	1.5 to 2.5
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		K type 2V. 21100-10092
Main jet / needle		96, 153
Injection pressure	bar	_
Pump pressure	bar	_
Octane rating	RON	91[E 91 RON]

Ignition system

		Starlet (EP80) 1990 to 1993
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	º (%)	_
Condenser capacity	µF	_
Rotation		Clockwise
Ignition timing - basic [static	º Crankshaft @ rpm	10 BTDC @ 950
V = Vacuum NV = No Vacuum		NV
Total ignition advance	º Crankshaft @ rpm	_
	º Crankshaft @ rpm	_
	º Crankshaft @ rpm	_
Centrifugal check.	º Crankshaft @ rpm	0.4 to 4.4 @ 1600[1]
	º Crankshaft @ rpm	18 to 22 @ 4000[1]
	º Crankshaft @ rpm	23 to 27 @ 5200[1]
Vacuum range check	mbar	133 to 400[2]
Maximum vacuum advance	º Crankshaft	14 to 18[3]
Spark plugs		NGK/Champion
Type		BPR6EY / RN9YCC
Electrode gap	mm	0.80

Electrical system

		Starlet (EP80) 1990 to 1993
Battery	V / CC / RC	12 / 40Ah
Alternator voltage / full load current / engine rpm		13.5 to 15.1 / _ / 3000
Starter motor current / voltage - cranking	A / V	50 / 11 (no load)
- locked	A / V	_

Running gear

		Starlet (EP80) 1990 to 1993
Brakes -		
Front (min. friction material thickness)	mm	1.0
Rear (min. friction material thickness)	mm	1.0
Tyres		
Saloon	Size	145x13: 155x13: 165/70x13
Estate / Van	Size	_
Pressure - front / rear - Saloon	bar	2.0 / 2.0[4]
- Estate / Van	bar	_
Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [º]	+1.0±1.0[5]
Camber		-15'±30'. 92 ▸: -15'±45'
Castor		+1°25'±30'. 92 ▸: +1°25'±45'
King pin inclination		+12°±30'. 92 ▸: +12°±45'
Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [º]	_
Camber		_

Torque wrench settings

		Starlet (EP80) 1990 to 1993
Cylinder head - stage 1	Nm	29
- stage 2	Nm	49
- stage 3	Nm	+ 90°
- stage 4	Nm	_
Big-end bearings	Nm	39
Main bearings	Nm	57
Clutch cover	Nm	19
Flywheel [driveplate]	Nm	83 [88]
Front hubs	Nm	226
Rear hubs	Nm	WSM
Wheel nuts / bolts	Nm	103
Spark plugs	Nm	18

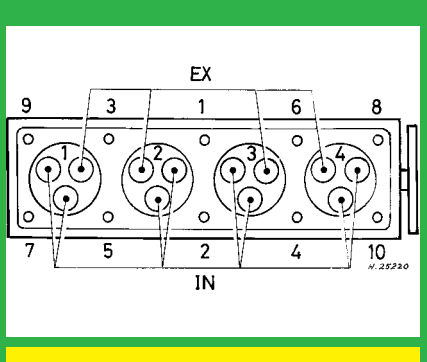
Capacities

		Starlet (EP80) 1990 to 1993
Engine oil & filter	litres	3.2
Gearbox - 4-speed [5-speed]	litres	2.4
Automatic transmission - refill	litres	2.2
Final drive	litres	AT: 1.4
Cooling system	litres	4.2
Fuel tank	litres	40

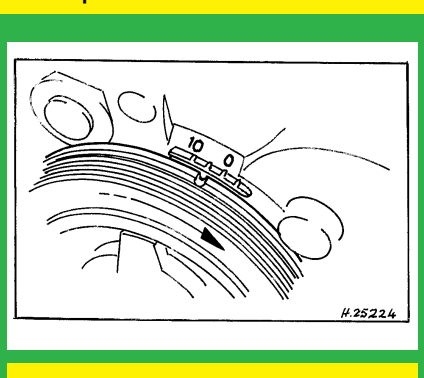
Notes and Illustrations

[1]**Distributor no. 19100-10021: 0.2 to 4.2 @ 1700, 11 to 15 @ 3500, 18 to 22 @ 6000**
[2]**Distributor no. 19100-10021 or 10030: 132 to 427**
[3]**Distributor no. 19100-10021 or 10030: 18 to 22**
[4]**155x13: 1.8 / 1.8. 165/70x13: 1.9 / 1.9**
[5]**92 ▸: +1.0±2.0**

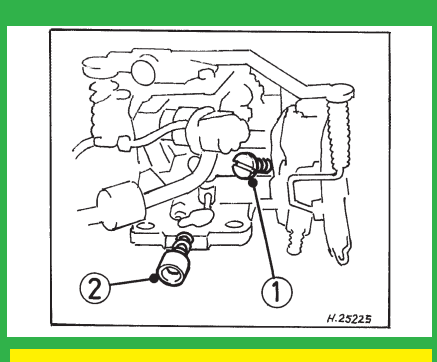
1: Idle speed 2: CO / Mixture



999 cm³



999 cm³



Aisan K type