

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

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HELP

## Engine and cooling system Sunny 1.3 (B12, N13) 1986 to 1992

Type		E13S SOHC
Capacity (cm <sup>3</sup> ) / number of cylinders		1269 / 4
Compression ratio / pressure	bar	9.0 / ≥9.8
Oil pressure	bar	2.0 [3.9]
Oil temperature	°C	-
Valve clearance - inlet	mm	0.25 H
Valve clearance - exhaust	mm	0.30 H
Firing order		1-3-4-2
No 1 cylinder position		TBE
Thermostat opening temperature	°C	82
Radiator cap pressure	bar	0.78 to 0.98

## Fuel system Sunny 1.3 (B12, N13) 1986 to 1992

Idle speed - manual [auto]	rpm	800±50 [850±50]
Fast idle speed - manual [auto]	rpm	2400±200 [2600±200]
CO @ idle speed [3000 rpm] - see page VI	%	1.5±0.5
HC @ idle speed [3000 rpm] - see page VI	ppm	≤1200
CO <sub>2</sub> @ idle speed [3000 rpm] - see page VI	%	-
O <sub>2</sub> @ idle speed [3000 rpm] - see page VI	%	-
Carburettor / fuel injection		Hitachi
Type / ref		217260-88 [AT: -89]
Main jet / needle		89, 145
Injection pressure	bar	-
Pump pressure	bar	0.20 to 0.27
Octane rating	RON	91[E 91 RON]

## Ignition system Sunny 1.3 (B12, N13) 1986 to 1992

Type		Electronic
Ignition coil		Hanshin STC-143
Primary resistance	ohms	1.0 to 1.3
Ballast resistor	ohms	-
Voltage - Tmnl 15(+) to earth	V	-
Distributor		Hitachi/Mitsubishi
Points gap (air gap)	mm	[0.30 to 0.50]
Dwell angle	° (%)	-
Condenser capacity	µF	-
Rotation		Anticlockwise
Ignition timing - basic [static	° Crankshaft @ rpm	2±2 BTDC @ idle
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	-
	° Crankshaft @ rpm	-
	° Crankshaft @ rpm	-
Centrifugal check.	° Crankshaft @ rpm	0 @ 1360
	° Crankshaft @ rpm	12 @ 2800
	° Crankshaft @ rpm	25 @ 5400
Vacuum range check	mbar	147 to 467 <sup>1</sup>
Maximum vacuum advance	° Crankshaft	15 <sup>1</sup>
Spark plugs		NGK/Champion
Type		BPR5ES / RN9YC
Electrode gap	mm	0.80 to 0.90

## Electrical system Sunny 1.3 (B12, N13) 1986 to 1992

Battery	V / CC / RC	12 / 60Ah
Alternator voltage / full load current / engine rpm		14.1 to 14.7 / _ / 2500
Starter motor current / voltage - cranking	A / V	60 / 11.5 (no load)
- locked	A / V	-

## Running gear Sunny 1.3 (B12, N13) 1986 to 1992

<b>Brakes -</b>		
Front (min. friction material thickness)	mm	2.0
Rear (min. friction material thickness)	mm	1.5

<b>Tyres</b>		
Saloon	Size	155x13: 175/70x13
Estate / Van	Size	155x13
Pressure - front / rear - Saloon	bar	2.1 / 2.1
- Estate / Van	bar	2.1 / 2.1

## Front suspension / wheel alignment

Toe-in (+) / Toe-out (-)	mm [°]	-0.5 to +1.5
Camber		-50' to +40'
Castor		+35' to 2°5'
King pin inclination		+13°5' to 14°35'

## Rear suspension / wheel alignment

Toe-in (+) / Toe-out (-)	mm [°]	0 to -4.0
Camber		-1°45' to -25'

## Torque wrench settings Sunny 1.3 (B12, N13) 1986 to 1992

Cylinder head - stage 1	Nm	29
- stage 2	Nm	69
Cylinder head - stage 3	Nm	Loosen, then 29
- stage 4	Nm	69 to 74 <sup>2</sup>
Big-end bearings	Nm	31 to 37
Main bearings	Nm	49 to 59
Clutch cover	Nm	22 to 29
Flywheel [driveplate]	Nm	78 to 88 <sup>3</sup>
Front hubs	Nm	196 to 275
Rear hubs	Nm	186 to 255
Wheel nuts / bolts	Nm	98 to 118
Spark plugs	Nm	20 to 29

## Capacities Sunny 1.3 (B12, N13) 1986 to 1992

Engine oil & filter	litres	3.2
Gearbox - 4-speed [5-speed]	litres	2.3 [2.7]
Automatic transmission - refill	litres	6.3
Final drive	litres	WT
Cooling system	litres	4.3 [Copper :4.9]
Fuel tank	litres	B12: 52. N13: 50

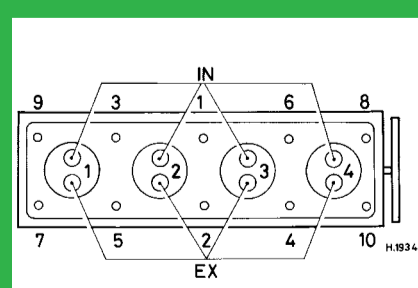
## Notes and Illustrations

<sup>1</sup>AT: 147 to 333 @ 10°

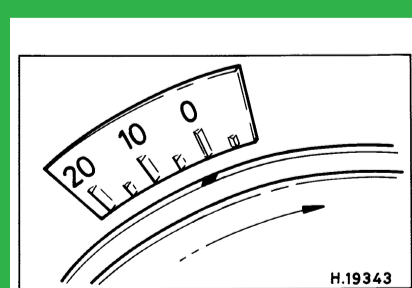
<sup>2</sup>Alternatively, use angle-torque method. WSM

<sup>3</sup>Driveplate: [93 to 103]

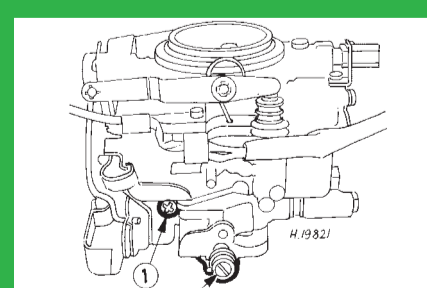
1: Idle speed 2: CO / Mixture



1269 cm<sup>3</sup>



1269 cm<sup>3</sup>



Hitachi 217260