

Engine & Cooling

Fuel

Ignition

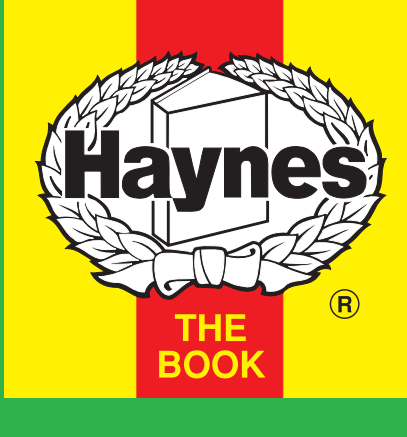
Electrical

Running gear

Torque settings

Capacities

Notes & Illustrations



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

Engine and cooling systemSunny 1.3 Van (VB11)1986 to 1991

Type		E13 SOHC
Capacity (cm ³) / number of cylinders		1269 / 4
Compression ratio / pressure	bar	9.0 / 12.5
Oil pressure	bar	2.0 [3.9]
Oil temperature	°C	—
Valve clearance - inlet	mm	0.22
Valve clearance - exhaust	mm	0.22
Firing order		1-3-4-2
No 1 cylinder position		TBE
Thermostat opening temperature	°C	82
Radiator cap pressure	bar	0.90

Fuel systemSunny 1.3 Van (VB11)1986 to 1991

Idle speed - manual [auto]	rpm	700±50
Fast idle speed - manual [auto]	rpm	1900 to 2300
CO @ idle speed [3000 rpm] - see page VI	%	1.5±0.5
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		Hitachi
Type / ref		217260-31. (CH: 217260-34)
Main jet / needle		87, 155
Injection pressure	bar	—
Pump pressure	bar	0.17 to 0.24
Octane rating	RON	91[E 91 RON]

Ignition systemSunny 1.3 Van (VB11)1986 to 1991

Type		Contact breaker - CIS
Ignition coil		Hitachi. Hanshin. Mitsubishi.
Primary resistance	ohms	1.26 to 1.65
Ballast resistor	ohms	—
Voltage - Tmnl 15(+) to earth	V	—
Distributor		Hitachi
Points gap (air gap)	mm	0.45 to 0.55
Dwell angle	° (%)	49 to 55
Condenser capacity	µF	0.20 to 0.24
Rotation		Anticlockwise
Ignition timing - basic [static	° Crankshaft @ rpm	2±2 BTDC @ 700±50
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Centrifugal check.	° Crankshaft @ rpm	0 @ 1100
	° Crankshaft @ rpm	14 @ 2800
	° Crankshaft @ rpm	25 @ 5400
Vacuum range check	mbar	147 to 467
Maximum vacuum advance	° Crankshaft	15
Spark plugs		NGK/Champion
Type		BPR5ES / RN9YC
Electrode gap	mm	0.80 to 0.90

Electrical systemSunny 1.3 Van (VB11)1986 to 1991

Battery	V / CC / RC	12 / 45Ah
Alternator voltage / full load current / engine rpm		14.4 to 15.0 / _ / 2500
Starter motor current / voltage - cranking	A / V	60 / 11.5 (no load)
- locked	A / V	—

Running gearSunny 1.3 Van (VB11)1986 to 1991

Brakes -		
Front (min. friction material thickness)	mm	2.0
Rear (min. friction material thickness)	mm	1.5

Tyres		
Saloon	Size	—
Estate / Van	Size	155x13
Pressure - front / rear - Saloon	bar	—
- Estate / Van	bar	1.8 / 1.8

Front suspension / wheel alignment

Toe-in (+) / Toe-out (–)	mm [°]	+3.0 to 5.0
Camber		-25' to +1°5'
Castor		+45' to 2°15'
King pin inclination		+12°10' to 13°40'

Rear suspension / wheel alignment

Toe-in (+) / Toe-out (–)	mm [°]	—
Camber		—

Torque wrench settingsSunny 1.3 Van (VB11)1986 to 1991

Cylinder head - stage 1	Nm	39 to 44
- stage 2	Nm	69 to 74
Cylinder head - stage 3	Nm	—
- stage 4	Nm	—
Big-end bearings	Nm	31 to 37
Main bearings	Nm	49 to 59
Clutch cover	Nm	16 to 21
Flywheel [driveplate]	Nm	78 to 88
Front hubs	Nm	78 to 157
Rear hubs	Nm	WSM
Wheel nuts / bolts	Nm	78 to 98
Spark plugs	Nm	20 to 29

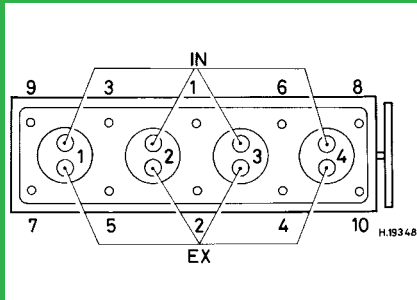
CapacitiesSunny 1.3 Van (VB11)1986 to 1991

Engine oil & filter	litres	3.9
Gearbox - 4-speed [5-speed]	litres	2.3 [2.7]
Automatic transmission - refill	litres	—
Final drive	litres	WT
Cooling system	litres	5.5
Fuel tank	litres	50

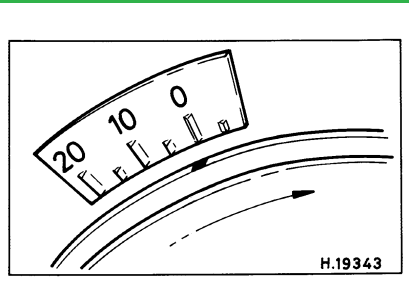
Notes and Illustrations



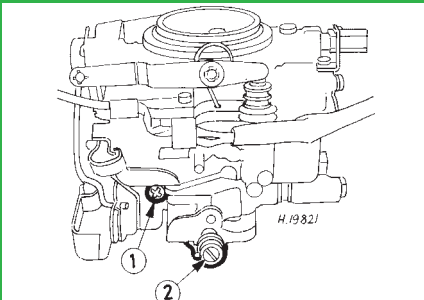
1: Idle speed 2: CO / Mixture



1269 cm³



1269 cm³



Hitachi 217260