

Engine & Cooling

Fuel

Ignition

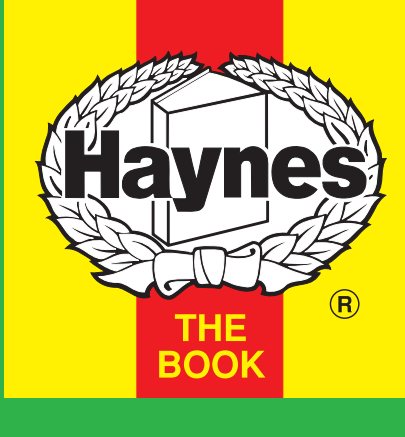
Electrical

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Automotive Technical
DATA BOOK

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Engine and cooling systemSunny 1.8 ZX & CAT (B12, N13)1989 to 1991

Type		CA18DE DOHC 16V
Capacity (cm³) / number of cylinders		1809 / 4
Compression ratio / pressure	bar	9.5 / ≥10.8
Oil pressure	bar	[4.6]
Oil temperature	°C	—
Valve clearance - inlet	mm	0: Hyd.
Valve clearance - exhaust	mm	0: Hyd.
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 systemSunny 1.8 ZX & CAT (B12, N13)1989 to 1991

Idle speed - manual [auto]	rpm	800±50
Fast idle speed - manual [auto]	rpm	—
CO @ idle speed [3000 rpm] - see page VI	%	≤2.0. CAT: ≤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		Nissan
Type / ref		ECCS (EFi)
Main jet / needle		—
Injection pressure	bar	2.5 @ idle
Pump pressure	bar	2.5
Octane rating	RON	97[R] ¹

Ignition systemSunny 1.8 ZX & CAT (B12, N13)1989 to 1991

Type		Direct electronic
Ignition coil		Hanshin MCP-200
Primary resistance	ohms	0.7
Ballast resistor	ohms	—
Voltage - Tmnl 15(+) to earth	V	—
Distributor		—
Points gap (air gap)	mm	—
Dwell angle	° (%)	—
Condenser capacity	µF	—
Rotation		Anticlockwise
Ignition timing - basic [static	° Crankshaft @ rpm	15±2 BTDC @ 800±50
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	—
	° 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		NGK/Champion
Type		BCPR6ES-11 / RC9YC4 ²
Electrode gap	mm	1.00 to 1.10

Electrical systemSunny 1.8 ZX & CAT (B12, N13)1989 to 1991

Battery	V / CC / RC	12 / 60 or 65Ah
Alternator voltage / full load current / engine rpm		14.1 to 14.7 / _ / 2500
Starter motor current / voltage - cranking	A / V	50 to 75 / 11.0, no load
- locked	A / V	—

Running gearSunny 1.8 ZX & CAT (B12, N13)1989 to 1991

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

Tyres		
Saloon	Size	185/60x14
Estate / Van	Size	—
Pressure - front / rear - Saloon	bar	2.0 / 2.0
- Estate / Van	bar	—

Front suspension / wheel alignment

Toe-in (+) / Toe-out (–)	mm [°]	-0.5 to +1.5
Camber		B12: -1°5' to +25' ³
Castor		B12: +45' to 2°15' N/A ⁴
King pin inclination		B12: +13°25' to 14°55' N/A ⁵

Rear suspension / wheel alignment

Toe-in (+) / Toe-out (–)	mm [°]	-3.5 to +0.5 ⁶
Camber		B12: -1°55' to -25' ⁷

Torque wrench settingsSunny 1.8 ZX & CAT (B12, N13)1989 to 1991

Cylinder head - stage 1	Nm	29
- stage 2	Nm	103, then loosen bolts
Cylinder head - stage 3	Nm	29
- stage 4	Nm	+ 85 to 90°
Big-end bearings	Nm	41 to 44
Main bearings	Nm	44 to 54
Clutch cover	Nm	22 to 29
Flywheel [driveplate]	Nm	83 to 93
Front hubs	Nm	196 to 275
Rear hubs	Nm	185 to 216
Wheel nuts / bolts	Nm	98 to 118
Spark plugs	Nm	20 to 29

CapacitiesSunny 1.8 ZX & CAT (B12, N13)1989 to 1991

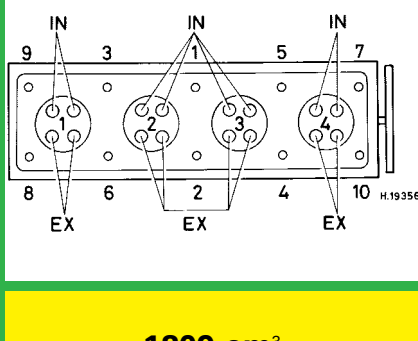
Engine oil & filter	litres	3.8
Gearbox - 4-speed [5-speed]	litres	4.7
Automatic transmission - refill	litres	—
Final drive	litres	WT
Cooling system	litres	5.2
Fuel tank	litres	B12: 52. N13: 50

Notes and Illustrations

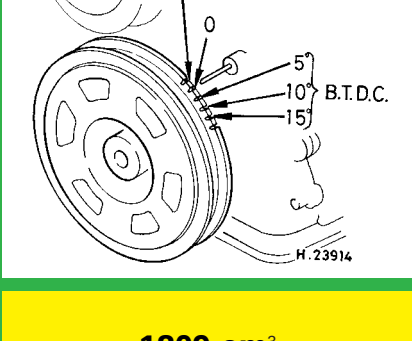
- ¹CAT: 95 [U]
- ²CAT: PFR6A-11 / RC9YCC
- ³N13: -50' to +40' N/A
- ⁴N13: +35' to 2°5' N/A
- ⁵N13: +13°5' to 14°35' N/A
- ⁶N13: -4.0 to 0
- ⁷N13: -1°45' to -15'

1: Idle speed

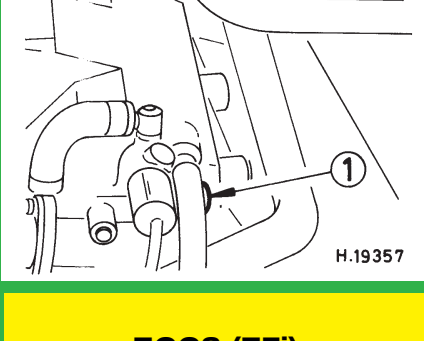
2: CO / Mixture



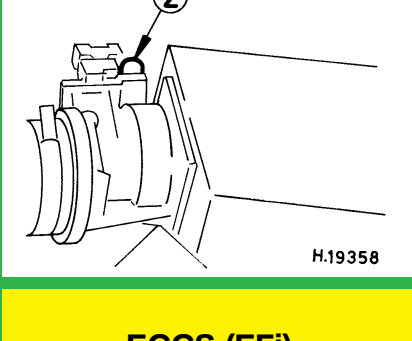
1809 cm³



1809 cm³



ECCS (EFi)



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