

VAUXHALL/OPEL

Nova 1.3

1983 to 1990

Engine & Cooling

Fuel

Ignition

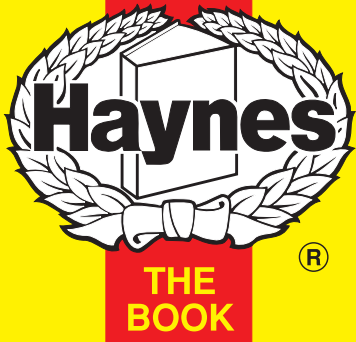
Electrical

Running gear

Torque settings

Capacities

Notes & Illustrations



Automotive Technical
DATA BOOK

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HELP

Engine and cooling system

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1983 to 1990

Type		13SB SOHC. 51kW. 15.04
Capacity (cm ³) / number of cylinders		1297 / 4
Compression ratio / pressure	bar	9.2 / _
Oil pressure	bar	1.5
Oil temperature	°C	80
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	92 to 107
Radiator cap pressure	bar	1.2 to 1.4

Fuel system

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Idle speed - manual [auto]	rpm	900 to 950. ISC: 800 to 850
Fast idle speed - manual [auto]	rpm	3800 to 4200. 2E3: 2300±200
CO @ idle speed [3000 rpm] - see page VI	%	1.5±0.5 WSM
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		Solex/Pierburg
Type / ref		1B1. 8.85 ►: 2E3
Main jet / needle		1B1: 120 or 117.5 ¹
Injection pressure	bar	_
Pump pressure	bar	0.25 to 0.36
Octane rating	RON	98[RA] ²

Ignition system

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Type		TI-i
Ignition coil		Delco
Primary resistance	ohms	0.43
Ballast resistor	ohms	_
Voltage - Tmnl 15(+) to earth	V	_
Distributor		AC Delco
Points gap (air gap)	mm	_
Dwell angle	° (%)	Electronic control
Condenser capacity	µF	_
Rotation		Anticlockwise
Ignition timing - basic [static	° Crankshaft @ rpm	10±2 BTDC @ idle ²
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
Centrifugal check.	° Crankshaft @ rpm	0 to 1 @ 1000 ³
	° Crankshaft @ rpm	9 to 14 @ 1800 ³
	° Crankshaft @ rpm	18 to 22 @ 4200 ³
Vacuum range check	mbar	100 to 240
Maximum vacuum advance	° Crankshaft	12.5 to 16.5
Spark plugs		AC/Champion
Type		CR42CXLS / RN7YC
Electrode gap	mm	0.70 to 0.80

Electrical system

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Battery	V / CC / RC	12 / 210 / 65 or / 175 / 60
Alternator voltage / full load current / engine rpm		13.7 to 14.5 / 45,55,65 / 3500
Starter motor current / voltage - cranking	A / V	50 / 11.5 (no load)
- locked	A / V	360 to 440 / 7.8 to 8.6

Running gear

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Brakes -		
Front (min. friction material thickness)	mm	7.0 with backing
Rear (min. friction material thickness)	mm	0.5 above rivets

Tyres		
Saloon	Size	155/70x13:165/65x14 ⁴
Estate / Van	Size	145x13: 155/70x13: 165/70x13 ⁵
Pressure - front / rear - Saloon	bar	1.7 / 1.7
- Estate / Van	bar	1.7 / 1.7

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	[-15' to +5']
Camber		-30' to +1° L
Castor		+30' to 2°30' L ⁶
King pin inclination		_

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	[0 to +1°] ⁷
Camber		0 to -1° ⁸

Torque wrench settings

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Cylinder head - stage 1	Nm	25 N
- stage 2	Nm	+ 60°
Cylinder head - stage 3	Nm	+ 60°
- stage 4	Nm	+ 60°
Big-end bearings	Nm	28. 40mm bolt: 25+30°
Main bearings	Nm	50 +45° +15° N
Clutch cover	Nm	15
Flywheel [driveplate]	Nm	35 +30° +15° N
Front hubs	Nm	WSM
Rear hubs	Nm	WSM
Wheel nuts / bolts	Nm	110
Spark plugs	Nm	25

Capacities

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Engine oil & filter	litres	3.0
Gearbox - 4-speed [5-speed]	litres	1.8
Automatic transmission - refill	litres	_
Final drive	litres	WT
Cooling system	litres	6.1
Fuel tank	litres	42

Notes and Illustrations

¹2E3: 97.5, 112.5

²Retard ignition 3°. 89 ►: [E 95 RON]

³Distributor no. 1 103 549. 1 103 684: 10 to 14 @ 1800, maximum advance 22 to 26°

⁴165/70x13: 175/70x13

⁵155x13

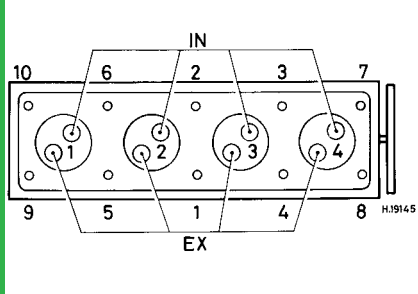
⁶88 ►: +45' to 2°45'

⁷87 MY: [-5' to +40']

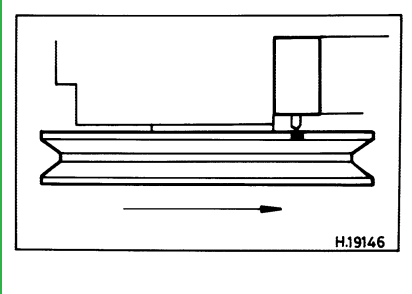
⁸87 MY: -40' to -1°35'

1: Idle speed

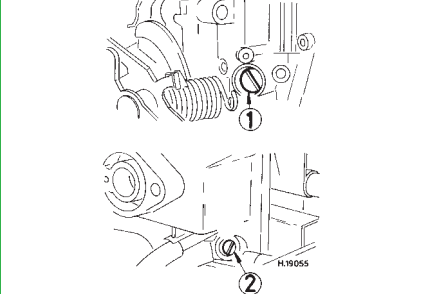
2: CO / Mixture



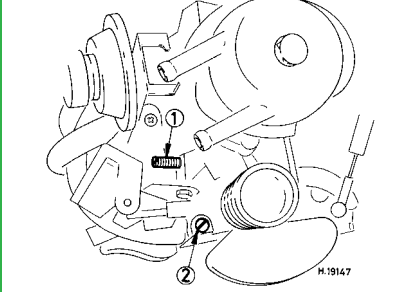
1297 cm³



1297 cm³



Solex / Pierburg 1B1



Pierburg 2E3