

VAUXHALL/OPEL

Carlton/Omega/Senator 3.0i

1987 to 1991

Engine & Cooling

Fuel

Ignition

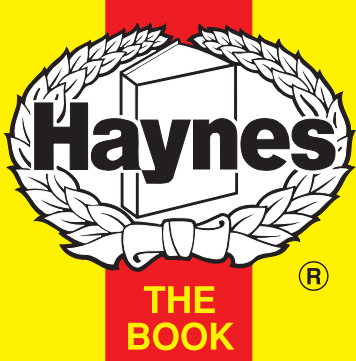
Electrical

Running gear

Torque settings

Capacities

Notes & Illustrations



Automotive Technical
DATA BOOK

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Engine and cooling system

Carlton/Omega/Senator 3.0i

1987 to 1991

Type		30NE CIH. 130kW. 15.04
Capacity (cm ³) / number of cylinders		2969 / 6
Compression ratio / pressure	bar	9.4 / _
Oil pressure	bar	_
Oil temperature	°C	_
Valve clearance - inlet	mm	0: Hyd.
Valve clearance - exhaust	mm	0: Hyd.
Firing order		1-5-3-6-2-4
No 1 cylinder position		TCE
Thermostat opening temperature	°C	92
Radiator cap pressure	bar	1.2 to 1.3

Fuel system

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1987 to 1991

Idle speed - manual [auto]	rpm	775 to 825 [675 to 725]
Fast idle speed - manual [auto]	rpm	_
CO @ idle speed [3000 rpm] - see page VI	%	≤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		Bosch
Type / ref		LE2-Jetronic
Main jet / needle		_
Injection pressure	bar	_
Pump pressure	bar	2.8 to 3.2
Octane rating	RON	98[RA] ¹

Ignition system

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1987 to 1991

Type		Computerized ²
Ignition coil		Bosch 1 227 020 009
Primary resistance	ohms	0.70 to 0.75
Ballast resistor	ohms	_
Voltage - Tmnl 15(+) to earth	V	_
Distributor		Bosch
Points gap (air gap)	mm	_
Dwell angle	° (%)	18 to 20 [16 to 18]
Condenser capacity	µF	_
Rotation		_
Ignition timing - basic [static	° Crankshaft @ rpm	10±2 BTDC @ idle
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		AC/Champion
Type		CR42CFS / RL82YC
Electrode gap	mm	0.70 to 0.80

Electrical system

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Battery	V / CC / RC	12 / 44, 55 or 66Ah
Alternator voltage / full load current / engine rpm		13.8 to 14.8 / _ / 2000
Starter motor current / voltage - cranking	A / V	50 / 11.5 (no load)
- locked	A / V	310 to 400 / 7.5

Running gear

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

Tyres		
Saloon	Size	195/65x15: 205/65x15
Estate / Van	Size	195/65x15
Pressure - front / rear - Saloon	bar	2.5 / 2.5 ³
- Estate / Van	bar	2.3 / 2.5

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	[0 to +20]' L
Camber		-2°15' to -45'
Castor		+4°45' to 6°45' ⁴
King pin inclination		_

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	+1.0 to 4.0
Camber		-2°40' to -1°20'

Torque wrench settings

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Cylinder head - stage 1	Nm	60
- stage 2	Nm	+ 90°
Cylinder head - stage 3	Nm	Warm up
- stage 4	Nm	+ 30°
Big-end bearings	Nm	45
Main bearings	Nm	110
Clutch cover	Nm	22
Flywheel [driveplate]	Nm	60
Front hubs	Nm	320
Rear hubs	Nm	WSM
Wheel nuts / bolts	Nm	90
Spark plugs	Nm	40

Capacities

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Engine oil & filter	litres	5.5
Gearbox - 4-speed [5-speed]	litres	1.9
Automatic transmission - refill	litres	5.5. AR25: 2.6
Final drive	litres	1.1
Cooling system	litres	10.2 [AT: 10.1]
Fuel tank	litres	4D: 75. 5D: 70

Notes and Illustrations

¹Retard ignition by 3°. 9.89 ►: [E 95 RON]

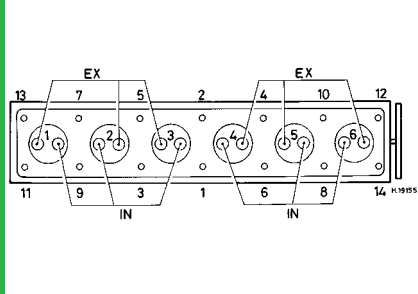
²EAI electronic advance ignition MSTs-h

³Senator: 2.2 / 2.2

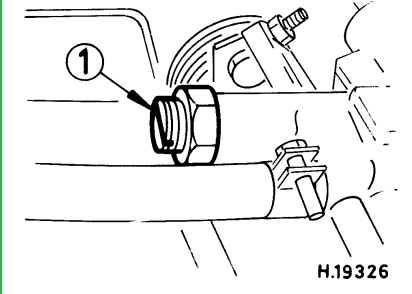
⁴Senator: +4°30' to 6°30'

1: Idle speed

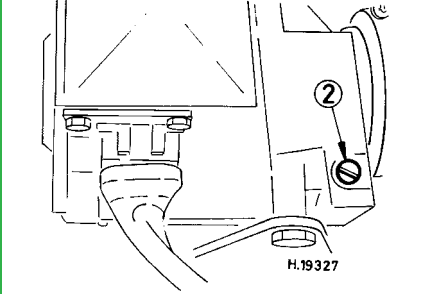
2: CO / Mixture



2969 cm³, 12V



LE2-Jetronic



LE2-Jetronic