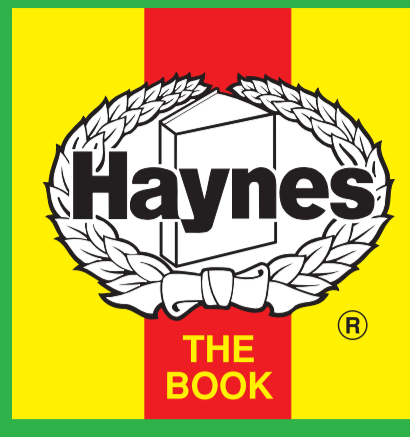


Engine & Cooling	Fuel	Ignition	Electrical	Running gear	Torque settings	Capacities	Notes & Illustrations
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## Automotive Technical DATA BOOK

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### Engine and cooling system Carlton/Omega-A 2.0i CAT 1986 to 1994

Type	C20NE SOHC. 85kW. US83 <sup>1</sup>	
Capacity (cm <sup>3</sup> ) / number of cylinders	1998 / 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 1.3

### Fuel system Carlton/Omega-A 2.0i CAT 1986 to 1994

Idle speed - manual [auto]	rpm	720 to 880
Fast idle speed - manual [auto]	rpm	_
CO @ idle speed [3000 rpm] - see page VI	%	≤0.4
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	Bosch	
Type / ref	ML4.1-Motronic. 90 ▶: M1.5	
Main jet / needle	_	
Injection pressure	bar	2.5±0.2 <sup>2</sup>
Pump pressure	bar	3.0±0.1 <sup>3</sup>
Octane rating	RON	95[U]

### Ignition system Carlton/Omega-A 2.0i CAT 1986 to 1994

Type	DME Motronic	
Ignition coil	Bosch 0 221 122 369	
Primary resistance	ohms	0.72±0.04
Ballast resistor	ohms	_
Voltage - Tmnl 15(+) to earth	V	_
Distributor	Bosch	
Points gap (air gap)	mm	_
Dwell angle	° (%)	Electronic control
Condenser capacity	µF	_
Rotation	Anticlockwise	
Ignition timing - basic [static	° Crankshaft @ rpm	8 to 12 BTDC @ idle N/A
V = Vacuum NV = No Vacuum	_	
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	Bosch/Champion	
Type	WR8DC / RN7YC	
Electrode gap	mm	0.70 to 0.80

### Electrical system Carlton/Omega-A 2.0i CAT 1986 to 1994

Battery	V / CC / RC	12 / 44Ah
Alternator voltage / full load current / engine rpm	13.8 to 14.8 / 55-90 / 2000	
Starter motor current / voltage - cranking	A / V	75 / 11.5 (no load)
- locked	A / V	475 to 600 / 12

### Running gear Carlton/Omega-A 2.0i CAT 1986 to 1994

<b>Brakes -</b>		
Front (min. friction material thickness)	mm	7.0 with backing
Rear (min. friction material thickness)	mm	7.0 with backing

<b>Tyres</b>		
Saloon	Size	185/70x14: 195/65x15
Estate / Van	Size	175x14: 185/70x14: 195/65x15
Pressure - front / rear - Saloon	bar	2.2 / 2.2
- Estate / Van	bar	2.0 / 2.2

### Front suspension / wheel alignment

Toe-in (+) / Toe-out (-)	mm [°]	[0 to +20]' L
Camber		-1°55' to -15'
Castor		<sup>4</sup>
King pin inclination		_

### Rear suspension / wheel alignment

Toe-in (+) / Toe-out (-)	mm [°]	-0.5 to +5.5 <sup>5</sup>
Camber		4D: -2°20' to -1°. 5D <sup>6</sup>

### Torque wrench settings Carlton/Omega-A 2.0i CAT 1986 to 1994

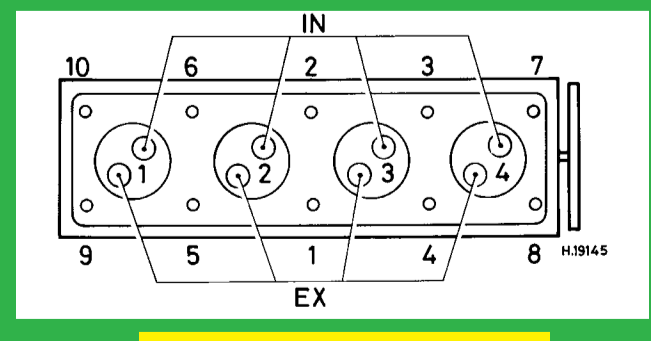
Cylinder head - stage 1	Nm	25 N
- stage 2	Nm	+90°
Cylinder head - stage 3	Nm	+90°
- stage 4	Nm	+90°
Big-end bearings	Nm	35 + 45° to 60° N
Main bearings	Nm	50 + 40° to 50° N
Clutch cover	Nm	15
Flywheel [driveplate]	Nm	65 + 30° to 45° <sup>7</sup>
Front hubs	Nm	320
Rear hubs	Nm	WSM
Wheel nuts / bolts	Nm	90
Spark plugs	Nm	25

### Capacities Carlton/Omega-A 2.0i CAT 1986 to 1994

Engine oil & filter	litres	4.5
Gearbox - 4-speed [5-speed]	litres	1.9
Automatic transmission - refill	litres	2.6
Final drive	litres	4D: 0.9. 5D: 1.1
Cooling system	litres	6.4
Fuel tank	litres	4D: 75. 5D: 70

### Notes and Illustrations

<sup>1</sup>C20NEJ. 73kW  
<sup>2</sup>M1.5-Motronic: 1.8 to 2.2  
<sup>3</sup>M1.5-Motronic: 2.5 to 3.0  
<sup>4</sup>4D manual steering: +2° to 4°. PAS: +4°30' to 6°30'. 5D manual steering: +1°30' to 3°30'. PAS: +4° to 6°  
<sup>5</sup>5D: 0 to +6.0  
<sup>6</sup>-2°5' to -45'  
<sup>7</sup>Use locking compound



**1998 cm<sup>3</sup>, 8V**