Haynes THE BOOK

Automotive Technical DATA BOOK

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Engine and cooling system — Carlton/Omega-A 2.4i CAT — 1988 to 1994

Type		C24NE CIH. 92kW. US83
Capacity (cm³) / number of cylinders		2410 / 4
Compression ratio / pressure	bar	9.2 / _
Oil pressure	bar	1.0
Oil temperature	ºC	60
Valve clearance - inlet	mm	0: Hyd.
Valve clearance - exhaust	mm	0: Hyd.
Firing order		1-3-4-2
No 1 cylinder position		TCE
Thermostat opening temperature	ºC	92
Radiator cap pressure	bar	1.2 to 1.3

Fuel system — Carlton/Omega-A 2.4i CAT — 1988 to 1994

Idle speed - manual [auto]	rpm	820 to 880 [720 to 780]
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
CO2 @ idle speed [3000 rpm] - see page VI	%	_
O2 @ idle speed [3000 rpm] - see page VI	%	_
Carburettor / fuel injection		Bosch
Type / ref		Motronic M1.5
Main jet / needle		_
Injection pressure	bar	2.5
Pump pressure	bar	3.0±0.2
Octane rating	RON	95[U]

Ignition system — Carlton/Omega-A 2.4i CAT — 1988 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	º (%)	Electronic control
Condenser capacity	µF	_
Rotation		Anticlockwise
Ignition timing - basic [static	º Crankshaft @ rpm	8 to 12 BTDC @ idle N/A
V = Vacuum NV = No Vacuum		NV
Total ignition advance	º Crankshaft @ rpm	_
	º Crankshaft @ rpm	_
	º Crankshaft @ rpm	_
Centrifugal check.	º Crankshaft @ rpm	Computer control
	º Crankshaft @ rpm	_
	º Crankshaft @ rpm	_
Vacuum range check	mbar	Computer control
Maximum vacuum advance	º Crankshaft	_
Spark plugs		Bosch/Champion
Type		WR7BC / RL82YCC
Electrode gap	mm	0.70 to 0.80

Electrical system — Carlton/Omega-A 2.4i CAT — 1988 to 1994

Battery	V / CC / RC	12 / 44Ah
Alternator voltage / full load current / engine rpm		13.8 to 14.8 / _ / 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 2.4i CAT — 1988 to 1994

Brakes -		
Front (min. friction material thickness)	mm	7.0 with backing
Rear (min. friction material thickness)	mm	7.0 with backing
Tyres		
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 [º]	[0 to +20'] L
Camber		-1°55' to -15'
Castor		[1]
King pin inclination		_
Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [º]	-0.5 to +5.5[2]
Camber		4D: -2°20' to -1°. 5D[3]

Torque wrench settings — Carlton/Omega-A 2.4i CAT — 1988 to 1994

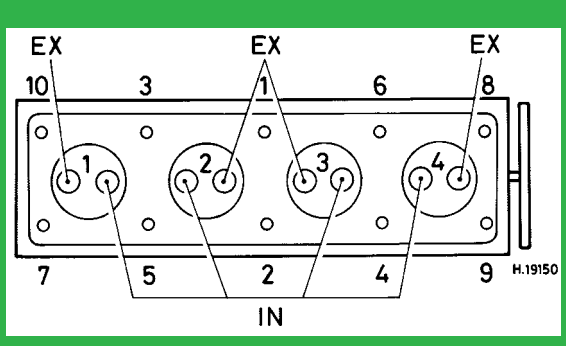
Cylinder head - stage 1	Nm	60
- stage 2	Nm	+ 90°
Cylinder head - stage 3	Nm	Warm engine
- stage 4	Nm	+ 30°
Big-end bearings	Nm	45
Main bearings	Nm	110
Clutch cover	Nm	22
Flywheel [driveplate]	Nm	60
Front hubs	Nm	320
Rear hubs	Nm	WSM
Wheel nuts / bolts	Nm	90
Spark plugs	Nm	40

Capacities — Carlton/Omega-A 2.4i CAT — 1988 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	1.1
Cooling system	litres	7.8 [AT: 7.7]
Fuel tank	litres	4D: 75. 5D: 70

Notes and Illustrations

[1]4D manual steering: +2° to 4°. PAS: +4°30' to 6°30'. 5D manual steering: +1°30' to 3°30'. PAS: +4° to 6°
[2]5D: 0 to +6.0
[3]-2°5' to -45'



2410 cm³