

VAUXHALL/OPEL

Carlton/Omega-A 24V Estate

1990 to 1994

Engine & Cooling

Fuel

Ignition

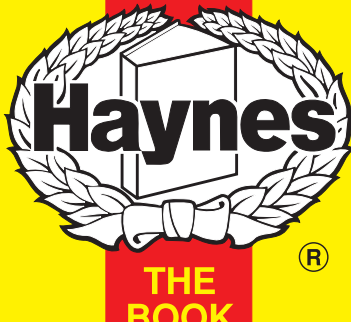
Electrical

Running gear

Torque settings

Capacities

Notes & Illustrations



Automotive Technical

DATA BOOK

Click on one of the buttons above to view data for this car. To return to this screen and make another choice, click anywhere on the data screen.

MENU

HELP

Engine and cooling system

Carlton/Omega-A 24V Estate

1990 to 1994

|                                                   |     |                              |
|---------------------------------------------------|-----|------------------------------|
| Type                                              |     | C30SEJ DOHC 24V. 147kW. US83 |
| Capacity (cm <sup>3</sup> ) / number of cylinders |     | 2969 / 6                     |
| Compression ratio / pressure                      | bar | 10.0 / _                     |
| Oil pressure                                      | bar | [3.0 to 3.5]                 |
| Oil temperature                                   | °C  | 80                           |
| 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±2 to 107                  |
| Radiator cap pressure                             | bar | 1.2 to 1.5                   |

Fuel system

Carlton/Omega-A 24V Estate

1990 to 1994

|                                           |     |                              |
|-------------------------------------------|-----|------------------------------|
| Idle speed - manual [auto]                | rpm | 570 to 730                   |
| 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, knock control |
| Main jet / needle                         |     | _                            |
| Injection pressure                        | bar | 2.3 to 2.7                   |
| Pump pressure                             | bar | 3.0 to 3.5                   |
| Octane rating                             | RON | 95[U]                        |

Ignition system

Carlton/Omega-A 24V Estate

1990 to 1994

|                                 |                    |                         |
|---------------------------------|--------------------|-------------------------|
| Type                            |                    | DME Motronic            |
| Ignition coil                   |                    | Bosch 1 227 020 009     |
| Primary resistance              | ohms               | 0.72±0.07               |
| 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 | 8 to 12 BTDC @ idle N/A |
| 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                     |                    | Bosch/Champion          |
| Type                            |                    | FR7DTC / RC7YCC         |
| Electrode gap                   | mm                 | 0.70 to 0.80            |

Electrical system

Carlton/Omega-A 24V Estate

1990 to 1994

|                                                     |             |                               |
|-----------------------------------------------------|-------------|-------------------------------|
| Battery                                             | V / CC / RC | 12 / 44, 55 or 66Ah           |
| Alternator voltage / full load current / engine rpm |             | 13.8 to 14.8 / 90, 120 / 2000 |
| Starter motor current / voltage - cranking          | A / V       | 75 / 11.5 (no load)           |
| - locked                                            | A / V       | 475 to 600 / 3.5              |

Running gear

Carlton/Omega-A 24V Estate

1990 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 | _                    |
| Estate / Van                     | Size | 195/65x15: 205/65x15 |
| Pressure - front / rear - Saloon | bar  | _                    |
| - 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°15' to 6°15' |
| 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

Carlton/Omega-A 24V Estate

1990 to 1994

|                         |    |                 |
|-------------------------|----|-----------------|
| Cylinder head - stage 1 | Nm | 60 N            |
| - stage 2               | Nm | + 90° +10°      |
| Cylinder head - stage 3 | Nm | Wait 10 minutes |
| - stage 4               | Nm | + 30° +10°      |
| Big-end bearings        | Nm | 45              |
| Main bearings           | Nm | 110             |
| Clutch cover            | Nm | 22              |
| Flywheel [driveplate]   | Nm | 55 + 30° + 45°  |
| Front hubs              | Nm | 320             |
| Rear hubs               | Nm | WSM             |
| Wheel nuts / bolts      | Nm | 90              |
| Spark plugs             | Nm | 25              |

Capacities

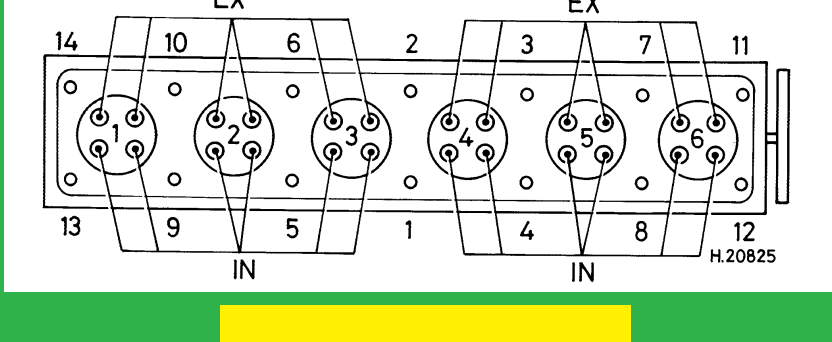
Carlton/Omega-A 24V Estate

1990 to 1994

|                                 |        |                             |
|---------------------------------|--------|-----------------------------|
| Engine oil & filter             | litres | 5.5                         |
| Gearbox - 4-speed [5-speed]     | litres | 1.9                         |
| Automatic transmission - refill | litres | 2.6                         |
| Final drive                     | litres | 1.1                         |
| Cooling system                  | litres | 10.0 [AT: 9.8] <sup>1</sup> |
| Fuel tank                       | litres | 70                          |

Notes and Illustrations

<sup>1</sup>A/C: 10.4 [AT + A/c: 10.2]



2969 cm<sup>3</sup>, 24V