

Engine & CoolingFuelIgnitionElectricalRunning gearTorque settingsCapacitiesNotes & Illustrations



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Engine and cooling system

320i 24V (E36)

1995 to 1997

|                                      |     |                        |
|--------------------------------------|-----|------------------------|
| Type                                 |     | M52/B20 DOHC 24V 112kW |
| Capacity (cm³) / number of cylinders |     | 1990 / 6               |
| Compression ratio / pressure         | bar | 11.0 / ≥10.0           |
| Oil pressure                         | bar | ≥0.5 [4.0]             |
| 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  | 88                     |
| Radiator cap pressure                | bar | 2.0±0.15               |

Fuel system

320i 24V (E36)

1995 to 1997

|                                           |     |               |
|-------------------------------------------|-----|---------------|
| Idle speed - manual [auto]                | rpm | 700±50 N/A    |
| Fast idle speed - manual [auto]           | rpm | —             |
| CO @ idle speed [3000 rpm] - see page VI  | %   | ≤0.5 N/A      |
| 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              |     | Bosch         |
| Type / ref                                |     | M3.1-Motronic |
| Main jet / needle                         |     | —             |
| Injection pressure                        | bar | 3.0±0.06      |
| Pump pressure                             | bar | 3.5 to 4.0    |
| Octane rating                             | RON | 95[U]         |

Ignition system

320i 24V (E36)

1995 to 1997

|                                 |                    |                      |
|---------------------------------|--------------------|----------------------|
| Type                            |                    | Direct electronic    |
| Ignition coil                   |                    | Bosch                |
| Primary resistance              | ohms               | 0.8±0.1              |
| Ballast resistor                | ohms               | —                    |
| Voltage - Tmnl 15(+) to earth   | V                  | —                    |
| Distributor                     |                    | —                    |
| Points gap (air gap)            | mm                 | [0.70 to 1.30]       |
| Dwell angle                     | ° (%)              | —                    |
| Condenser capacity              | µF                 | —                    |
| Rotation                        |                    | —                    |
| Ignition timing - basic [static | ° Crankshaft @ rpm | Computer control N/A |
| V = Vacuum    NV = No Vacuum    |                    | —                    |
| Total ignition advance          | ° Crankshaft @ rpm | Computer control     |
|                                 | ° 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                |
| Type                            |                    | F7LDCR               |
| Electrode gap                   | mm                 | 0.90 to 1.10         |

Electrical system

320i 24V (E36)

1995 to 1997

|                                                     |             |                              |
|-----------------------------------------------------|-------------|------------------------------|
| Battery                                             | V / CC / RC | 12 / 65Ah                    |
| Alternator voltage / full load current / engine rpm |             | 13.5 to 14.2 / 80, 90 / 1500 |
| Starter motor current / voltage - cranking          | A / V       |                              |
| - locked                                            | A / V       | —                            |

Running gear

320i 24V (E36)

1995 to 1997

|                                          |    |     |
|------------------------------------------|----|-----|
| Brakes -                                 |    |     |
| Front (min. friction material thickness) | mm | 2.0 |
| Rear (min. friction material thickness)  | mm | 2.0 |

|                                  |      |           |
|----------------------------------|------|-----------|
| Tyres                            |      |           |
| Saloon                           | Size | 205/60x15 |
| Estate / Van                     | Size | 205/60x15 |
| Pressure - front / rear - Saloon | bar  | 2.0 / 2.3 |
| - Estate / Van                   | bar  | 2.0 / 2.3 |

|                                    |        |                                 |
|------------------------------------|--------|---------------------------------|
| Front suspension / wheel alignment |        |                                 |
| Toe-in (+) / Toe-out (–)           | mm [°] | [+18'±5']                       |
| Camber                             |        | -30'±30'. Sport: -51'±30' L     |
| Castor                             |        | +3°52'±30'. Sport: +3°57'±30' L |
| King pin inclination               |        | +15°44'±30'. Sport: +15°56'     |

|                                   |        |                            |
|-----------------------------------|--------|----------------------------|
| Rear suspension / wheel alignment |        |                            |
| Toe-in (+) / Toe-out (–)          | mm [°] | [+24'±6']                  |
| Camber                            |        | -1°40'±15'. Sport: -2°±15' |

Torque wrench settings

320i 24V (E36)

1995 to 1997

|                         |    |                  |
|-------------------------|----|------------------|
| Cylinder head - stage 1 | Nm | 40 N             |
| - stage 2               | Nm | + 90°            |
| Cylinder head - stage 3 | Nm | + 90°            |
| - stage 4               | Nm | —                |
| Big-end bearings        | Nm | 20 + 70° N       |
| Main bearings           | Nm | 20 + 70° N       |
| Clutch cover            | Nm | 24. 10.9 hex: 35 |
| Flywheel [driveplate]   | Nm | 105 [120] N      |
| Front hubs              | Nm | 290              |
| Rear hubs               | Nm | 250              |
| Wheel nuts / bolts      | Nm | 100±10           |
| Spark plugs             | Nm | 30 to 33         |

Capacities

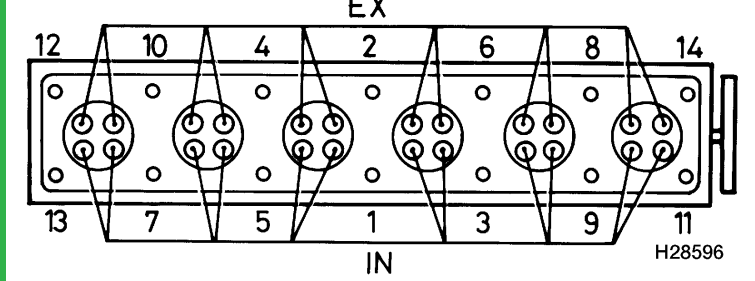
320i 24V (E36)

1995 to 1997

|                                 |        |      |
|---------------------------------|--------|------|
| Engine oil & filter             | litres | 6.5  |
| Gearbox - 4-speed [5-speed]     | litres | 1.0  |
| Automatic transmission - refill | litres | 3.3  |
| Final drive                     | litres | 1.1  |
| Cooling system                  | litres | 10.5 |
| Fuel tank                       | litres | 65   |

Notes and Illustrations

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1990 cm³, 24V