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# Automotive Technical DATA BOOK

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### Engine and cooling system 750i (E38) 1994 to 1997

|   |                            |
|---|----------------------------|
| Type  | M70,3/B54 240kW SOHC 24V   |
| Capacity (cm <sup>3</sup> ) / number of cylinders | 5379 / 12                  |
| Compression ratio / pressure                      | bar 10.0 / ≥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                                      | 1-7-5-11-3-9-6-12-2-8-4-10 |
| No 1 cylinder position                            | PER                        |
| Thermostat opening temperature                    | °C 95                      |
| Radiator cap pressure                             | bar 2.0±0.1                |

### Fuel system 750i (E38) 1994 to 1997

|   |     |                   |
|---|-----|-------------------|
| Idle speed - manual [auto]                            | rpm | 600±50            |
| Fast idle speed - manual [auto]                       | rpm | —                 |
| CO @ idle speed [3000 rpm] - see page VI              | %   | ≤0.3 N/A          |
| HC @ idle speed [3000 rpm] - see page VI              | ppm | ≤200              |
| 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  |     | DME M5.2-Motronic |
| Main jet / needle                                     |     | —                 |
| Injection pressure                                    | bar | —                 |
| Pump pressure   | bar | 3.0±0.06          |
| Octane rating   | RON | 95[U]             |

### Ignition system 750i (E38) 1994 to 1997

|                                 |                       |                      |
|---------------------------------|-----------------------|----------------------|
| Type                            | DME Motronic          |                      |
| Ignition coil                   | —                     |                      |
| Primary resistance              | ohms a: 0.50. b: 0.37 |                      |
| Ballast resistor                | ohms —                |                      |
| Voltage - Tmnl 15(+) to earth   | V —                   |                      |
| Distributor                     | —                     |                      |
| Points gap (air gap)            | mm —                  |                      |
| 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                            |                       | F8LCR                |
| Electrode gap                   | mm                    | 0.70+0.10            |

### Electrical system 750i (E38) 1994 to 1997

|   |             |                           |
|---|-------------|---------------------------|
| Battery   | V / CC / RC | 12 / 90Ah                 |
| Alternator voltage / full load current / engine rpm |             | 13.5 to 14.2 / 140 / 3000 |
| Starter motor current / voltage - cranking          | A / V       | —                         |
| - locked  | A / V       | —                         |

### Running gear 750i (E38) 1994 to 1997

|  |    |     |
|--|----|-----|
| <b>Brakes -</b>                          |    |     |
| Front (min. friction material thickness) | mm | 2.0 |
| Rear (min. friction material thickness)  | mm | 2.0 |

|                                  |      |                              |
|----------------------------------|------|------------------------------|
| <b>Tyres</b>                     |      |                              |
| Saloon                           | Size | 230/55x390: 235/60x16        |
| Estate / Van                     | Size | —                            |
| Pressure - front / rear - Saloon | bar  | 2.6 / 3.0. 235/60: 2.2 / 2.6 |
| - Estate / Van                   | bar  | —                            |

|   |        |           |
|---|--------|-----------|
| <b>Front suspension / wheel alignment</b> |        |           |
| Toe-in (+) / Toe-out (-)                  | mm [°] | [+14'±5'] |
| Camber                                    |        | -13'±30'  |
| Castor                                    |        | +6°6'±30' |
| King pin inclination                      |        | —         |

|  |        |            |
|--|--------|------------|
| <b>Rear suspension / wheel alignment</b> |        |            |
| Toe-in (+) / Toe-out (-)                 | mm [°] | [+18'±10'] |
| Camber                                   |        | -1°30'±20' |

### Torque wrench settings 750i (E38) 1994 to 1997

|                         |    |            |
|-------------------------|----|------------|
| Cylinder head - stage 1 | Nm | 30±2 N     |
| - stage 2               | Nm | + 60°      |
| Cylinder head - stage 3 | Nm | + 60°      |
| - stage 4               | Nm | —          |
| Big-end bearings        | Nm | 20 + 70° N |
| Main bearings           | Nm | 20 + 70° N |
| Clutch cover            | Nm | —          |
| Flywheel [driveplate]   | Nm | 105±5 N    |
| Front hubs              | Nm | 290        |
| Rear hubs               | Nm | 247.6±5%   |
| Wheel nuts / bolts      | Nm | 100±10     |
| Spark plugs             | Nm | 30 to 33   |

### Capacities 750i (E38) 1994 to 1997

|                                 |        |                     |
|---------------------------------|--------|---------------------|
| Engine oil & filter             | litres | 8.0                 |
| Gearbox - 4-speed [5-speed]     | litres | —                   |
| Automatic transmission - refill | litres | 3.0 Filled for life |
| Final drive                     | litres | 1.2                 |
| Cooling system                  | litres | 13.0                |
| Fuel tank                       | litres | 95                  |

### Notes and Illustrations

