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# Automotive Technical DATA BOOK

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HELP

## Engine and cooling system 750i & L & CAT (E32) 1987 to 1994

|   |     |                            |
|---|-----|----------------------------|
| Type  |     | M70/B50 50 12A 220kW       |
| Capacity (cm <sup>3</sup> ) / number of cylinders |     | 4988 / 12                  |
| Compression ratio / pressure                      | bar | 8.8 / 10 to 12             |
| 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  | 80                         |
| Radiator cap pressure                             | bar | 2.0±0.1                    |

## Fuel system 750i & L & CAT (E32) 1987 to 1994

|   |     |                           |
|---|-----|---------------------------|
| Idle speed - manual [auto]                            | rpm | 700±50                    |
| Fast idle speed - manual [auto]                       | rpm | —                         |
| CO @ idle speed [3000 rpm] - see page VI              | %   | 0.5±0.3                   |
| 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  |     | M1.2 or M1.7-Motronic     |
| Main jet / needle                                     |     | —                         |
| Injection pressure                                    | bar | —                         |
| Pump pressure   | bar | 3.0±0.06                  |
| Octane rating   | RON | 97[E 95 RON] <sup>1</sup> |

## Ignition system 750i & L & CAT (E32) 1987 to 1994

|                                 |                    |                     |
|---------------------------------|--------------------|---------------------|
| Type                            |                    | DME Motronic        |
| Ignition coil                   |                    | Bosch 0 221 118 335 |
| Primary resistance              | ohms               | a: 0.50. b: 0.37    |
| Ballast resistor                | ohms               | —                   |
| Voltage - Tmnl 15(+) to earth   | V                  | —                   |
| Distributor                     |                    | Bosch               |
| Points gap (air gap)            | mm                 | [0.30 to 0.70]      |
| Dwell angle                     | ° (%)              | —                   |
| Condenser capacity              | µF                 | —                   |
| Rotation                        |                    | —                   |
| Ignition timing - basic [static | ° Crankshaft @ rpm | Computer control    |
| 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/Champion      |
| Type                            |                    | F8LCR / C9YCC       |
| Electrode gap                   | mm                 | 0.70 to 0.80        |

## Electrical system 750i & L & CAT (E32) 1987 to 1994

|   |             |                         |
|---|-------------|-------------------------|
| Battery   | V / CC / RC | 12 / 84Ah               |
| Alternator voltage / full load current / engine rpm |             | 13.5 to 14.2 / _ / 3000 |
| Starter motor current / voltage - cranking          | A / V       | —                       |
| - locked  | A / V       | —                       |

## Running gear 750i & L & CAT (E32) 1987 to 1994

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

|                                  |      |           |
|----------------------------------|------|-----------|
| <b>Tyres</b>                     |      |           |
| Saloon                           | Size | 225/60x15 |
| Estate / Van                     | Size | —         |
| Pressure - front / rear - Saloon | bar  | 2.7 / 3.0 |
| - Estate / Van                   | bar  | —         |

|   |        |            |
|---|--------|------------|
| <b>Front suspension / wheel alignment</b> |        |            |
| Toe-in (+) / Toe-out (-)                  | mm [°] | [+18'±5']  |
| Camber                                    |        | -13'±30'   |
| Castor                                    |        | +7°59'±30' |
| King pin inclination                      |        | +12°4'±30' |

|  |        |            |
|--|--------|------------|
| <b>Rear suspension / wheel alignment</b> |        |            |
| Toe-in (+) / Toe-out (-)                 | mm [°] | [+18'±7']  |
| Camber                                   |        | -2°20'±30' |

## Torque wrench settings 750i & L & CAT (E32) 1987 to 1994

|                         |    |            |
|-------------------------|----|------------|
| Cylinder head - stage 1 | Nm | TORX: 30±2 |
| - stage 2               | Nm | + 120°     |
| Cylinder head - stage 3 | Nm | —          |
| - stage 4               | Nm | —          |
| Big-end bearings        | Nm | 23 + 70° N |
| Main bearings           | Nm | 20 + 70°   |
| Clutch cover            | Nm | —          |
| Flywheel [driveplate]   | Nm | 105±5      |
| Front hubs              | Nm | 290        |
| Rear hubs               | Nm | 247.6 ±5%  |
| Wheel nuts / bolts      | Nm | 100±10     |
| Spark plugs             | Nm | 30 to 33   |

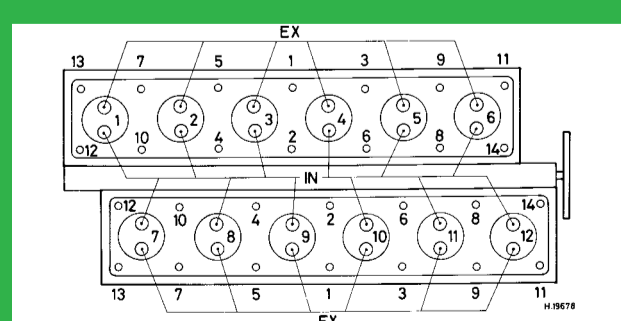
## Capacities 750i & L & CAT (E32) 1987 to 1994

|                                 |        |            |
|---------------------------------|--------|------------|
| Engine oil & filter             | litres | 7.5        |
| Gearbox - 4-speed [5-speed]     | litres | —          |
| Automatic transmission - refill | litres | 3.0        |
| Final drive                     | litres | 1.7 or 1.9 |
| Cooling system                  | litres | 14.0       |
| Fuel tank                       | litres | 102        |

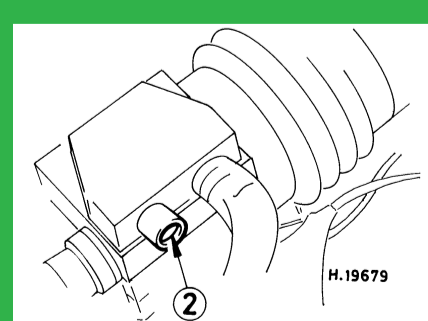
## Notes and Illustrations

<sup>1</sup>CAT: [U]

1: Idle speed 2: CO / Mixture



4988 cm<sup>3</sup>, M70



M1.2 / M1.7-Motronic