

Engine & Cooling

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Automotive Technical  
**DATA BOOK**

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HELP

Engine and cooling system528i E391996 to 1997

|                                                   |                        |              |
|---------------------------------------------------|------------------------|--------------|
| Type                                              | M52 B28 DOHC 24V 142kW |              |
| Capacity (cm <sup>3</sup> ) / number of cylinders | 2793 / 6               |              |
| Compression ratio / pressure                      | bar                    | 10.2 / ≥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                            | —                      |              |
| Thermostat opening temperature                    | °C                     | 92           |
| Radiator cap pressure                             | bar                    | —            |

Fuel system528i E391996 to 1997

|                                           |                      |         |
|-------------------------------------------|----------------------|---------|
| Idle speed - manual [auto]                | rpm                  | 750±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                  | —       |
| CO2 @ idle speed [3000 rpm] - see page VI | %                    | —       |
| O2 @ idle speed [3000 rpm] - see page VI  | %                    | —       |
| Carburettor / fuel injection              | _ Bosch              |         |
| Type / ref                                | DME Motronic MS 41.0 |         |
| Main jet / needle                         | —                    |         |
| Injection pressure                        | bar                  | —       |
| Pump pressure                             | bar                  | 3.5     |
| Octane rating                             | RON                  | 95[U]   |

Ignition system528i E391996 to 1997

|                                 |                    |             |
|---------------------------------|--------------------|-------------|
| Type                            | Direct electronic  |             |
| Ignition coil                   | —                  |             |
| Primary resistance              | ohms               | 0.37 to 0.5 |
| 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 | —           |
| V = Vacuum    NV = No Vacuum    | —                  |             |
| Total ignition advance          | ° Crankshaft @ rpm | —           |
|                                 | ° Crankshaft @ rpm | —           |
|                                 | ° Crankshaft @ rpm | —           |
| Centrifugal check.              | ° Crankshaft @ rpm | —           |
|                                 | ° Crankshaft @ rpm | —           |
|                                 | ° Crankshaft @ rpm | —           |
| Vacuum range check              | mbar               | —           |
| Maximum vacuum advance          | ° Crankshaft       | —           |
| Spark plugs                     | Bosch              |             |
| Type                            | F7LDCR             |             |
| Electrode gap                   | mm                 | 0.7         |

Electrical system528i E391996 to 1997

|                                                     |               |           |
|-----------------------------------------------------|---------------|-----------|
| Battery                                             | V / CC / RC   | 12 / 70Ah |
| Alternator voltage / full load current / engine rpm | 14.3 / 80 / _ |           |
| Starter motor current / voltage - cranking          | A / V         | —         |
| - locked                                            | A / V         | —         |

Running gear528i E391996 to 1997

|                                          |    |     |
|------------------------------------------|----|-----|
| Brakes -                                 |    |     |
| Front (min. friction material thickness) | mm | 3.0 |
| Rear (min. friction material thickness)  | mm | 3.0 |

|                                  |      |                  |
|----------------------------------|------|------------------|
| Tyres                            |      |                  |
| Saloon                           | Size | 225/60x15        |
| Estate / Van                     | Size | —                |
| Pressure - front / rear - Saloon | bar  | Refer to vehicle |
| - Estate / Van                   | bar  | —                |

|                                    |            |            |
|------------------------------------|------------|------------|
| Front suspension / wheel alignment |            |            |
| Toe-in (+) / Toe-out (–)           | mm [°]     | [0°5'±10'] |
| Camber                             | -0°13'±30' |            |
| Castor                             | 6°42'±30'  |            |
| King pin inclination               | —          |            |

|                                   |            |             |
|-----------------------------------|------------|-------------|
| Rear suspension / wheel alignment |            |             |
| Toe-in (+) / Toe-out (–)          | mm [°]     | [0°16'±10'] |
| Camber                            | -2°10'±20' |             |

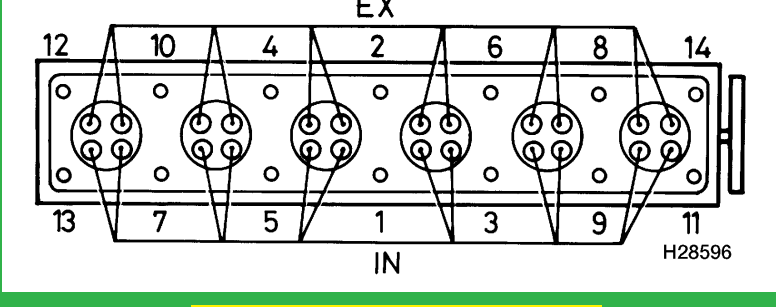
Torque wrench settings528i E391996 to 1997

|                         |    |           |
|-------------------------|----|-----------|
| Cylinder head - stage 1 | Nm | 40        |
| - stage 2               | Nm | +90°      |
| Cylinder head - stage 3 | Nm | +90°      |
| - stage 4               | Nm | —         |
| Big-end bearings        | Nm | 5, 20+70° |
| Main bearings           | Nm | 20+70°    |
| Clutch cover            | Nm | 24        |
| Flywheel [driveplate]   | Nm | 105       |
| Front hubs              | Nm | —         |
| Rear hubs               | Nm | 300       |
| Wheel nuts / bolts      | Nm | 100±10    |
| Spark plugs             | Nm | —         |

Capacities528i E391996 to 1997

|                                 |        |      |
|---------------------------------|--------|------|
| Engine oil & filter             | litres | 6.5  |
| Gearbox - 4-speed [5-speed]     | litres | 1.1  |
| Automatic transmission - refill | litres | 3.3  |
| Final drive                     | litres | 1.0  |
| Cooling system                  | litres | 10.5 |
| Fuel tank                       | litres | 70   |

Notes and Illustrations



2793 cm³ 24V