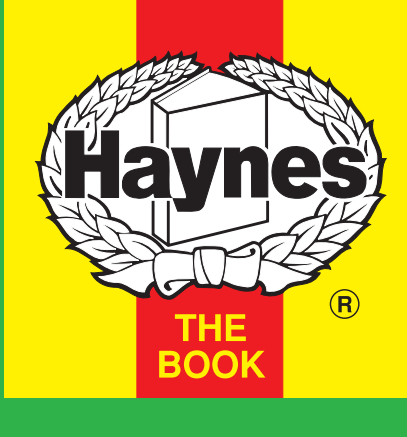


|                  |      |          |            |              |                 |            |                       |
|------------------|------|----------|------------|--------------|-----------------|------------|-----------------------|
| Engine & Cooling | Fuel | Ignition | Electrical | Running gear | Torque settings | Capacities | Notes & Illustrations |
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Automotive Technical  
DATA BOOK

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HELP

Engine and cooling systemSafrane 2.2i 12V CAT (B543)1993 to 1997

|                                      |     |                         |
|--------------------------------------|-----|-------------------------|
| Type                                 |     | J7T-7-60 [AT: J7T-7-61] |
| Capacity (cm³) / number of cylinders |     | 2165 / 4                |
| Compression ratio / pressure         | bar | 9.2 / _                 |
| Oil pressure                         | bar | 1.25 [3.0]              |
| Oil temperature                      | °C  | 80                      |
| Valve clearance - inlet              | mm  | 0.10 to 0.15            |
| Valve clearance - exhaust            | mm  | 0.20 to 0.25            |
| Firing order                         |     | 1-3-4-2                 |
| No 1 cylinder position               |     | FE                      |
| Thermostat opening temperature       | °C  | 83                      |
| Radiator cap pressure                | bar | 0.8 to 1.2              |

Fuel systemSafrane 2.2i 12V CAT (B543)1993 to 1997

|                                           |     |                     |
|-------------------------------------------|-----|---------------------|
| Idle speed - manual [auto]                | rpm | 825±50 [775±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 | ≤100                |
| CO2 @ idle speed [3000 rpm] - see page VI | %   | ≥14.5               |
| O2 @ idle speed [3000 rpm] - see page VI  | %   | _                   |
| Carburettor / fuel injection              |     | Siemens Bendix      |
| Type / ref                                |     | MPI                 |
| Main jet / needle                         |     | _                   |
| Injection pressure                        | bar | 2.5±0.2             |
| Pump pressure                             | bar | 3.0±0.2             |
| Octane rating                             | RON | 91[U]               |

Ignition systemSafrane 2.2i 12V CAT (B543)1993 to 1997

|                                 |                    |                      |
|---------------------------------|--------------------|----------------------|
| Type                            |                    | Computerized         |
| Ignition coil                   |                    | Renix                |
| Primary resistance              | ohms               | 0.4 to 0.8           |
| 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                     |                    | Eyquem/NGK           |
| Type                            |                    | FC62LS3 / BCP6ET     |
| Electrode gap                   | mm                 | 1.20 N/A             |

Electrical systemSafrane 2.2i 12V CAT (B543)1993 to 1997

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

Running gearSafrane 2.2i 12V CAT (B543)1993 to 1997

|                                          |    |                  |
|------------------------------------------|----|------------------|
| Brakes -                                 |    |                  |
| Front (min. friction material thickness) | mm | 6.0 with backing |
| Rear (min. friction material thickness)  | mm | 6.0 with backing |

|                                  |      |           |
|----------------------------------|------|-----------|
| Tyres                            |      |           |
| Saloon                           | Size | 195/65x15 |
| Estate / Van                     | Size | _         |
| Pressure - front / rear - Saloon | bar  | 2.5 / 2.3 |
| - Estate / Van                   | bar  | _         |

|                                    |        |                |
|------------------------------------|--------|----------------|
| Front suspension / wheel alignment |        |                |
| Toe-in (+) / Toe-out (-)           | mm [°] | -2.0±1.0       |
| Camber                             |        | -27'±30' N/A   |
| Castor                             |        | +4°8'±30' N/A  |
| King pin inclination               |        | +8°57'±30' N/A |

|                                   |        |              |
|-----------------------------------|--------|--------------|
| Rear suspension / wheel alignment |        |              |
| Toe-in (+) / Toe-out (-)          | mm [°] | +2.0±1.0 N/A |
| Camber                            |        | -55' N/A     |

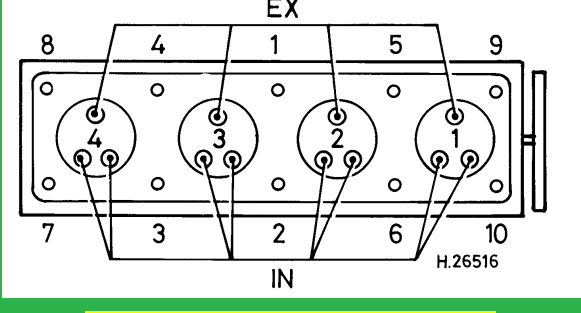
Torque wrench settingsSafrane 2.2i 12V CAT (B543)1993 to 1997

|                         |    |              |
|-------------------------|----|--------------|
| Cylinder head - stage 1 | Nm | 20           |
| - stage 2               | Nm | + 80°        |
| Cylinder head - stage 3 | Nm | Wait 3 mins. |
| - stage 4               | Nm | + 80°        |
| Big-end bearings        | Nm | 60 to 65     |
| Main bearings           | Nm | 88 to 98     |
| Clutch cover            | Nm | 25           |
| Flywheel [driveplate]   | Nm | 60           |
| Front hubs              | Nm | 250          |
| Rear hubs               | Nm | 165          |
| Wheel nuts / bolts      | Nm | 100          |
| Spark plugs             | Nm | _            |

CapacitiesSafrane 2.2i 12V CAT (B543)1993 to 1997

|                                 |        |             |
|---------------------------------|--------|-------------|
| Engine oil & filter             | litres | 6.1         |
| Gearbox - 4-speed [5-speed]     | litres | 2.3 to 2.8  |
| Automatic transmission - refill | litres | 4.0         |
| Final drive                     | litres | WT. AT: 1.5 |
| Cooling system                  | litres | 7.0 to 7.2  |
| Fuel tank                       | litres | 80          |

Notes and Illustrations



2165 cm³, 12V