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Automotive Technical DATA BOOK

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HELP

Engine and cooling system Tipo 2.0ie CAT 1990 to 1992

| | | |
|---|-------------------------|--------------|
| Type | 159 A5.046 8V 80kW US83 | |
| Capacity (cm ³) / number of cylinders | 1995 / 4 | |
| Compression ratio / pressure | bar | 9.5±0.15 / _ |
| Oil pressure | bar | 0.8 [4.0] |
| Oil temperature | °C | 100 |
| Valve clearance - inlet | mm | 0.39±0.04 |
| Valve clearance - exhaust | mm | 0.46±0.03 |
| Firing order | 1-3-4-2 | |
| No 1 cylinder position | TBE | |
| Thermostat opening temperature | °C | 83±2 to 97 |
| Radiator cap pressure | bar | 0.98 |

Fuel system Tipo 2.0ie CAT 1990 to 1992

| | | |
|---|---------------|-------------------|
| Idle speed - manual [auto] | rpm | 820±50 |
| Fast idle speed - manual [auto] | rpm | _ |
| CO @ idle speed [3000 rpm] - see page VI | % | 1.5±0.5. Ex: ≤0.5 |
| HC @ idle speed [3000 rpm] - see page VI | ppm | ≤500. Ex: ≤100 |
| CO ₂ @ idle speed [3000 rpm] - see page VI | % | _ |
| O ₂ @ idle speed [3000 rpm] - see page VI | % | _ |
| Carburettor / fuel injection | Weber-Marelli | |
| Type / ref | IAW MPI WF4U | |
| Main jet / needle | _ | |
| Injection pressure | bar | 3.0±0.2 |
| Pump pressure | bar | ≤4.5 |
| Octane rating | RON | 95[U] |

Ignition system Tipo 2.0ie CAT 1990 to 1992

| | | |
|---------------------------------|--------------------|------------------------|
| Type | IAW | |
| Ignition coil | Marelli BAE 504DK | |
| Primary resistance | ohms | 0.405 to 0.495 |
| Ballast resistor | ohms | _ |
| Voltage - Tmnl 15(+) to earth | V | _ |
| Distributor | Marelli | |
| Points gap (air gap) | mm | _ |
| Dwell angle | ° (%) | _ |
| Condenser capacity | µF | _ |
| Rotation | _ | |
| Ignition timing - basic [static | ° Crankshaft @ rpm | 9±2 BTDC @ 600 to 1200 |
| V = Vacuum NV = No Vacuum | _ | |
| Total ignition advance | ° Crankshaft @ rpm | 37±2 @ 2900 |
| | ° 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 | Champion | |
| Type | RN7YCC | |
| Electrode gap | mm | 0.85 to 0.95 |

Electrical system Tipo 2.0ie CAT 1990 to 1992

| | | |
|---|--------------------------|-------------------|
| Battery | V / CC / RC | 12 / 320 / 60Ah |
| Alternator voltage / full load current / engine rpm | 14.0 to 14.6 / 65 / 3500 | |
| Starter motor current / voltage - cranking | A / V | 360 to 380 / 8.15 |
| - locked | A / V | 680 to 700 / 4.9 |

Running gear Tipo 2.0ie CAT 1990 to 1992

| | | |
|--|----|-----|
| Brakes - | | |
| Front (min. friction material thickness) | mm | 1.5 |
| Rear (min. friction material thickness) | mm | 1.5 |

| | | |
|----------------------------------|------|-----------|
| Tyres | | |
| Saloon | Size | 175/65x14 |
| Estate / Van | Size | _ |
| Pressure - front / rear - Saloon | bar | 2.2 / 2.1 |
| - Estate / Van | bar | _ |

Front suspension / wheel alignment

| | | |
|--------------------------|----------------|--------------|
| Toe-in (+) / Toe-out (-) | mm [°] | -1.0 to +1.0 |
| Camber | +25'±30' N/A | |
| Castor | +2°50'±30' N/A | |
| King pin inclination | _ | |

Rear suspension / wheel alignment

| | | |
|--------------------------|----------------|--------------|
| Toe-in (+) / Toe-out (-) | mm [°] | -2.0 to +2.0 |
| Camber | -1°30'±15' N/A | |

Torque wrench settings Tipo 2.0ie CAT 1990 to 1992

| | | |
|-------------------------|----|--------------------------------|
| Cylinder head - stage 1 | Nm | 20 |
| - stage 2 | Nm | 40 |
| Cylinder head - stage 3 | Nm | + 90° |
| - stage 4 | Nm | + 90° |
| Big-end bearings | Nm | 25 + 50° |
| Main bearings | Nm | Centre: 20 + 130° ¹ |
| Clutch cover | Nm | 38 |
| Flywheel [driveplate] | Nm | 142 |
| Front hubs | Nm | 235 |
| Rear hubs | Nm | 320 |
| Wheel nuts / bolts | Nm | 86 |
| Spark plugs | Nm | 25 to 30 |

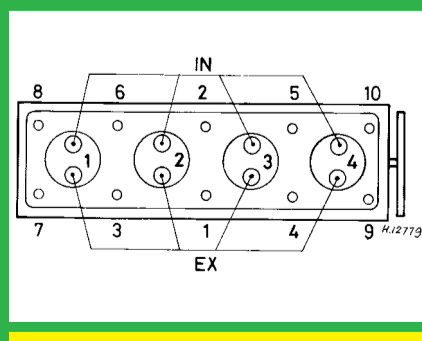
Capacities Tipo 2.0ie CAT 1990 to 1992

| | | |
|---------------------------------|--------|-----|
| Engine oil & filter | litres | 5.2 |
| Gearbox - 4-speed [5-speed] | litres | 1.4 |
| Automatic transmission - refill | litres | _ |
| Final drive | litres | WT |
| Cooling system | litres | 8.0 |
| Fuel tank | litres | 55 |

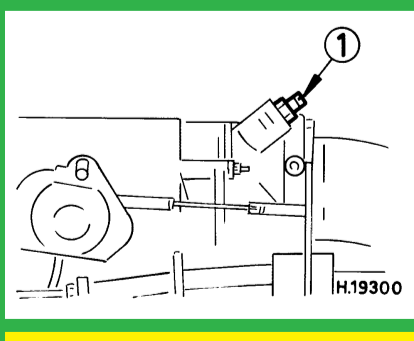
Notes and Illustrations

¹Side: 20 + 90°

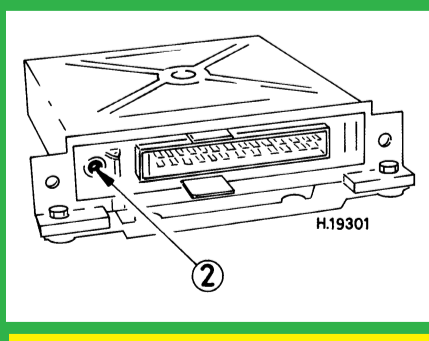
1: Idle speed 2: CO / Mixture



1995 cm³, DOHC 8V



Weber-Marelli IAW



Weber-Marelli IAW