

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

Click on one of the buttons above to view data for this car. To return to this screen and make another choice, click anywhere on the data screen.

MENU

HELP

## Engine and cooling system Tipo 1.8ie CAT 1992 to 1994

Type		159 A4.046 DOHC 8V 77kW US83
Capacity (cm <sup>3</sup> ) / number of cylinders		1756 / 4
Compression ratio / pressure	bar	9.5±0.15 / _
Oil pressure	bar	≥1.5 [4.6]
Oil temperature	°C	100
Valve clearance - inlet	mm	0.43±0.04
Valve clearance - exhaust	mm	0.48±0.04
Firing order		1-3-4-2
No 1 cylinder position		TBE
Thermostat opening temperature	°C	83±2
Radiator cap pressure	bar	0.98

## Fuel system Tipo 1.8ie CAT 1992 to 1994

Idle speed - manual [auto]	rpm	850±50
Fast idle speed - manual [auto]	rpm	_
CO @ idle speed [3000 rpm] - see page VI	%	0.7±0.2. Ex: ≤0.35
HC @ idle speed [3000 rpm] - see page VI	ppm	≤500. Ex: ≤100
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		Weber-Marelli
Type / ref		IAW MPI
Main jet / needle		_
Injection pressure	bar	3.0±0.2
Pump pressure	bar	≤4.5
Octane rating	RON	97[E 95 RON]

## Ignition system Tipo 1.8ie CAT 1992 to 1994

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 V = Vacuum NV = No Vacuum]	° Crankshaft @ rpm	14±2 BTDC @ 850±50
Total ignition advance	° Crankshaft @ rpm	_
	° 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 1.8ie CAT 1992 to 1994

Battery	V / CC / RC	12 / 255 / 55Ah
Alternator voltage / full load current / engine rpm		14.3 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 1.8ie CAT 1992 to 1994

<b>Brakes -</b>		
Front (min. friction material thickness)	mm	1.5
Rear (min. friction material thickness)	mm	1.5

<b>Tyres</b>		
Saloon	Size	175/65x14: 185/60x14
Estate / Van	Size	_
Pressure - front / rear - Saloon	bar	2.2 / 2.2
- 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 [°]	-3.0 to +1.0
Camber		-1°30'±15' N/A

## Torque wrench settings Tipo 1.8ie CAT 1992 to 1994

Cylinder head - stage 1	Nm	20
- stage 2	Nm	60
Cylinder head - stage 3	Nm	+ 90°
- stage 4	Nm	+ 90°
Big-end bearings	Nm	25 + 50°
Main bearings	Nm	Centre: 20 + 130° <sup>1</sup>
Clutch cover	Nm	38
Flywheel [driveplate]	Nm	142
Front hubs	Nm	275
Rear hubs	Nm	320
Wheel nuts / bolts	Nm	86
Spark plugs	Nm	27

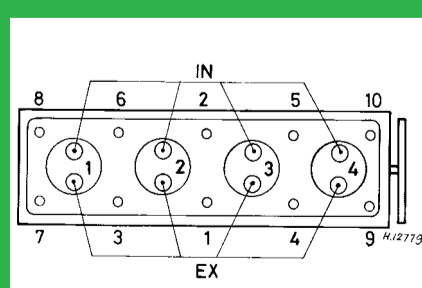
## Capacities Tipo 1.8ie CAT 1992 to 1994

Engine oil & filter	litres	5.2
Gearbox - 4-speed [5-speed]	litres	2.0
Automatic transmission - refill	litres	_
Final drive	litres	WT
Cooling system	litres	6.9
Fuel tank	litres	55

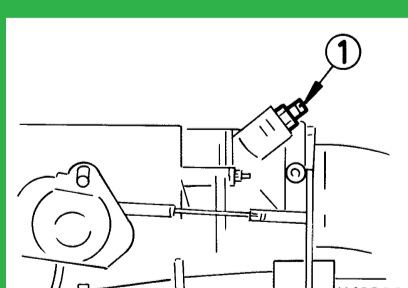
## Notes and Illustrations

<sup>1</sup>Side: 20 + 90°

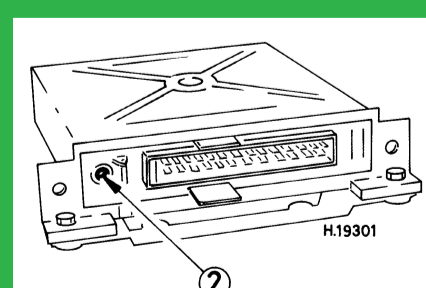
1: Idle speed 2: CO / Mixture



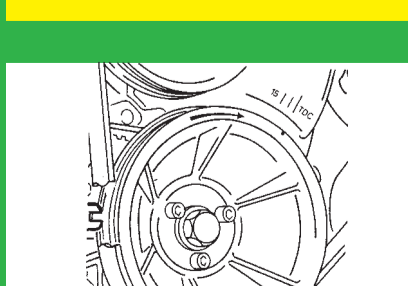
1756 cm<sup>3</sup>, DOHC 8V



Weber-Marelli IAW



Weber-Marelli IAW



1756 cm<sup>3</sup>, DOHC 8V