

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 system Tempra 1.8ie 1990 to 1992

Type	159 A4.000 DOHC 8V (80kW)	
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	81 to 85
Radiator cap pressure	bar	0.98

## Fuel system Tempra 1.8ie 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
HC @ idle speed [3000 rpm] - see page VI	ppm	≤1200
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 Tempra 1.8ie 1990 to 1992

Type	AEI	
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	15±2 BTDC @ 820±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	Bosch/Champion	
Type	WR6DC / RN7YC	
Electrode gap	mm	0.60 to 0.70

## Electrical system Tempra 1.8ie 1990 to 1992

Battery	V / CC / RC	12 / 225 / 45Ah
Alternator voltage / full load current / engine rpm	14.3 to 14.6 / 65, 90 / 3500	
Starter motor current / voltage - cranking	A / V	360 to 380 / 8.15
- locked	A / V	680 to 700 / 4.9

## Running gear Tempra 1.8ie 1990 to 1992

<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	175/65x14: 185/60x14
Pressure - front / rear - Saloon	bar	2.2 / 2.4
- Estate / Van	bar	2.2 / 2.2

## Front suspension / wheel alignment

Toe-in (+) / Toe-out (-)	mm [°]	-1.0 to +1.0
Camber	-20' to +40' N/A	
Castor	+2°50' to 3°50' N/A	
King pin inclination	_	

## Rear suspension / wheel alignment

Toe-in (+) / Toe-out (-)	mm [°]	-3.0 to +1.0
Camber	-30' to -1°30' N/A	

## Torque wrench settings Tempra 1.8ie 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	20 + 50°
Main bearings	Nm	Centre: 20 + 130° <sup>2</sup>
Clutch cover	Nm	38
Flywheel [driveplate]	Nm	142
Front hubs	Nm	235
Rear hubs	Nm	284
Wheel nuts / bolts	Nm	86
Spark plugs	Nm	25 to 30

## Capacities Tempra 1.8ie 1990 to 1992

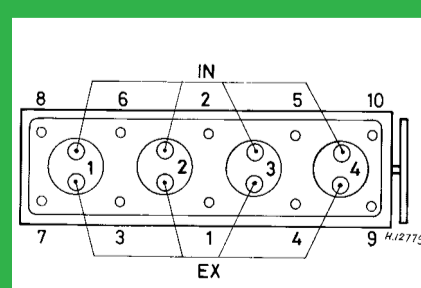
Engine oil & filter	litres	5.2
Gearbox - 4-speed [5-speed]	litres	2.0
Automatic transmission - refill	litres	_
Final drive	litres	WT
Cooling system	litres	6.9
Fuel tank	litres	65

## Notes and Illustrations

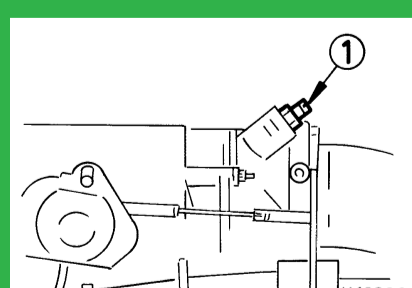
<sup>1</sup>Estate: +2°10' to 3°10'

<sup>2</sup>Side: 20 + 90°

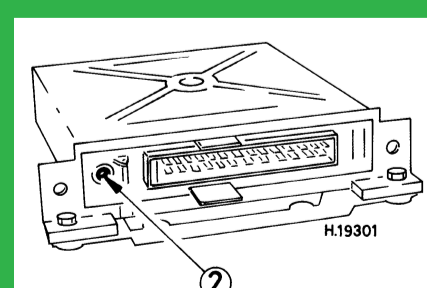
1: Idle speed    2: CO / Mixture



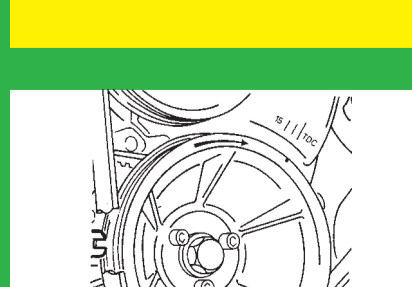
1756 cm<sup>3</sup>



Weber-Marelli IAW



Weber-Marelli IAW



1756 cm<sup>3</sup>