

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 Tipo 1.1 1990 to 1992

Type	160 A3.000 SOHC 41kW	
Capacity (cm ³) / number of cylinders	1108 / 4	
Compression ratio / pressure	bar	9.6±0.5 / _
Oil pressure	bar	[2.9 to 3.9]
Oil temperature	°C	100
Valve clearance - inlet	mm	0.30±0.05
Valve clearance - exhaust	mm	0.40±0.05
Firing order	1-3-4-2	
No 1 cylinder position	TBE	
Thermostat opening temperature	°C	85 to 89
Radiator cap pressure	bar	0.98

Fuel system Tipo 1.1 1990 to 1992

Idle speed - manual [auto]	rpm	800 to 850
Fast idle speed - manual [auto]	rpm	_
CO @ idle speed [3000 rpm] - see page VI	%	1.0±0.5
HC @ idle speed [3000 rpm] - see page VI	ppm	≤1200
CO ₂ @ idle speed [3000 rpm] - see page VI	%	_
O ₂ @ idle speed [3000 rpm] - see page VI	%	_
Carburettor / fuel injection	Weber	
Type / ref	32 TLF 12/250	
Main jet / needle	105	
Injection pressure	bar	_
Pump pressure	bar	≥0.20
Octane rating	RON	97[E 95 RON]

Ignition system Tipo 1.1 1990 to 1992

Type	Electronic	
Ignition coil	Marelli BAE 506D	
Primary resistance	ohms	0.666 to 0.814
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	10±1 BTDC @ idle
V = Vacuum NV = No Vacuum	NV	
Total ignition advance	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
Centrifugal check.	° Crankshaft @ rpm	0±2 @ 1250±200
	° Crankshaft @ rpm	12±2 @ 2100±200
	° Crankshaft @ rpm	24±2 @ 5250±200
Vacuum range check	mbar	200 to 413
Maximum vacuum advance	° Crankshaft	12±2
Spark plugs	Bosch/Champion	
Type	FR7DC / RN9YC	
Electrode gap	mm	0.70 to 0.80

Electrical system Tipo 1.1 1990 to 1992

Battery	V / CC / RC	12 / 185 / 40 or / 200 / 40
Alternator voltage / full load current / engine rpm	14.3 to 14.6 / 55 / 3500	
Starter motor current / voltage - cranking	A / V	160 to 180 / 9.4 to 9.6
- locked	A / V	316 / 7.3

Running gear Tipo 1.1 1990 to 1992

Brakes -		
Front (min. friction material thickness)	mm	1.5
Rear (min. friction material thickness)	mm	1.5
Tyres		
Saloon	Size	165/70x13
Estate / Van	Size	_
Pressure - front / rear - Saloon	bar	2.0 / 1.9
- Estate / Van	bar	_
Front suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	0±1.0
Camber	+25'±30' N/A	
Castor	+1°40'±30'	
King pin inclination	_	
Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	-1.0±2.0
Camber	-1°±30'	

Torque wrench settings Tipo 1.1 1990 to 1992

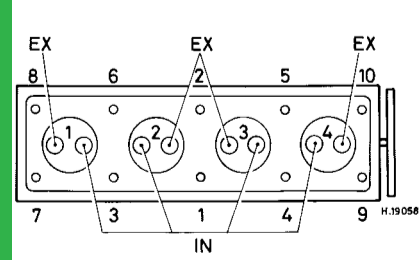
Cylinder head - stage 1	Nm	30
- stage 2	Nm	+ 90°
Cylinder head - stage 3	Nm	+ 90°
- stage 4	Nm	_
Big-end bearings	Nm	41
Main bearings	Nm	40 + 90°
Clutch cover	Nm	M6: 17. M8: 30
Flywheel [driveplate]	Nm	44
Front hubs	Nm	235
Rear hubs	Nm	320
Wheel nuts / bolts	Nm	86
Spark plugs	Nm	25 to 30

Capacities Tipo 1.1 1990 to 1992

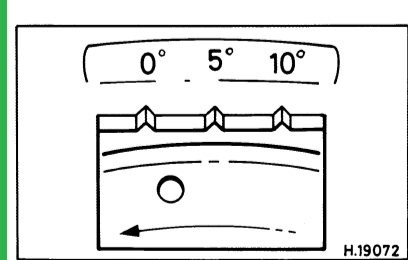
Engine oil & filter	litres	3.45
Gearbox - 4-speed [5-speed]	litres	1.4
Automatic transmission - refill	litres	_
Final drive	litres	WT
Cooling system	litres	4.5
Fuel tank	litres	55

Notes and Illustrations

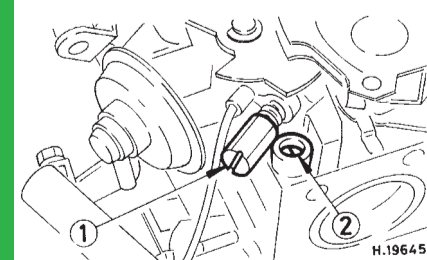
1: Idle speed 2: CO / Mixture



1108 cm³



1108 cm³



Weber TLF