

Engine & Cooling

Fuel

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Automotive Technical
DATA BOOK

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HELP

Engine and cooling systemFiorino 13001988 to 1996

Type		146 A5.000 SOHC 49kW
Capacity (cm³) / number of cylinders		1301 / 4
Compression ratio / pressure	bar	9.35±0.15 / _
Oil pressure	bar	[3.4 to 4.9]
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	80 to 84
Radiator cap pressure	bar	0.98

Fuel systemFiorino 13001988 to 1996

Idle speed - manual [auto]	rpm	850±50
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
CO2 @ idle speed [3000 rpm] - see page VI	%	_
O2 @ idle speed [3000 rpm] - see page VI	%	_
Carburettor / fuel injection		Weber
Type / ref		30-32 DMTE 27/150. 91 ►: 151
Main jet / needle		92, 105
Injection pressure	bar	_
Pump pressure	bar	0.15 to 0.20
Octane rating	RON	98[E 95 RON]

Ignition systemFiorino 13001988 to 1996

Type		Electronic
Ignition coil		Marelli BAE 506 A
Primary resistance	ohms	0.756 to 0.924
Ballast resistor	ohms	_
Voltage - Tmnl 15(+) to earth	V	_
Distributor		Marelli
Points gap (air gap)	mm	[0.30 to 0.40]
Dwell angle	° (%)	_
Condenser capacity	µF	_
Rotation		Clockwise
Ignition timing - basic [static	° Crankshaft @ rpm	10 BTDC @ idle
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
Centrifugal check.	° Crankshaft @ rpm	0 @ 1400 to 1800
	° Crankshaft @ rpm	7 to 11 @ 3000
	° Crankshaft @ rpm	20 to 24 @ 5200
Vacuum range check	mbar	132 to 400
Maximum vacuum advance	° Crankshaft	12 to 16
Spark plugs		Bosch/Champion
Type		WR7DC / RN9YC
Electrode gap	mm	0.70 to 0.80

Electrical systemFiorino 13001988 to 1996

Battery	V / CC / RC	12 / 185 / 45Ah
Alternator voltage / full load current / engine rpm		14.0 to 14.3 / 45 / 3500
Starter motor current / voltage - cranking	A / V	170 / 9.4
- locked	A / V	330 to 350 / 6.7 to 7.1

Running gearFiorino 13001988 to 1996

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

Tyres		
Saloon	Size	_
Estate / Van	Size	165/70x13
Pressure - front / rear - Saloon	bar	_
- Estate / Van	bar	1.9 / 1.9

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	-3.0±1.0
Camber		+1°50'±30'. 91 ►: +35'±30'
Castor		+30'±30'. Pick-up: +25'±30' ¹
King pin inclination		_

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	+5.0±2.0
Camber		Van: -40'±30' ²

Torque wrench settingsFiorino 13001988 to 1996

Cylinder head - stage 1	Nm	65 ³
- stage 2	Nm	+ 90 ^{°3}
Cylinder head - stage 3	Nm	+ 90 ^{°3}
- stage 4	Nm	_
Big-end bearings	Nm	51
Main bearings	Nm	80
Clutch cover	Nm	16
Flywheel [driveplate]	Nm	83
Front hubs	Nm	216
Rear hubs	Nm	216
Wheel nuts / bolts	Nm	86
Spark plugs	Nm	25 to 30

CapacitiesFiorino 13001988 to 1996

Engine oil & filter	litres	3.5
Gearbox - 4-speed [5-speed]	litres	3.0. 91 ►: 3.4
Automatic transmission - refill	litres	_
Final drive	litres	WT
Cooling system	litres	5.0. 91 ►: 5.5
Fuel tank	litres	54

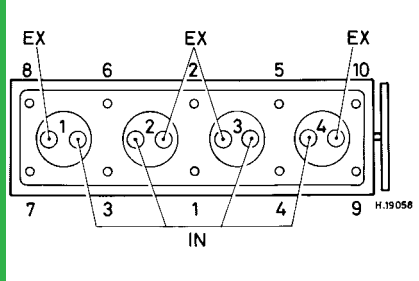
Notes and Illustrations

¹**Combi: +25'±30'**

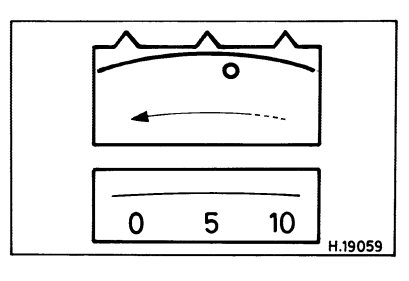
²**Combi: -55'±30'. PU: -45'±30'. 91 ►: Van: -1°±30'. Combi: -1°10'±30'. PU: -40'±30'**

³**NUTS: 65 + 40° + 40°**

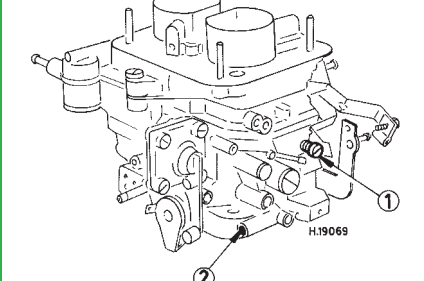
1: Idle speed 2: CO / Mixture



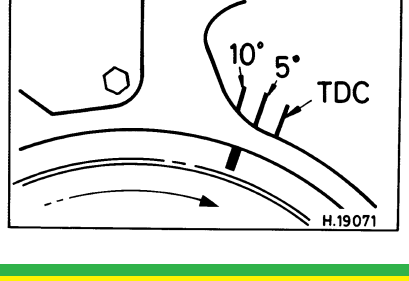
1301 cm³



1301 cm³



Weber DMTE



1301 cm³, alternative