

Engine & Cooling

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Automotive Technical
DATA BOOK

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Engine and cooling systemMarbella 9001988 to 1992

Type		09NCA
Capacity (cm³) / number of cylinders		903 / 4
Compression ratio / pressure	bar	8.5 / _
Oil pressure	bar	[2.9 to 3.9]
Oil temperature	°C	100
Valve clearance - inlet	mm	0.15±0.05
- exhaust	mm	0.20±0.05
Firing order		1-3-4-2
No 1 cylinder position		TCE
Thermostat opening temperature	°C	85
Radiator cap pressure	bar	1.0

Fuel systemMarbella 9001988 to 1992

Idle speed - manual [auto]	rpm	850±50
Fast idle speed - manual [auto]	rpm	_
CO @ idle speed [3000 rpm] - see page VI	%	2.0 to 3.0
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		Bressel-Weber/Solex
Type / ref		B-W: 32 ICEV. Sol: C32 DISA
Main jet / needle		B-W: 112. Solex: 117
Injection pressure	bar	_
Pump pressure	bar	0.2 to 0.3
Octane rating	RON	92[E 95 RON]

Ignition systemMarbella 9001988 to 1992

Type		Contact breaker - CIS
Ignition coil		Marelli BE200B. Femsa K12V
Primary resistance	ohms	2.6 to 3.3 (typical)
Ballast resistor	ohms	_
Voltage - Tmnl 15(+) to earth	V	_
Distributor		Ducellier/Marelli¹
Points gap (air gap)	mm	0.40
Dwell angle	° (%)	55±3 (61±3)
Condenser capacity	µF	0.25±0.025
Rotation		Clockwise
Ignition timing - basic [static	° Crankshaft @ rpm	5 BTDC @ 850±50
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	44±4 BTDC @ 4750
	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
Centrifugal check.	° Crankshaft @ rpm	10±2 @ 2000
	° Crankshaft @ rpm	20±2 @ 3000
	° Crankshaft @ rpm	32±2 @ 4750
Vacuum range check	mbar	133 to 333
Maximum vacuum advance	° Crankshaft	12±2
Spark plugs		Bosch/Champion
Type		WR7DC / RN9YC
Electrode gap	mm	0.70 to 0.80

Electrical systemMarbella 9001988 to 1992

Battery	V / CC / RC	12 / 32Ah
Alternator voltage / full load current / engine rpm		14.0 / _ / 3000
Starter motor current / voltage - cranking	A / V	_
- locked	A / V	310 to 360 / 6.6 to 7.2

Running gearMarbella 9001988 to 1992

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

Tyres		
Saloon	Size	135x13: 145/70x13
Estate / Van	Size	_
Pressure - front / rear - Saloon	bar	GL: 1.8 / 2.0²
- Estate / Van	bar	_

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	0 to -4.0
Camber		+1°30'±30'
Castor		+3°±30'
King pin inclination		_

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	_
Camber		_

Torque wrench settingsMarbella 9001988 to 1992

Cylinder head - stage 1	Nm	30
- stage 2	Nm	59
- stage 3	Nm	_
- stage 4	Nm	_
Big-end bearings	Nm	51
Main bearings	Nm	80
Clutch cover	Nm	16
Flywheel [driveplate]	Nm	85
Front hubs	Nm	196
Rear hubs	Nm	57
Wheel nuts / bolts	Nm	86
Spark plugs	Nm	32

CapacitiesMarbella 9001988 to 1992

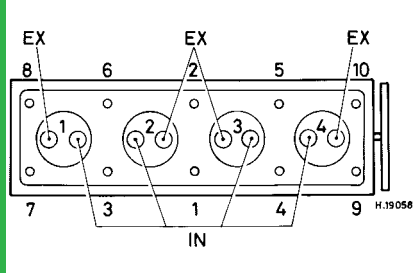
Engine oil & filter	litres	3.6
Gearbox - 4-speed [5-speed]	litres	2.4
Automatic transmission - refill	litres	_
Final drive	litres	WT
Cooling system	litres	5.2
Fuel tank	litres	35

Notes and Illustrations

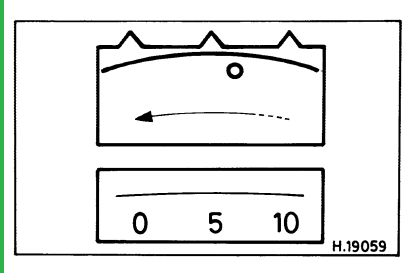
¹Femsa may also be fitted

²GLX: 1.9 / 2.0

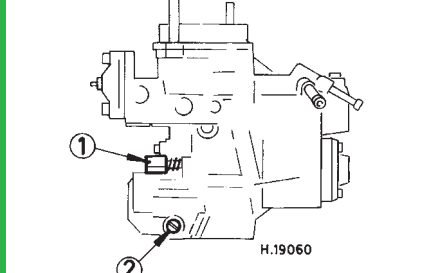
1: Idle speed 2: CO / Mixture



903 cm³



903 cm³



32 ICEV / C32 DISA