

Engine & Cooling

Fuel

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Automotive Technical
DATA BOOK

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Engine and cooling systemMetro 1.31986 to 1989

Type		12HC (From 1987 MY: 12HD) ¹
Capacity (cm ³) / number of cylinders		1275 / 4
Compression ratio / pressure	bar	9.75 / $\bar{}$
Oil pressure	bar	1.0 [4.1]
Oil temperature	°C	$\bar{}$
Valve clearance - inlet	mm	0.27 to 0.33
Valve clearance - exhaust	mm	0.27 to 0.33
Firing order		1-3-4-2
No 1 cylinder position		TCE
Thermostat opening temperature	°C	88
Radiator cap pressure	bar	1.04

Fuel systemMetro 1.31986 to 1989

Idle speed - manual [auto]	rpm	880±50
Fast idle speed - manual [auto]	rpm	1050 to 1150 [1000±50]
CO @ idle speed [3000 rpm] - see page VI	%	1.5 to 3.5
HC @ idle speed [3000 rpm] - see page VI	ppm	≤1200
CO ₂ @ idle speed [3000 rpm] - see page VI	%	$\bar{}$
O ₂ @ idle speed [3000 rpm] - see page VI	%	$\bar{}$
Carburettor / fuel injection		SU
Type / ref		HIF44
Main jet / needle		0.100 / BER [BFZ, AT]
Injection pressure	bar	$\bar{}$
Pump pressure	bar	0.4
Octane rating	RON	97[L]

Ignition systemMetro 1.31986 to 1989

Type		Electronic
Ignition coil		GCL 143
Primary resistance	ohms	0.78±0.08
Ballast resistor	ohms	$\bar{}$
Voltage - Tmnl 15(+) to earth	V	$\bar{}$
Distributor		Lucas
Points gap (air gap)	mm	[0.20±0.05]
Dwell angle	° (%)	$\bar{}$
Condenser capacity	µF	$\bar{}$
Rotation		Anticlockwise
Ignition timing - basic [static	° Crankshaft @ rpm	7 to 9 BTDC @ 1500
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	$\bar{}$
	° Crankshaft @ rpm	$\bar{}$
	° Crankshaft @ rpm	$\bar{}$
Centrifugal check.	° Crankshaft @ rpm	-1 to +1 @ 1000
	° Crankshaft @ rpm	6 to 10 @ 3000
	° Crankshaft @ rpm	17.5 to 22 @ 6500
Vacuum range check	mbar	173 to 528
Maximum vacuum advance	° Crankshaft	16 to 20
Spark plugs		Unipart/Champion
Type		GSP4362 / N9YC
Electrode gap	mm	1.00

Electrical systemMetro 1.31986 to 1989

Battery	V / CC / RC	12 / $\bar{}$
Alternator voltage / full load current / engine rpm		14.0 / $\bar{}$ / 3000
Starter motor current / voltage - cranking	A / V	75 / 12 (no load)
- locked	A / V	380 / 7

Running gearMetro 1.31986 to 1989

Brakes -		
Front (min. friction material thickness)	mm	3.0
Rear (min. friction material thickness)	mm	1.5

Tyres		
Saloon	Size	160/65 R315
Estate / Van	Size	$\bar{}$
Pressure - front / rear - Saloon	bar	2.0 / 1.8
- Estate / Van	bar	$\bar{}$

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	[0 to -25']
Camber		0±30'
Castor		+2°6'±2°
King pin inclination		+10°38'

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	[+10' to +50']
Camber		-1°±30'

Torque wrench settingsMetro 1.31986 to 1989

Cylinder head - stage 1	Nm	38
- stage 2	Nm	75
Cylinder head - stage 3	Nm	$\bar{}$
- stage 4	Nm	$\bar{}$
Big-end bearings	Nm	Bolts: 50. Nuts: 45
Main bearings	Nm	85
Clutch cover	Nm	25
Flywheel [driveplate]	Nm	Centre bolt: 152
Front hubs	Nm	2 hole shaft: 271 ²
Rear hubs	Nm	88
Wheel nuts / bolts	Nm	57
Spark plugs	Nm	25

CapacitiesMetro 1.31986 to 1989

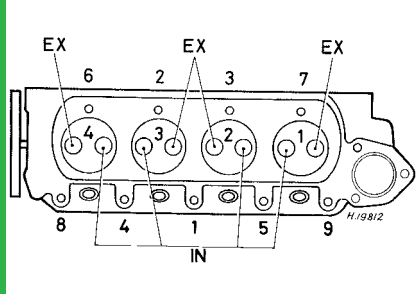
Engine oil & filter	litres	4.8 [AT: 5.1]
Gearbox - 4-speed [5-speed]	litres	With engine
Automatic transmission - refill	litres	With engine
Final drive	litres	With engine
Cooling system	litres	4.8
Fuel tank	litres	33

Notes and Illustrations

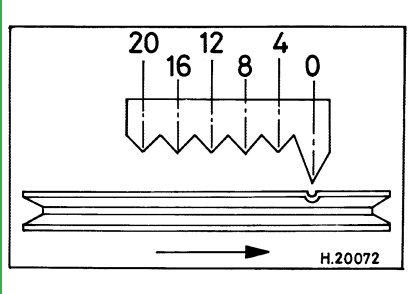
¹12HC06AA/04AA/05AA/02AA/03AA/07AA/01AA/08AA/11AA (AT)/
12HD09AA/10AA/11AA/12AA/13AA/21AA/22AA/23AA (AT)

²1 hole shaft: 262

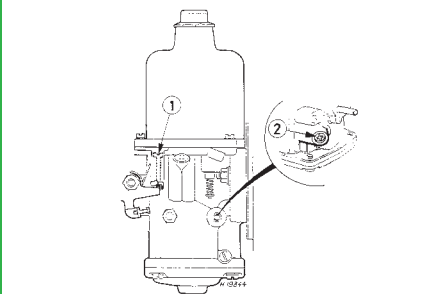
1: Idle speed 2: CO / Mixture



1275 cm³



1275 cm³



SU HIF