

Engine & Cooling

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Automotive Technical
DATA BOOK

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Engine and cooling systemMetro MG Turbo1986 to 1990

Type		12HC16AA ¹
Capacity (cm ³) / number of cylinders		1275 / 4
Compression ratio / pressure	bar	9.4 / _
Oil pressure	bar	1.0 [4.1]
Oil temperature	°C	_
Valve clearance - inlet	mm	0.30 to 0.35
Valve clearance - exhaust	mm	0.35 to 0.41
Firing order		1-3-4-2
No 1 cylinder position		TCE
Thermostat opening temperature	°C	88
Radiator cap pressure	bar	1.04

Fuel systemMetro MG Turbo1986 to 1990

Idle speed - manual [auto]	rpm	880±50
Fast idle speed - manual [auto]	rpm	1050 to 1150
CO @ idle speed [3000 rpm] - see page VI	%	0.5 to 2.5
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		SU
Type / ref		HIF44 (sealed)
Main jet / needle		0.100 / BDD
Injection pressure	bar	_
Pump pressure	bar	0.4
Octane rating	RON	97[L]

Ignition systemMetro MG Turbo1986 to 1990

Type		Electronic
Ignition coil		GCL 143
Primary resistance	ohms	0.78±0.08
Ballast resistor	ohms	_
Voltage - Tmnl 15(+) to earth	V	_
Distributor		Lucas
Points gap (air gap)	mm	[0.20±0.05]
Dwell angle	° (%)	_
Condenser capacity	µF	_
Rotation		Anticlockwise
Ignition timing - basic [static	° Crankshaft @ rpm	7±1 BTDC @ 1500
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
Centrifugal check.	° Crankshaft @ rpm	8.8 to 13.5 @ 2360
	° Crankshaft @ rpm	11 to 15.5 @ 2880
	° Crankshaft @ rpm	15 to 19.5 @ 5600
Vacuum range check	mbar	7 to 227
Maximum vacuum advance	° Crankshaft	22 to 26
Spark plugs		Unipart/Champion
Type		GSP4452 / RN7YC
Electrode gap	mm	1.00

Electrical systemMetro MG Turbo1986 to 1990

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

Running gearMetro MG Turbo1986 to 1990

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

Tyres		
Saloon	Size	165/60x13: 185/55x13
Estate / Van	Size	_
Pressure - front / rear - Saloon	bar	2.0 / 2.0
- Estate / Van	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 MG Turbo1986 to 1990

Cylinder head - stage 1	Nm	38
- stage 2	Nm	75
Cylinder head - stage 3	Nm	_
- stage 4	Nm	_
Big-end bearings	Nm	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. Alloys: 49
Spark plugs	Nm	25

CapacitiesMetro MG Turbo1986 to 1990

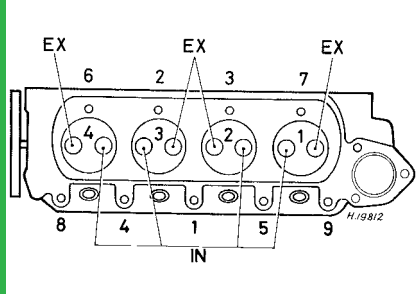
Engine oil & filter	litres	4.8
Gearbox - 4-speed [5-speed]	litres	With engine
Automatic transmission - refill	litres	_
Final drive	litres	With engine
Cooling system	litres	4.8
Fuel tank	litres	33

Notes and Illustrations

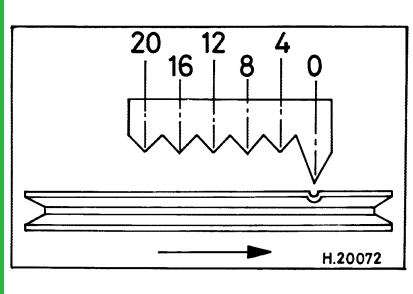
¹1987 ►: 12HD26AA

²1 hole shaft: 262

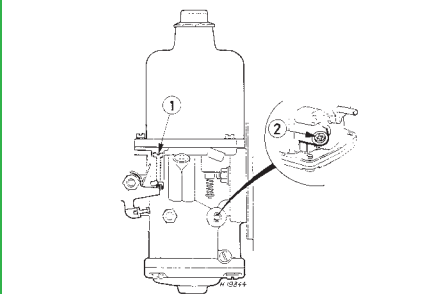
1: Idle speed 2: CO / Mixture



1275 cm³



1275 cm³



SU HIF