

Engine & Cooling

Fuel

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Automotive Technical
DATA BOOK

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HELP

Engine and cooling systemMini 1000 & CAT1988 to 1992

Type		99HE20. CAT: 99HD81 OHV
Capacity (cm³) / number of cylinders		998 / 4
Compression ratio / pressure	bar	9.6 / _
Oil pressure	bar	1.0 [4.1]
Oil temperature	°C	_
Valve clearance - inlet	mm	0.28 to 0.33
Valve clearance - exhaust	mm	0.28 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 systemMini 1000 & CAT1988 to 1992

Idle speed - manual [auto]	rpm	750±50
Fast idle speed - manual [auto]	rpm	1100±50
CO @ idle speed [3000 rpm] - see page VI	%	1.5 to 3.5
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		HS4 / FZX 1415
Main jet / needle		0.090 / AAC
Injection pressure	bar	_
Pump pressure	bar	_
Octane rating	RON	97[E 95 RON] ¹

Ignition systemMini 1000 & CAT1988 to 1992

Type		Contact breaker - CIS
Ignition coil		Unipart GCL 144
Primary resistance	ohms	1.4±0.1
Ballast resistor	ohms	1.5
Voltage - Tmnl 15(+) to earth	V	6.0 to 8.0
Distributor		Lucas
Points gap (air gap)	mm	0.38±0.03
Dwell angle	° (%)	54±5
Condenser capacity	µF	0.18 to 0.25
Rotation		Anticlockwise
Ignition timing - basic [static	° Crankshaft @ rpm	10+0-2 BTDC @ 1500
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
Centrifugal check.	° Crankshaft @ rpm	6 to 10 @ 2000
	° Crankshaft @ rpm	13 to 17 @ 3700
	° Crankshaft @ rpm	16 to 20 @ 4800
Vacuum range check	mbar	68 to 305
Maximum vacuum advance	° Crankshaft	16
Spark plugs		Unipart/Champion
Type		GSP 4382 or 3372 / N12YC
Electrode gap	mm	0.65

Electrical systemMini 1000 & CAT1988 to 1992

Battery	V / CC / RC	12 / 30,40Ah
Alternator voltage / full load current / engine rpm		13.6 to 14.4 / _ / 3000
Starter motor current / voltage - cranking	A / V	50 / 12
- locked	A / V	360 / 7.0

Running gearMini 1000 & CAT1988 to 1992

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

Tyres		
Saloon	Size	145/70x12
Estate / Van	Size	_
Pressure - front / rear - Saloon	bar	1.9 / 1.9
- Estate / Van	bar	_

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	-1.6
Camber		+2°±1°
Castor		+3°±1°
King pin inclination		_

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	+3.2
Camber		+1°+1°30'-30'

Torque wrench settingsMini 1000 & CAT1988 to 1992

Cylinder head - stage 1	Nm	34
- stage 2	Nm	68
Cylinder head - stage 3	Nm	_
- stage 4	Nm	_
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: 203 ²
Rear hubs	Nm	81
Wheel nuts / bolts	Nm	63. Alloys: 50
Spark plugs	Nm	25

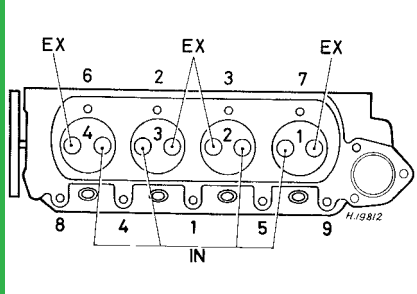
CapacitiesMini 1000 & CAT1988 to 1992

Engine oil & filter	litres	4.8 [AT: 5.0]
Gearbox - 4-speed [5-speed]	litres	With engine
Automatic transmission - refill	litres	With engine
Final drive	litres	With engine
Cooling system	litres	3.6
Fuel tank	litres	34

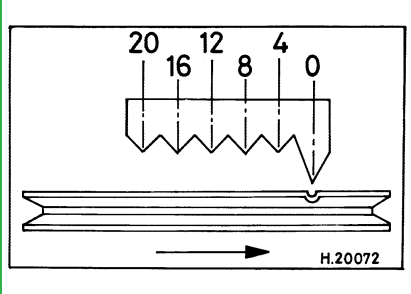
Notes and Illustrations

¹CAT: 95 [U]
²1 hole shaft: 262

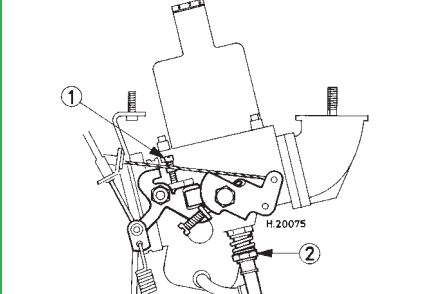
1: Idle speed 2: CO / Mixture



998 cm³



998 cm³



SU HS4