

Engine & Cooling

Fuel

Ignition

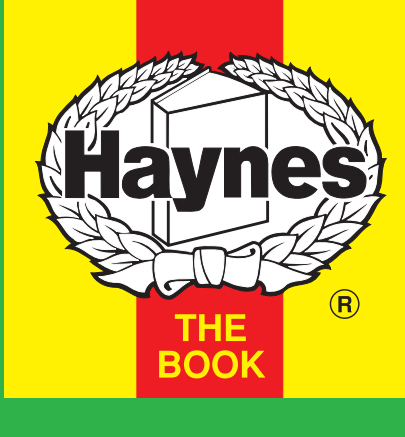
Electrical

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Automotive Technical
DATA BOOK

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HELP

Engine and cooling system

164, 2.0 T-Spark & CAT

1990 to 1993

Type		064.20. CAT: 064.16 DOHC 107kW
Capacity (cm³) / number of cylinders		1962 / 4
Compression ratio / pressure	bar	10.0 / _
Oil pressure	bar	[3.4 to 4.9]
Oil temperature	°C	90
Valve clearance - inlet	mm	0.38 to 0.45
Valve clearance - exhaust	mm	0.43 to 0.50
Firing order		1-3-4-2
No 1 cylinder position		TCE
Thermostat opening temperature	°C	83±2. Later: 87±2
Radiator cap pressure	bar	0.6 to 0.8¹

Fuel system

164, 2.0 T-Spark & CAT

1990 to 1993

Idle speed - manual [auto]	rpm	800±50. CAT: 750 to 850
Fast idle speed - manual [auto]	rpm	_
CO @ idle speed [3000 rpm] - see page VI	%	0.4 to 1.0. CAT: ≤0.2 Ex
HC @ idle speed [3000 rpm] - see page VI	ppm	≤350. CAT: ≤70 Ex
CO2 @ idle speed [3000 rpm] - see page VI	%	_
O2 @ idle speed [3000 rpm] - see page VI	%	_
Carburettor / fuel injection		Bosch
Type / ref		ML4.1-Motronic
Main jet / needle		_
Injection pressure	bar	_
Pump pressure	bar	2.8 to 3.2
Octane rating	RON	98[E 95 RON]²

Ignition system

164, 2.0 T-Spark & CAT

1990 to 1993

Type		Motronic
Ignition coil		2xBosch 0 221 600 054
Primary resistance	ohms	0.45 to 0.55
Ballast resistor	ohms	_
Voltage - Tmnl 15(+) to earth	V	_
Distributor		Bosch
Points gap (air gap)	mm	_
Dwell angle	° (%)	_
Condenser capacity	µF	_
Rotation		Clockwise
Ignition timing - basic [static	° Crankshaft @ rpm	10±1 BTDC @ 800±50
V = Vacuum NV = No Vacuum		_
Total ignition advance	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
Centrifugal check.	° Crankshaft @ rpm	Computer control
	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
Vacuum range check	mbar	Computer control
Maximum vacuum advance	° Crankshaft	_
Spark plugs		Lodge/Champion
Type		25HLD / C6YCC
Electrode gap	mm	Champion: 0.80

Electrical system

164, 2.0 T-Spark & CAT

1990 to 1993

Battery	V / CC / RC	12 / 60Ah
Alternator voltage / full load current / engine rpm		13.0 to 14.0 / 70 / 3000
Starter motor current / voltage - cranking	A / V	350 / 9.0
- locked	A / V	750 / 4.0

Running gear

164, 2.0 T-Spark & CAT

1990 to 1993

Brakes -		
Front (min. friction material thickness)	mm	2.0
Rear (min. friction material thickness)	mm	2.0

Tyres		
Saloon	Size	185/70x14: 195/60x15:195/65x15
Estate / Van	Size	_
Pressure - front / rear - Saloon	bar	2.2 / 2.0
- Estate / Van	bar	_

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	0±1.0³
Camber		-1°40'±20' U/L
Castor		+2°30'±20' U/L
King pin inclination		_

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	+3.0±1.0 U/L⁴
Camber		-15'±20' U/L

Torque wrench settings

164, 2.0 T-Spark & CAT

1990 to 1993

Cylinder head - stage 1	Nm	74 to 82 gradually
- stage 2	Nm	After 1000km
Cylinder head - stage 3	Nm	- 360° in sequence
- stage 4	Nm	82 to 88
Big-end bearings	Nm	49 to 52 oiled
Main bearings	Nm	46 to 49 oiled
Clutch cover	Nm	19 to 25
Flywheel [driveplate]	Nm	110 to 113
Front hubs	Nm	356 to 400
Rear hubs	Nm	250 to 300
Wheel nuts / bolts	Nm	95 to 105
Spark plugs	Nm	25 to 34 oiled

Capacities

164, 2.0 T-Spark & CAT

1990 to 1993

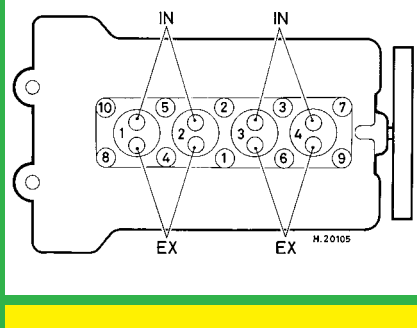
Engine oil & filter	litres	5.0
Gearbox - 4-speed [5-speed]	litres	1.6
Automatic transmission - refill	litres	_
Final drive	litres	WT
Cooling system	litres	9.0. Refill: 7.0
Fuel tank	litres	70

Notes and Illustrations

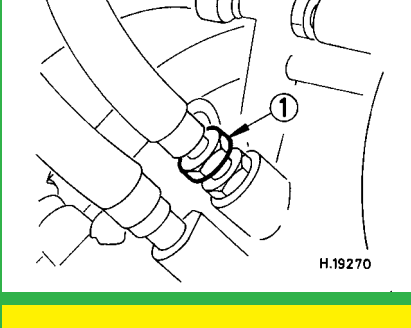
- ¹Later: 0.9 to 1.1
- ²CAT: 95 [U]
- ³Chassis no. 060 13379 ►: +4.0±1.0
- ⁴Self-levelling: +5.0±1.0

1: Idle speed

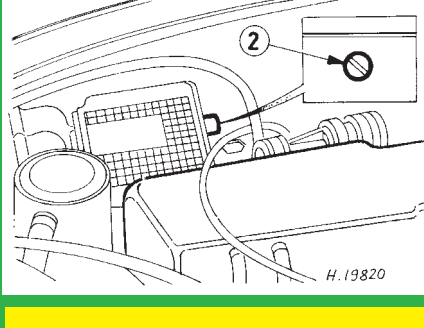
2: CO / Mixture



1962 cm³



ML4.1-Motronic, 1962 cm³



ML4.1-Motronic, 1962 cm³