

Engine & Cooling	Fuel	Ignition	Electrical	Running gear	Torque settings	Capacities	Notes & Illustration
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HELP

Type	12A	3A	FF3	A	QIV
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Capacity (cm ³) / number of cylinders		1275 / 4
Compression ratio / pressure	bar	10.1 / –
Oil pressure	bar	1.0 [4.1]
Oil temperature	°C	–
Valve clearance - inlet	mm	0.33 to 0.38
Valve clearance - exhaust	mm	0.33 to 0.38
Firing order		1-3-4-2
No 1 cylinder position		TCE
Thermostat opening temperature	°C	85 to 88
Radiator cap pressure	bar	1.04

Fuel system	Mini Cooper CAI	1990 to 1992
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Idle speed - manual [auto]	rpm	900±50
Fast idle speed - manual [auto]	rpm	1200±50
CO @ idle speed [3000 rpm] - see page VI	%	1.6 to 3.0
HC @ idle speed [3000 rpm] - see page VI	ppm	≤200
CO2 @ idle speed [3000 rpm] - see page VI	%	–
O2 @ idle speed [3000 rpm] - see page VI	%	–
Carburettor / fuel injection		SU
Type / ref		HIF44 FZX 1531
Main jet / needle		0.100 / BFY
Injection pressure	bar	–
Pump pressure	bar	0.28
Octane rating	RON	95[1]

Ignition system	Mini Cooper CAT	1990 to 1992
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Type		Electronic
Ignition coil		Unipart 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	1.0
Rotation		Anticlockwise
Ignition timing - basic [static	° Crankshaft @ rpm	5±1 BTDC @ 1500
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Centrifugal check.	° Crankshaft @ rpm	-1 to +1 @ 600
	° Crankshaft @ rpm	20 to 24 @ 4840
	° Crankshaft @ rpm	21.5 to 25.9 @ 6000
Vacuum range check	mbar	105 to 264
Maximum vacuum advance	° Crankshaft	16
Spark plugs		Unipart
Type		GSP4362
Electrode gap	mm	0.85

Electrical system	Mini Cooper CAT	1990 to 1992

Battery	V / CC / RC	12 / 265 / 45
Alternator voltage / full load current / engine rpm		13.6 to 14.4 / 45 / 3000
Starter motor current / voltage - cranking	A / V	—
locked	A / V	280 / 7.0 ± 0.1

Running gear	Mini Cooper CAT	1990 to 1992
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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	2.0 / 2.0
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- 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 settings			
Wheel nuts	110 lb-ft	150 N·m	133-153

Torque Wrench settings		Mini Cooper CAT	1990 to 1992
Cylinder head - stage 1	Nm	38	

- stage 2	NM	75
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Cylinder head - stage 3	Nm	—
- stage 4	Nm	

Big-end bearings	Nm	45
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Main bearings	Nm	85
Clutch cover	Nm	25

Flywheel [driveplate]	Nm	Centre bolt. 152
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Front hubs	Nm	2 hole shaft: 203 ¹
Rear hubs	Nm	81

Wheel nuts / bolts	NM	37
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Spark plugs	Nm	25
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Capacitors	mini Cooper CVA = 2000 to 2002

Engine oil & filter	litres	5.1
Gearbox - 4-speed [5-speed]	litres	With engine

Automatic transmission - 10ml	litres	—
Final drive	litres	With gearbox

Final drive	litres	With engine
Cooling system	litres	4.8

Product tank	nitrogen	oil

¹1 hole shaft: 262

1: Idle speed 2: CO / Mixture

