

Engine & Cooling

Fuel

Ignition

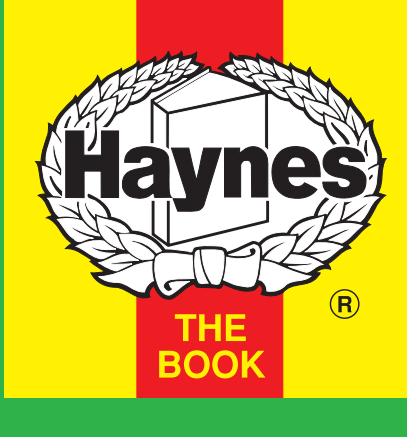
Electrical

Running gear

Torque settings

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Notes & Illustrations



Automotive Technical
DATA BOOK

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HELP

Engine and cooling system820 MPI CAT1989 to 1991

Type		M16i, 20 HD DOHC 16V
Capacity (cm³) / number of cylinders		1994 / 4
Compression ratio / pressure	bar	10.0 / _
Oil pressure	bar	0.7 [3.8]
Oil temperature	°C	_
Valve clearance - inlet	mm	0: Hyd.
Valve clearance - exhaust	mm	0: Hyd.
Firing order		1-3-4-2
No 1 cylinder position		TBE
Thermostat opening temperature	°C	88
Radiator cap pressure	bar	1.04

Fuel system820 MPI CAT1989 to 1991

Idle speed - manual [auto]	rpm	Base: 750±15
Fast idle speed - manual [auto]	rpm	_
CO @ idle speed [3000 rpm] - see page VI	%	0.25 to 0.5
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		Rover
Type / ref		MPI (H)
Main jet / needle		_
Injection pressure	bar	3.0 above manifold
Pump pressure	bar	4.1
Octane rating	RON	95[U]

Ignition system820 MPI CAT1989 to 1991

Type		Computerized
Ignition coil		GCL 141
Primary resistance	ohms	0.71 to 0.81
Ballast resistor	ohms	_
Voltage - Tmnl 15(+) to earth	V	_
Distributor		Lucas
Points gap (air gap)	mm	_
Dwell angle	° (%)	_
Condenser capacity	µF	_
Rotation		Anticlockwise
Ignition timing - basic [static	° Crankshaft @ rpm	9 to 11 BTDC @ 1500
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	24 to 28 BTDC @ 1500
	° 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		Unipart/Champion
Type		GSP4662 / RC9YC
Electrode gap	mm	0.85

Electrical system820 MPI CAT1989 to 1991

Battery	V / CC / RC	12 / 480 / 90
Alternator voltage / full load current / engine rpm		14.0 / _ / 3000
Starter motor current / voltage - cranking	A / V	_
- locked	A / V	_

Running gear820 MPI CAT1989 to 1991

Brakes -		
Front (min. friction material thickness)	mm	8.2 with backing plate
Rear (min. friction material thickness)	mm	7.2 with backing plate

Tyres		
Saloon	Size	195/70x14:195/65x15:205/55x16
Estate / Van	Size	_
Pressure - front / rear - Saloon	bar	1.9 / 1.9¹
- Estate / Van	bar	_

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	[0±8']. 91 ►: [0±15']
Camber		+24'±1°12'
Castor		+2°36'±2°
King pin inclination		+8°±1°12'

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	[+22'±15']
Camber		+13'±1°12'

Torque wrench settings820 MPI CAT1989 to 1991

Cylinder head - stage 1	Nm	45
- stage 2	Nm	80
Cylinder head - stage 3	Nm	+ 60°, or 108²
- stage 4	Nm	_
Big-end bearings	Nm	55
Main bearings	Nm	105
Clutch cover	Nm	26
Flywheel [driveplate]	Nm	85 [110]
Front hubs	Nm	290
Rear hubs	Nm	245
Wheel nuts / bolts	Nm	72
Spark plugs	Nm	18

Capacities820 MPI CAT1989 to 1991

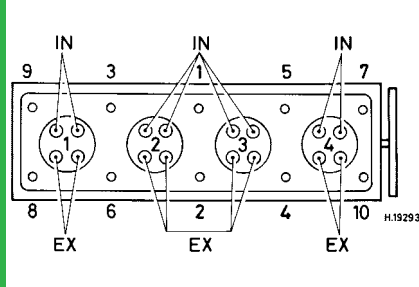
Engine oil & filter	litres	4.5
Gearbox - 4-speed [5-speed]	litres	2.3
Automatic transmission - refill	litres	2.0
Final drive	litres	WT
Cooling system	litres	10.0
Fuel tank	litres	68

Notes and Illustrations

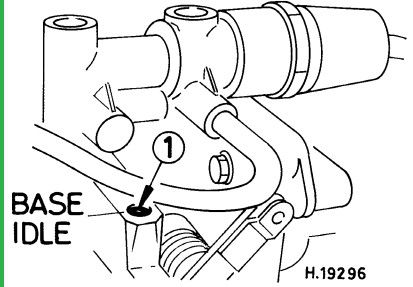
¹205/55x16: 2.2 / 2.2

²Whichever occurs first

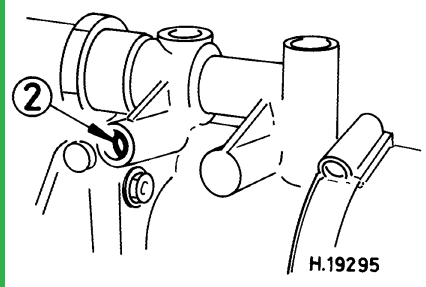
1: Idle speed 2: CO / Mixture



1994 cm³, 16V



Rover MPI



Rover MPI