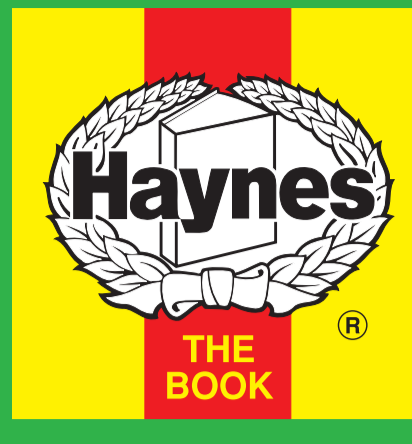


Engine & Cooling Fuel Ignition Electrical Running gear Torque settings Capacities Notes & Illustrations



Automotive Technical DATA BOOK

Click on one of the buttons above to view data for this car. To return to this screen and make another choice, click anywhere on the data screen.

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HELP

Engine and cooling system Range Rover 3.9i & Classic 1989 to 1996

Type		3.9L V8 OHV 136kW
Capacity (cm ³) / number of cylinders		3947 / 8
Compression ratio / pressure	bar	9.35 / ≥9.3
Oil pressure	bar	[2.1 to 2.8]
Oil temperature	°C	–
Valve clearance - inlet	mm	0: Hyd.
Valve clearance - exhaust	mm	0: Hyd.
Firing order		1-8-4-3-6-5-7-2
No 1 cylinder position		FL
Thermostat opening temperature	°C	88
Radiator cap pressure	bar	1.04

Fuel system Range Rover 3.9i & Classic 1989 to 1996

Idle speed - manual [auto]	rpm	525±25 Base idle
Fast idle speed - manual [auto]	rpm	–
CO @ idle speed [3000 rpm] - see page VI	%	≤0.5 N/A
HC @ idle speed [3000 rpm] - see page VI	ppm	≤200
CO ₂ @ idle speed [3000 rpm] - see page VI	%	–
O ₂ @ idle speed [3000 rpm] - see page VI	%	–
Carburettor / fuel injection		Lucas
Type / ref		L-Jetronic Hot Wire
Main jet / needle		–
Injection pressure	bar	–
Pump pressure	bar	2.3 to 2.6
Octane rating	RON	95[U]

Ignition system Range Rover 3.9i & Classic 1989 to 1996

Type		Electronic
Ignition coil		Bosch
Primary resistance	ohms	–
Ballast resistor	ohms	–
Voltage - Tmnl 15(+) to earth	V	–
Distributor		Lucas
Points gap (air gap)	mm	[0.20 to 0.36]
Dwell angle	° (%)	–
Condenser capacity	µF	–
Rotation		Clockwise
Ignition timing - basic [static	° Crankshaft @ rpm	6±1 @ 800
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	–
	° Crankshaft @ rpm	–
	° Crankshaft @ rpm	–
Centrifugal check.	° Crankshaft @ rpm	2 to 6 @ 1200
	° Crankshaft @ rpm	17 to 21 @ 2800
	° Crankshaft @ rpm	16 to 22 @ 4600
Vacuum range check	mbar	–
Maximum vacuum advance	° Crankshaft	–
Spark plugs		Champion
Type		RN12YCC
Electrode gap	mm	0.85 to 0.95

Electrical system Range Rover 3.9i & Classic 1989 to 1996

Battery	V / CC / RC	12 / 210 / 85 or / 380 / 120
Alternator voltage / full load current / engine rpm		13.6 to 14.4 / 85, 100 / 3000
Starter motor current / voltage - cranking	A / V	–
- locked	A / V	–

Running gear Range Rover 3.9i & Classic 1989 to 1996

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

Tyres		
Saloon	Size	–
Estate / Van	Size	205x16
Pressure - front / rear - Saloon	bar	–
- Estate / Van	bar	1.9 / 2.1

Front suspension / wheel alignment

Toe-in (+) / Toe-out (-)	mm [°]	-1.2 to -2.4
Camber		0
Castor		+3°
King pin inclination		+7°

Rear suspension / wheel alignment

Toe-in (+) / Toe-out (-)	mm [°]	–
Camber		–

Torque wrench settings Range Rover 3.9i & Classic 1989 to 1996

Cylinder head - stage 1	Nm	No 1 to 10: 88 to 95
- stage 2	Nm	No11 to 14: 54 to 61
Cylinder head - stage 3	Nm	–
- stage 4	Nm	–
Big-end bearings	Nm	47 to 54
Main bearings	Nm	¹
Clutch cover	Nm	24 to 30
Flywheel [driveplate]	Nm	74 to 81
Front hubs	Nm	41 to 52
Rear hubs	Nm	41 to 52
Wheel nuts / bolts	Nm	Steel: 102 to 115 ²
Spark plugs	Nm	19 to 22

Capacities Range Rover 3.9i & Classic 1989 to 1996

Engine oil & filter	litres	5.7
Gearbox - 4-speed [5-speed]	litres	2.7. Transfer:2.5
Automatic transmission - refill	litres	9.1. Transfer: 2.5
Final drive	litres	Front & rear: 1.7
Cooling system	litres	11.3
Fuel tank	litres	76.4 ³

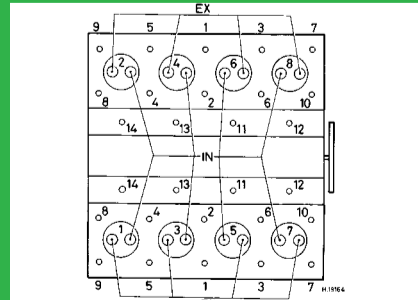
Notes and Illustrations

¹No 1 to 4: 68 to 75. Others: 88 to 95

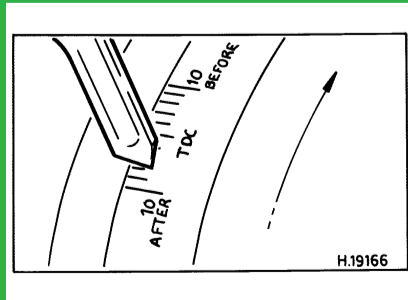
²Alloy: 122 to 129

³91 ▶93: 81.8. 93 ▶: 88.5

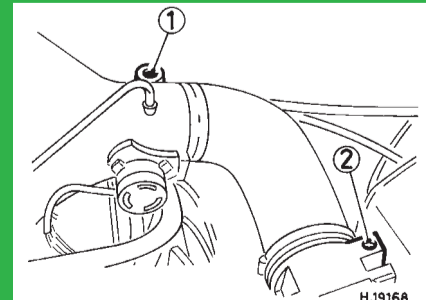
1: Idle speed 2: CO / Mixture



3947 cm³



3947 cm³



L-Jetronic