

[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.

MENU

HELP

## Engine and cooling system Range Rover 3.9 EFi (LC) 1989 to 1992

Type		3.9L V8 134kW
Capacity (cm <sup>3</sup> ) / number of cylinders		3947 / 8
Compression ratio / pressure	bar	8.13 / ≥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 3.9 EFi (LC) 1989 to 1992

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 <sub>2</sub> @ idle speed [3000 rpm] - see page VI	%	–
O <sub>2</sub> @ idle speed [3000 rpm] - see page VI	%	–
Carburettor / fuel injection		Lucas
Type / ref		Hot Wire
Main jet / needle		–
Injection pressure	bar	–
Pump pressure	bar	2.3 to 2.6
Octane rating	RON	91[E 91 RON]

## Ignition system Range Rover 3.9 EFi (LC) 1989 to 1992

Type		Electronic
Ignition coil		Bosch 0221 122 392
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	2±1 @ 800
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	–
	° Crankshaft @ rpm	–
	° Crankshaft @ rpm	–
Centrifugal check.	° Crankshaft @ rpm	4 to 8 @ 1600
	° Crankshaft @ rpm	12 to 17 @ 2800
	° Crankshaft @ rpm	11 to 17 @ 4000
Vacuum range check	mbar	–
Maximum vacuum advance	° Crankshaft	–
Spark plugs		Champion
Type		RN12YCC
Electrode gap	mm	0.80

## Electrical system Range Rover 3.9 EFi (LC) 1989 to 1992

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

## Running gear Range Rover 3.9 EFi (LC) 1989 to 1992

<b>Brakes -</b>		
Front (min. friction material thickness)	mm	–
Rear (min. friction material thickness)	mm	–
<b>Tyres</b>		
Saloon	Size	–
Estate / Van	Size	205x16
Pressure - front / rear - Saloon	bar	–
- Estate / Van	bar	1.9 / 2.1
<b>Front suspension / wheel alignment</b>		
Toe-in (+) / Toe-out (–)	mm [°]	-1.2 to -2.4
Camber		0
Castor		+3°
King pin inclination		+7°
<b>Rear suspension / wheel alignment</b>		
Toe-in (+) / Toe-out (–)	mm [°]	–
Camber		–

## Torque wrench settings Range Rover 3.9 EFi (LC) 1989 to 1992

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	<sup>1</sup>
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 <sup>2</sup>
Spark plugs	Nm	19 to 22

## Capacities Range Rover 3.9 EFi (LC) 1989 to 1992

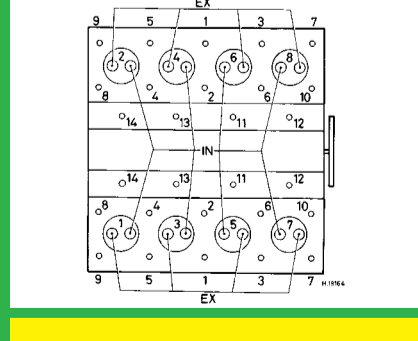
Engine oil & filter	litres	5.7
Gearbox - 4-speed [5-speed]	litres	2.7. Transfer:2.5
Automatic transmission - refill	litres	9.1. Transfer: 2.5
Final drive	litres	Front & rear: 1.7
Cooling system	litres	11.3
Fuel tank	litres	76.4. 91 MY: 81.8

## Notes and Illustrations

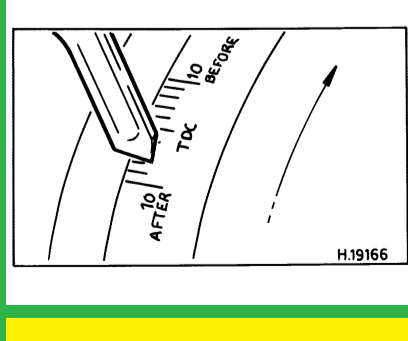
<sup>1</sup>No 1 to 4: 68 to 75. Others: 88 to 95

<sup>2</sup>Alloy: 122 to 129

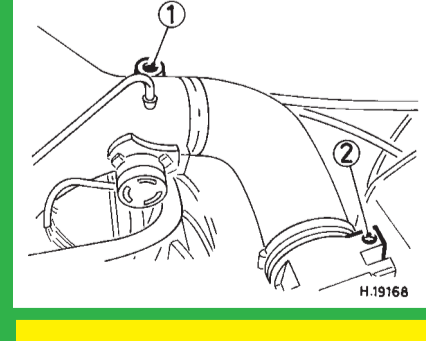
1: Idle speed 2: CO / Mixture



3947 cm<sup>3</sup>



3947 cm<sup>3</sup>



Hot wire injection