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Automotive Technical DATA BOOK

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HELP

Engine and cooling system Discovery V8i CAT 1990 to 1995

Type		V8 OHV 114kW
Capacity (cm ³) / number of cylinders		3528 / 8
Compression ratio / pressure	bar	8.13 / ≥9.3
Oil pressure	bar	[1.9]
Oil temperature	°C	80
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	82
Radiator cap pressure	bar	1.04

Fuel system Discovery V8i CAT 1990 to 1995

Idle speed - manual [auto]	rpm	665 to 735 ECU control ¹
Fast idle speed - manual [auto]	rpm	1100±50
CO @ idle speed [3000 rpm] - see page VI	%	0.5 to 1.0
HC @ idle speed [3000 rpm] - see page VI	ppm	≤1200
CO ₂ @ idle speed [3000 rpm] - see page VI	%	—
O ₂ @ idle speed [3000 rpm] - see page VI	%	—
Carburettor / fuel injection		Lucas
Type / ref		Hot wire
Main jet / needle		—
Injection pressure	bar	—
Pump pressure	bar	—
Octane rating	RON	91[U]

Ignition system Discovery V8i CAT 1990 to 1995

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 0.35]
Dwell angle	° (%)	—
Condenser capacity	µF	—
Rotation		Clockwise
Ignition timing - basic [static]	° Crankshaft @ rpm	6±1 BTDC @ 800
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Centrifugal check.	° Crankshaft @ rpm	3 to 7 @ 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		RN12YC
Electrode gap	mm	0.84 to 0.96

Electrical system Discovery V8i CAT 1990 to 1995

Battery	V / CC / RC	12 / 380 / 120
Alternator voltage / full load current / engine rpm		14.2±0.25 / _ / 3000
Starter motor current / voltage - cranking	A / V	—
- locked	A / V	—

Running gear Discovery V8i CAT 1990 to 1995

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

Tyres		
Saloon	Size	—
Estate / Van	Size	205x16: 235/70x16
Pressure - front / rear - Saloon	bar	—
- Estate / Van	bar	1.9 / 2.6

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 Discovery V8i CAT 1990 to 1995

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	²
Clutch cover	Nm	24 to 30
Flywheel [driveplate]	Nm	74 to 81
Front hubs	Nm	—
Rear hubs	Nm	—
Wheel nuts / bolts	Nm	129
Spark plugs	Nm	—

Capacities Discovery V8i CAT 1990 to 1995

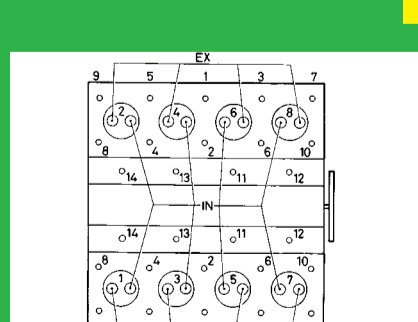
Engine oil & filter	litres	5.7
Gearbox - 4-speed [5-speed]	litres	2.7. Transfer:2.5
Automatic transmission - refill	litres	9.1
Final drive	litres	Front & rear: 1.7
Cooling system	litres	11.3
Fuel tank	litres	88.6

Notes and Illustrations

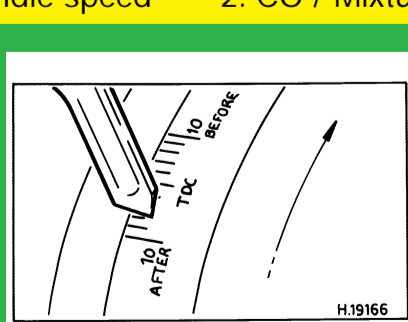
¹Base idle: 525±25

²No 1 to 4: 68 to 75. Others: 88 to 95

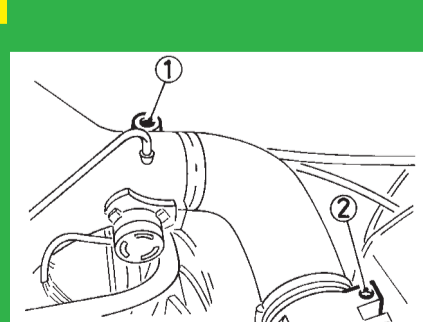
1: Idle speed 2: CO / Mixture



3528 cm³



3528 cm³



Hot wire injection