

Engine & Cooling	Fuel	Ignition	Electrical	Running gear	Torque settings	Capacities	Notes & Illustrations
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Engine and cooling system XJ6 4.0, Sovereign & Sport 1994 to 1997

Type	AJ16 DOHC 24V 182kW	
Capacity (cm ³) / number of cylinders	3980 / 6	
Compression ratio / pressure	bar	10.0 / ≥11.0
Oil pressure	bar	0.5 [4.83]
Oil temperature	°C	80
Valve clearance - inlet	mm	0.30
Valve clearance - exhaust	mm	0.36
Firing order	1-5-3-6-2-4	
No 1 cylinder position	TCE	
Thermostat opening temperature	°C	88
Radiator cap pressure	bar	1.20

Fuel system XJ6 4.0, Sovereign & Sport 1994 to 1997

Idle speed - manual [auto]	rpm	700
Fast idle speed - manual [auto]	rpm	—
CO @ idle speed [3000 rpm] - see page VI	%	≤0.5
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	MPI	
Main jet / needle	—	
Injection pressure	bar	3.0
Pump pressure	bar	3.0
Octane rating	RON	95[U]

Ignition system XJ6 4.0, Sovereign & Sport 1994 to 1997

Type	Direct electronic	
Ignition coil	Diamond	
Primary resistance	ohms	0.75
Ballast resistor	ohms	—
Voltage - Tmnl 15(+) to earth	V	—
Distributor	—	
Points gap (air gap)	mm	—
Dwell angle	° (%)	—
Condenser capacity	µF	—
Rotation	—	
Ignition timing - basic [static	° Crankshaft @ rpm	Computer control N/A
V = Vacuum NV = No Vacuum	—	
Total ignition advance	° Crankshaft @ rpm	Computer control
	° 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	_/Champion	
Type	RC9YC	
Electrode gap	mm	0.90

Electrical system XJ6 4.0, Sovereign & Sport 1994 to 1997

Battery	V / CC / RC	12 / 72Ah
Alternator voltage / full load current / engine rpm	14.4 / 120 / _	
Starter motor current / voltage - cranking	A / V	—
- locked	A / V	—

Running gear XJ6 4.0, Sovereign & Sport 1994 to 1997

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

Tyres		
Saloon	Size	225/60x16: 225/55x16
Estate / Van	Size	—
Pressure - front / rear - Saloon	bar	2.2 / 2.3
- Estate / Van	bar	—

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	[+5'±10]
Camber	+24' to -1°	
Castor	+2°	
King pin inclination	—	

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (-)	mm [°]	[+15'±10']
Camber	-45'±24'	

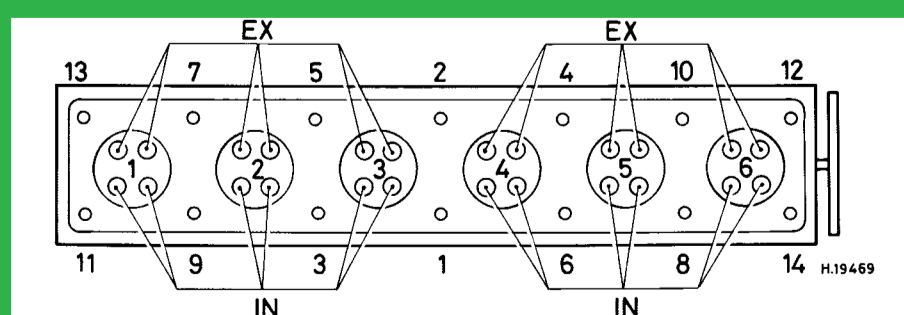
Torque wrench settings XJ6 4.0, Sovereign & Sport 1994 to 1997

Cylinder head - stage 1	Nm	59 to 61 N
- stage 2	Nm	+90°
Cylinder head - stage 3	Nm	—
- stage 4	Nm	—
Big-end bearings	Nm	52 to 55 N
Main bearings	Nm	136 to 142 N
Clutch cover	Nm	23 to 27
Flywheel [driveplate]	Nm	95 to 105 [88 to 108]
Front hubs	Nm	WSM
Rear hubs	Nm	80 to 100
Wheel nuts / bolts	Nm	68 to 82 (Alloy: 88 to 102)
Spark plugs	Nm	22 to 28

Capacities XJ6 4.0, Sovereign & Sport 1994 to 1997

Engine oil & filter	litres	8.0
Gearbox - 4-speed [5-speed]	litres	1.4
Automatic transmission - refill	litres	9.5
Final drive	litres	2.1
Cooling system	litres	13.5. Refill: 9.25
Fuel tank	litres	81

Notes and Illustrations



3980 cm³