

Engine & Cooling

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Automotive Technical
DATA BOOK

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Engine and cooling systemXJ-S & XJ-SC 3.61983 to 1988

Type		AJ-6
Capacity (cm ³) / number of cylinders		3590 / 6
Compression ratio / pressure	bar	9.6 / 13.8
Oil pressure	bar	[2.8]
Oil temperature	°C	—
Valve clearance - inlet	mm	0.30 to 0.36
Valve clearance - exhaust	mm	0.30 to 0.36
Firing order		1-5-3-6-2-4
No 1 cylinder position		F
Thermostat opening temperature	°C	88
Radiator cap pressure	bar	1.0

Fuel systemXJ-S & XJ-SC 3.61983 to 1988

Idle speed - manual [auto]	rpm	800±50
Fast idle speed - manual [auto]	rpm	—
CO @ idle speed [3000 rpm] - see page VI	%	1.0 to 2.0
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		Digital P
Main jet / needle		—
Injection pressure	bar	—
Pump pressure	bar	2.5
Octane rating	RON	98[L]

Ignition systemXJ-S & XJ-SC 3.61983 to 1988

Type		Electronic
Ignition coil		Lucas 35C6
Primary resistance	ohms	0.9 to 1.1
Ballast resistor	ohms	—
Voltage - Tmnl 15(+) to earth	V	—
Distributor		Lucas
Points gap (air gap)	mm	[0.20 to 0.40]
Dwell angle	° (%)	—
Condenser capacity	µF	—
Rotation		Clockwise
Ignition timing - basic [static	° Crankshaft @ rpm	21 BTDC @ 2000
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Centrifugal check.	° Crankshaft @ rpm	0 @ 850
	° Crankshaft @ rpm	3 to 6 @ 1250
	° Crankshaft @ rpm	7.25 to 9.5 @ 6400
Vacuum range check	mbar	135 to 813
Maximum vacuum advance	° Crankshaft	5 to 7
Spark plugs		Champion
Type		RC9YCC
Electrode gap	mm	0.90

Electrical systemXJ-S & XJ-SC 3.61983 to 1988

Battery	V / CC / RC	12 / 66Ah
Alternator voltage / full load current / engine rpm		13.5 to 14.0 / _ / 3000
Starter motor current / voltage - cranking	A / V	—
- locked	A / V	940 / 6.5

Running gearXJ-S & XJ-SC 3.61983 to 1988

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

Tyres		
Saloon	Size	215/70x15
Estate / Van	Size	—
Pressure - front / rear - Saloon	bar	1.8 / 1.8
- Estate / Van	bar	—

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (—)	mm [°]	0 to +3.2 ¹
Camber		-0.5°±0.25°
Castor		+3.5°±0.25°
King pin inclination		—

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (—)	mm [°]	0±0.8 ¹
Camber		-0.75°±0.25°

Torque wrench settingsXJ-S & XJ-SC 3.61983 to 1988

Cylinder head - stage 1	Nm	52 to 54
- stage 2	Nm	+ 90°
Cylinder head - stage 3	Nm	—
- stage 4	Nm	—
Big-end bearings	Nm	52 to 55
Main bearings	Nm	136 to 142
Clutch cover	Nm	23 to 27
Flywheel [driveplate]	Nm	98
Front hubs	Nm	WSM
Rear hubs	Nm	136 to 163
Wheel nuts / bolts	Nm	61
Spark plugs	Nm	—

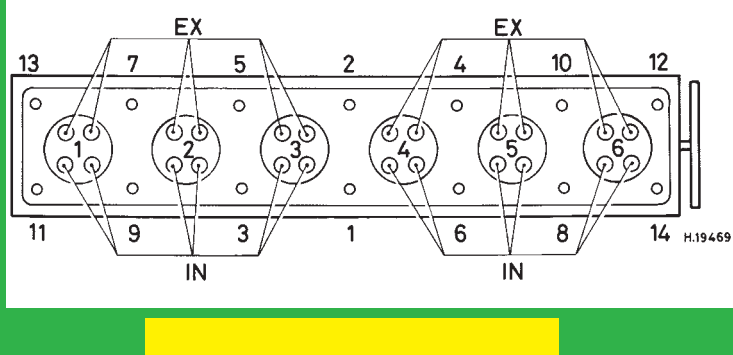
CapacitiesXJ-S & XJ-SC 3.61983 to 1988

Engine oil & filter	litres	8.5
Gearbox - 4-speed [5-speed]	litres	1.4
Automatic transmission - refill	litres	4.0
Final drive	litres	1.6
Cooling system	litres	11.6
Fuel tank	litres	91

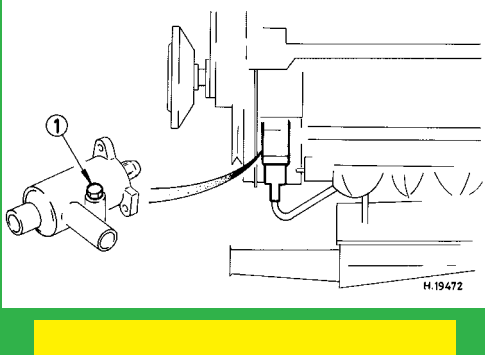
Notes and Illustrations

¹Laden

1: Idle speed 2: CO / Mixture



3590 cm³



Digital P, 3590 cm³