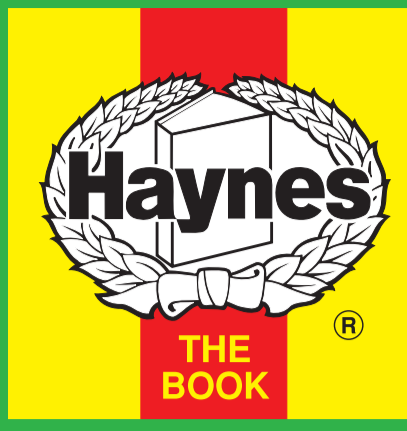


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# Automotive Technical DATA BOOK

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## Engine and cooling system Wrangler 4.0 1993 to 1997

Type		OHV 135kW
Capacity (cm <sup>3</sup> ) / number of cylinders		3960 / 6
Compression ratio / pressure	bar	8.75 / _
Oil pressure	bar	0.9 [2.6 to 5.2]
Oil temperature	°C	_
Valve clearance - inlet	mm	0: Hyd.
Valve clearance - exhaust	mm	0: Hyd.
Firing order		1-5-3-6-2-4
No 1 cylinder position		F
Thermostat opening temperature	°C	90
Radiator cap pressure	bar	0.83 to 1.10

## Fuel system Wrangler 4.0 1993 to 1997

Idle speed - manual [auto]	rpm	Computer control N/A
Fast idle speed - manual [auto]	rpm	_
CO @ idle speed [3000 rpm] - see page VI	%	_
HC @ idle speed [3000 rpm] - see page VI	ppm	_
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		_
Type / ref		MPSFI
Main jet / needle		_
Injection pressure	bar	2.14
Pump pressure	bar	2.69 to 2.83
Octane rating	RON	87[U]

## Ignition system Wrangler 4.0 1993 to 1997

Type		Electronic
Ignition coil		Diamond. Toyodenso
Primary resistance	ohms	0.97 to 1.18.Toyo:0.95 to 1.20
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		RC12LYC
Electrode gap	mm	0.88

## Electrical system Wrangler 4.0 1993 to 1997

Battery	V / CC / RC	12/430/80, 500/85, RHD: 650/93
Alternator voltage / full load current / engine rpm		13.87 to 15.0 / 75, 90 / 3000
Starter motor current / voltage - cranking	A / V	75 / 11.5 (no load)
- locked	A / V	_

## Running gear Wrangler 4.0 1993 to 1997

<b>Brakes -</b>		
Front (min. friction material thickness)	mm	_
Rear (min. friction material thickness)	mm	_

<b>Tyres</b>		
Saloon	Size	_
Estate / Van	Size	205/75x15: 215/75x15
Pressure - front / rear - Saloon	bar	_
- Estate / Van	bar	Refer to vehicle

## Front suspension / wheel alignment

Toe-in (+) / Toe-out (-)	mm [°]	0±1.6 PW
Camber		0±30'
Castor		MT: +6°30'-1°15'+45' <sup>1</sup>
King pin inclination		_

## Rear suspension / wheel alignment

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

## Torque wrench settings Wrangler 4.0 1993 to 1997

Cylinder head - stage 1	Nm	All except no.11: 149
- stage 2	Nm	No.11: 135
Cylinder head - stage 3	Nm	_
- stage 4	Nm	_
Big-end bearings	Nm	45
Main bearings	Nm	54, then 95, then 108
Clutch cover	Nm	54
Flywheel [driveplate]	Nm	143
Front hubs	Nm	Model 30: 237
Rear hubs	Nm	_
Wheel nuts / bolts	Nm	109 to 150
Spark plugs	Nm	37

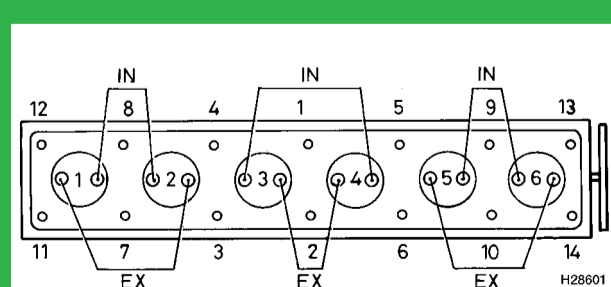
## Capacities Wrangler 4.0 1993 to 1997

Engine oil & filter	litres	5.7
Gearbox - 4-speed [5-speed]	litres	AX-5: 3.5. AX-15: 3.2 <sup>2</sup>
Automatic transmission - refill	litres	3.8
Final drive	litres	2.1
Cooling system	litres	9.9
Fuel tank	litres	56.8 or 75.7

## Notes and Illustrations

<sup>1</sup>AT: +8°-1°30'+1°

<sup>2</sup>Command-Trac transfer box: 1.5



3960 cm<sup>3</sup>