

Engine & Cooling

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Automotive Technical
DATA BOOK

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Engine and cooling systemL-Series 1800 4x41989 to 1993

Type		EA81 OHC
Capacity (cm ³) / number of cylinders		1781 / 4
Compression ratio / pressure	bar	9.0 / ≥9.5
Oil pressure	bar	0.98 [2.94]
Oil temperature	°C	75 to 85
Valve clearance - inlet	mm	0: Hyd.
- exhaust	mm	0: Hyd.
Firing order		1-3-2-4
No 1 cylinder position		FR
Thermostat opening temperature	°C	83.5 to 86.5
Radiator cap pressure	bar	0.88±0.10

Fuel systemL-Series 1800 4x41989 to 1993

Idle speed - manual [auto]	rpm	800±50
Fast idle speed - manual [auto]	rpm	—
CO @ idle speed [3000 rpm] - see page VI	%	1.0±0.5
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		Hitachi
Type / ref		DCZ 328
Main jet / needle		114, 160 [AT: 114, 155]
Injection pressure	bar	—
Pump pressure	bar	0.18 to 0.23
Octane rating	RON	91[E 91 RON]

Ignition systemL-Series 1800 4x41989 to 1993

Type		Electronic
Ignition coil		Diamond Electric E083
Primary resistance	ohms	1.35 to 1.65
Ballast resistor	ohms	—
Voltage - Tmnl 15(+) to earth	V	—
Distributor		Nippon Denso
Points gap (air gap)	mm	[0.20 to 0.40]
Dwell angle	° (%)	—
Condenser capacity	µF	—
Rotation		Anticlockwise
Ignition timing - basic [static	° Crankshaft @ rpm	8 BTDC @ 800
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Centrifugal check.	° Crankshaft @ rpm	0 @ 1000
	° Crankshaft @ rpm	16 @ 3200
	° Crankshaft @ rpm	28 @ 5600
Vacuum range check	mbar	133 to 533
Maximum vacuum advance	° Crankshaft	20 to 24
Spark plugs		NGK/Champion
Type		BPR6ES / RN9YC
Electrode gap	mm	0.70 to 0.80

Electrical systemL-Series 1800 4x41989 to 1993

Battery	V / CC / RC	12 / 306 / 78 or 420 / 111
Alternator voltage / full load current / engine rpm		14.2 to 14.8 / _ / 2500
Starter motor current / voltage - cranking	A / V	230 to 370 / 8.0
- locked	A / V	300 / 2.5 or 735 / 5.0

Running gearL-Series 1800 4x41989 to 1993

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

Tyres		
Saloon	Size	175/70x13
Estate / Van	Size	175/70x13
Pressure - front / rear - Saloon	bar	2.0 / 2.0
- Estate / Van	bar	2.0 / 2.0

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	+2.0±3.0
Camber		+1°40'. Estate: +1°45'±45'
Castor		+1°50'. Estate +1°35'±45'
King pin inclination		+12°50'

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	0±3.0
Camber		0±45'

Torque wrench settingsL-Series 1800 4x41989 to 1993

Cylinder head - stage 1	Nm	29
- stage 2	Nm	59
- stage 3	Nm	64
- stage 4	Nm	—
Big-end bearings	Nm	41
Main bearings	Nm	39 to 47
Clutch cover	Nm	14 to 17
Flywheel [driveplate]	Nm	69 to 75
Front hubs	Nm	196
Rear hubs	Nm	196
Wheel nuts / bolts	Nm	78 to 98
Spark plugs	Nm	20 to 29

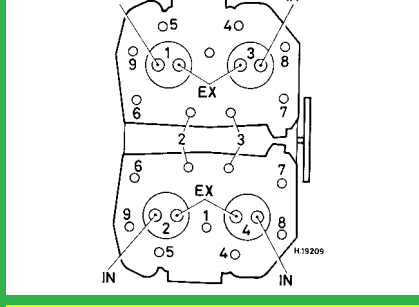
CapacitiesL-Series 1800 4x41989 to 1993

Engine oil & filter	litres	4.0
Gearbox - 4-speed [5-speed]	litres	3.3
Automatic transmission - refill	litres	6.8 to 7.2
Final drive	litres	AT: 1.4 ¹
Cooling system	litres	5.5
Fuel tank	litres	60

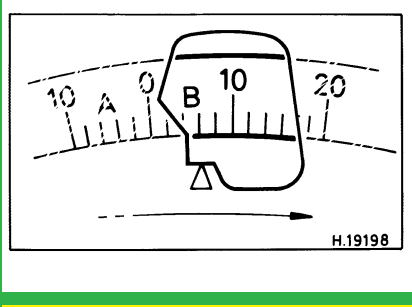
Notes and Illustrations

¹Rear: 0.8

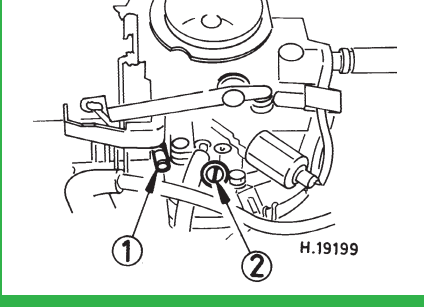
1: Idle speed 2: CO / Mixture



1781 cm³, 8V



1781 cm³



Hitachi DCZ