

Engine & Cooling

Fuel

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Automotive Technical
DATA BOOK

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Engine and cooling systemConcerto 1.6 SOHC 16V1989 to 1991

Type		D16Z1 SOHC 16V
Capacity (cm ³) / number of cylinders		1590 / 4
Compression ratio / pressure	bar	9.6 / ≥9.3
Oil pressure	bar	1.4 [5.1]
Oil temperature	°C	80
Valve clearance - inlet	mm	0.17 to 0.22
Valve clearance - exhaust	mm	0.22 to 0.27
Firing order		1-3-4-2
No 1 cylinder position		TBE
Thermostat opening temperature	°C	76 to 80
Radiator cap pressure	bar	0.74 to 1.03

Fuel systemConcerto 1.6 SOHC 16V1989 to 1991

Idle speed - manual [auto]	rpm	750±50 [700±50]
Fast idle speed - manual [auto]	rpm	1600 to 2000
CO @ idle speed [3000 rpm] - see page VI	%	≤1.0
HC @ idle speed [3000 rpm] - see page VI	ppm	≤300
CO2 @ idle speed [3000 rpm] - see page VI	%	—
O2 @ idle speed [3000 rpm] - see page VI	%	—
Carburettor / fuel injection		Keihin
Type / ref		2x CV type
Main jet / needle		—
Injection pressure	bar	—
Pump pressure	bar	0.07 to 0.23
Octane rating	RON	91[E 91 RON]

Ignition systemConcerto 1.6 SOHC 16V1989 to 1991

Type		Electronic
Ignition coil		—
Primary resistance	ohms	0.6 to 0.7
Ballast resistor	ohms	—
Voltage - Tmnl 15(+) to earth	V	—
Distributor		Hitachi
Points gap (air gap)	mm	[Equal gaps]
Dwell angle	° (%)	—
Condenser capacity	µF	—
Rotation		Clockwise
Ignition timing - basic [static	° Crankshaft @ rpm	16±2 BTDC @ idle
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	22±2 BTDC @ idle
	° 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		NGK/Champion
Type		BCPR6E-11 / RN9YC
Electrode gap	mm	1.00 to 1.10

Electrical systemConcerto 1.6 SOHC 16V1989 to 1991

Battery	V / CC / RC	12 / 300 / 47Ah
Alternator voltage / full load current / engine rpm		13.5 to 16.0 / _ / 2000
Starter motor current / voltage - cranking	A / V	230 to 350 / 8.0 to 8.5
- locked	A / V	—

Running gearConcerto 1.6 SOHC 16V1989 to 1991

Brakes -		
Front (min. friction material thickness)	mm	1.6
Rear (min. friction material thickness)	mm	2.0. Discs: 1.6

Tyres		
Saloon	Size	175/65x14
Estate / Van	Size	—
Pressure - front / rear - Saloon	bar	WSM
- Estate / Van	bar	—

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	-0.7±1.4
Camber		-20'±30'
Castor		+3°±1°
King pin inclination		+7°35'

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	+2.3±1.4
Camber		-26'±30'

Torque wrench settingsConcerto 1.6 SOHC 16V1989 to 1991

Cylinder head - stage 1	Nm	30 oiled
- stage 2	Nm	68
Cylinder head - stage 3	Nm	—
- stage 4	Nm	—
Big-end bearings	Nm	32
Main bearings	Nm	63 oiled
Clutch cover	Nm	26
Flywheel [driveplate]	Nm	120
Front hubs	Nm	185
Rear hubs	Nm	185
Wheel nuts / bolts	Nm	110
Spark plugs	Nm	18

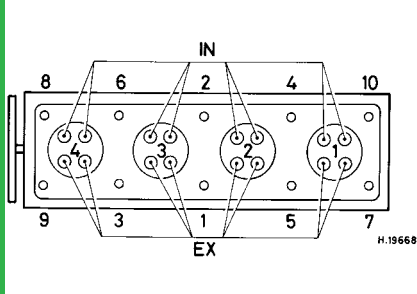
CapacitiesConcerto 1.6 SOHC 16V1989 to 1991

Engine oil & filter	litres	3.5
Gearbox - 4-speed [5-speed]	litres	1.8
Automatic transmission - refill	litres	2.4
Final drive	litres	WT
Cooling system	litres	5.5 [AT: 5.4]
Fuel tank	litres	55

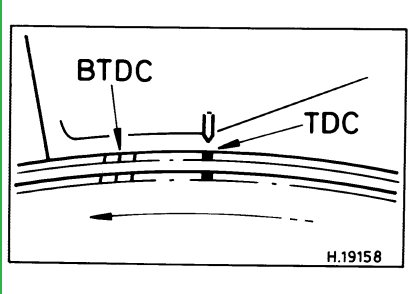
Notes and Illustrations



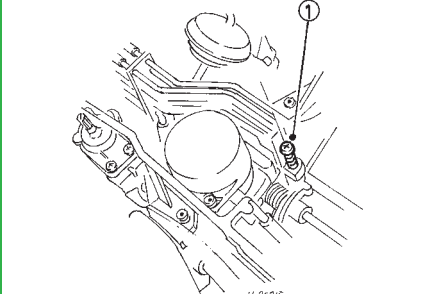
1: Idle speed 2: CO / Mixture



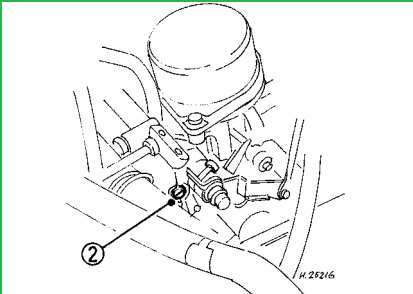
1590 cm³



1590 cm³



Keihin CV



Keihin CV