

Engine & Cooling

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Automotive Technical
DATA BOOK

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Engine and cooling systemBluebird 1.8 (T12/72)1986 to 1990

Type		CA18NS SOHC
Capacity (cm ³) / number of cylinders		1796 / 4
Compression ratio / pressure	bar	9.6 / ≥9.0
Oil pressure	bar	[3.2 to 5.1]
Oil temperature	°C	—
Valve clearance - inlet	mm	0.30 H
Valve clearance - exhaust	mm	0.30 H
Firing order		1-3-4-2
No 1 cylinder position		TBE
Thermostat opening temperature	°C	82
Radiator cap pressure	bar	0.78 to 0.98

Fuel systemBluebird 1.8 (T12/72)1986 to 1990

Idle speed - manual [auto]	rpm	650±100 [750±100]
Fast idle speed - manual [auto]	rpm	2100 to 2400
CO @ idle speed [3000 rpm] - see page VI	%	1.0±0.5
HC @ idle speed [3000 rpm] - see page VI	ppm	≤1200
CO2 @ idle speed [3000 rpm] - see page VI	%	—
O2 @ idle speed [3000 rpm] - see page VI	%	—
Carburettor / fuel injection		Nikki
Type / ref		21E304-A4 [-D8, AT]
Main jet / needle		103, 170
Injection pressure	bar	—
Pump pressure	bar	0.20 to 0.27
Octane rating	RON	97[R]

Ignition systemBluebird 1.8 (T12/72)1986 to 1990

Type		Electronic
Ignition coil		Hanshin STC-106
Primary resistance	ohms	1.3 to 1.7
Ballast resistor	ohms	—
Voltage - Tmnl 15(+) to earth	V	—
Distributor		Hitachi
Points gap (air gap)	mm	[0.30 to 0.50]
Dwell angle	° (%)	—
Condenser capacity	µF	—
Rotation		Anticlockwise
Ignition timing - basic [static	° Crankshaft @ rpm	5±1 BTDC @ idle
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Centrifugal check.	° Crankshaft @ rpm	0 @ 1400
	° Crankshaft @ rpm	12 @ 2800
	° Crankshaft @ rpm	20 @ 4400
Vacuum range check	mbar	133 to 467
Maximum vacuum advance	° Crankshaft	20
Spark plugs		NGK/Champion
Type		BCPR6ES-11 / RC7YC
Electrode gap	mm	1.00 to 1.10

Electrical systemBluebird 1.8 (T12/72)1986 to 1990

Battery	V / CC / RC	12 / 60Ah
Alternator voltage / full load current / engine rpm		14.1 to 14.7 / _ / 2500
Starter motor current / voltage - cranking	A / V	60 to 100 / 11.5 (no load)
- locked	A / V	—

Running gearBluebird 1.8 (T12/72)1986 to 1990

Brakes -		
Front (min. friction material thickness)	mm	2.0
Rear (min. friction material thickness)	mm	1.5

Tyres		
Saloon	Size	165x14: 185/70x14
Estate / Van	Size	—
Pressure - front / rear - Saloon	bar	1.9 / 1.8
- Estate / Van	bar	—

Front suspension / wheel alignment

Toe-in (+) / Toe-out (–)	mm [°]	+1.0 to 3.0
Camber		-25' to +1°5'
Castor		+1°20' to 2°50'
King pin inclination		+13°50' to 15°20' ¹

Rear suspension / wheel alignment

Toe-in (+) / Toe-out (–)	mm [°]	-2.0 to -6.0
Camber		-1°10' to +20'

Torque wrench settingsBluebird 1.8 (T12/72)1986 to 1990

Cylinder head - stage 1	Nm	29
- stage 2	Nm	78, then loosen bolts
Cylinder head - stage 3	Nm	29
- stage 4	Nm	74 to 83
Big-end bearings	Nm	32 to 36
Main bearings	Nm	45 to 54
Clutch cover	Nm	18 to 22
Flywheel [driveplate]	Nm	98 to 108
Front hubs	Nm	235 to 314
Rear hubs	Nm	WSM
Wheel nuts / bolts	Nm	98 to 118
Spark plugs	Nm	20 to 29

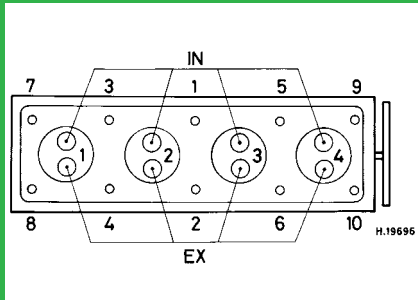
CapacitiesBluebird 1.8 (T12/72)1986 to 1990

Engine oil & filter	litres	3.6
Gearbox - 4-speed [5-speed]	litres	2.7
Automatic transmission - refill	litres	6.3
Final drive	litres	WT
Cooling system	litres	7.3
Fuel tank	litres	60

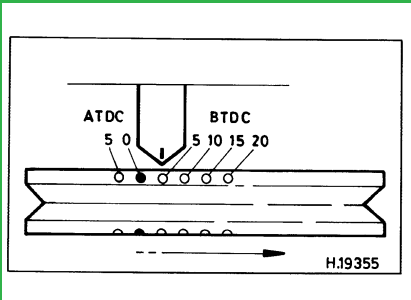
Notes and Illustrations

¹T72: +14°15' to 15°45'

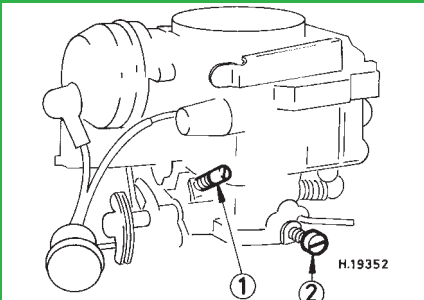
1: Idle speed 2: CO / Mixture



1796 cm³



1796 cm³



Nikki