

Engine & Cooling

Fuel

Ignition

Electrical

Running gear

Torque settings

Capacities

Notes & Illustrations



Automotive Technical
DATA BOOK

Click on one of the buttons above to view data for this car. To return to this screen and make another choice, click anywhere on the data screen.

MENU

HELP

Engine and cooling systemCarina 1.6 & CAT (AT171)1988 to 1992

Type		4A-F (DOHC 16V)
Capacity (cm ³) / number of cylinders		1587 / 4
Compression ratio / pressure	bar	9.5 / 13.2
Oil pressure	bar	0.5 [3.0]
Oil temperature	°C	80
Valve clearance - inlet	mm	0.15 to 0.25
- exhaust	mm	0.20 to 0.30
Firing order		1-3-4-2
No 1 cylinder position		TBE
Thermostat opening temperature	°C	80 to 84
Radiator cap pressure	bar	0.74 to 1.03

Fuel systemCarina 1.6 & CAT (AT171)1988 to 1992

Idle speed - manual [auto]	rpm	800 (PAS: 900)
Fast idle speed - manual [auto]	rpm	3000±200
CO @ idle speed [3000 rpm] - see page VI	%	1.0 to 2.0. CAT: 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		Aisan
Type / ref		Downdraught 2V
Main jet / needle		—
Injection pressure	bar	—
Pump pressure	bar	—
Octane rating	RON	95[E 95 RON] ¹

Ignition systemCarina 1.6 & CAT (AT171)1988 to 1992

Type		Electronic
Ignition coil		—
Primary resistance	ohms	1.3 to 1.5
Ballast resistor	ohms	—
Voltage - Tmnl 15(+) to earth	V	—
Distributor		—
Points gap (air gap)	mm	[0.20 to 0.40]
Dwell angle	° (%)	—
Condenser capacity	µF	—
Rotation		—
Ignition timing - basic [static	° Crankshaft @ rpm	10 BTDC @ 800. CAT: 5 BTDC
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Centrifugal check.	° Crankshaft @ rpm	0 to 3 @ 1600 ²
	° Crankshaft @ rpm	11 to 14 @ 3300 ²
	° Crankshaft @ rpm	19 to 23 @ 6600 ²
Vacuum range check	mbar	133 to 560 ³
Maximum vacuum advance	° Crankshaft	13 to 17 ⁴
Spark plugs		NGK/Champion
Type		BCRE527Y / RN11YC
Electrode gap	mm	0.80

Electrical systemCarina 1.6 & CAT (AT171)1988 to 1992

Battery	V / CC / RC	—
Alternator voltage / full load current / engine rpm		13.5 to 15.1 / _ / 3000
Starter motor current / voltage - cranking	A / V	—
- locked	A / V	—

Running gearCarina 1.6 & CAT (AT171)1988 to 1992

Brakes -		
Front (min. friction material thickness)	mm	1.0
Rear (min. friction material thickness)	mm	1.0

Tyres		
Saloon	Size	165x13: 185/70x13
Estate / Van	Size	165x13
Pressure - front / rear - Saloon	bar	1.9 / 1.9 ⁵
- Estate / Van	bar	1.9 / 1.9 ⁵

Front suspension / wheel alignment

Toe-in (+) / Toe-out (–)	mm [°]	0±1.0
Camber		0±30'
Castor		-5'±30'. Estate: 0±30' ⁶
King pin inclination		+13°15'±30'

Rear suspension / wheel alignment

Toe-in (+) / Toe-out (–)	mm [°]	+5.0±1.0 ⁷
Camber		-30'±30'. Estate: -15'±30' ⁷

Torque wrench settingsCarina 1.6 & CAT (AT171)1988 to 1992

Cylinder head - stage 1	Nm	60 in several stages
- stage 2	Nm	—
- stage 3	Nm	—
- stage 4	Nm	—
Big-end bearings	Nm	49
Main bearings	Nm	60
Clutch cover	Nm	19
Flywheel [driveplate]	Nm	78 [64]
Front hubs	Nm	186 ⁸
Rear hubs	Nm	WSM
Wheel nuts / bolts	Nm	103
Spark plugs	Nm	18

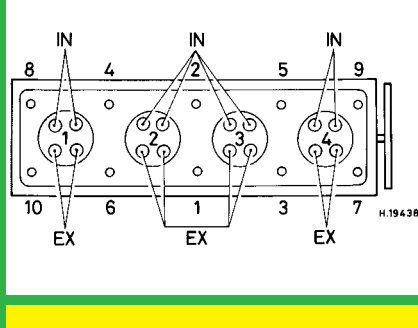
CapacitiesCarina 1.6 & CAT (AT171)1988 to 1992

Engine oil & filter	litres	3.2
Gearbox - 4-speed [5-speed]	litres	2.7 [2.6]
Automatic transmission - refill	litres	3.1
Final drive	litres	AT: 1.4
Cooling system	litres	5.2 [AT: 5.5]
Fuel tank	litres	60

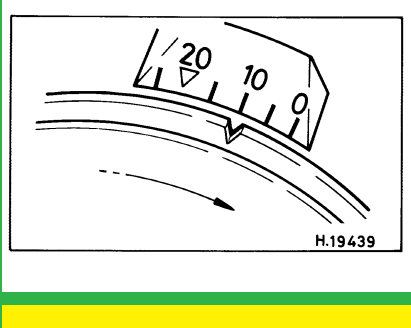
Notes and Illustrations

- ¹CAT: 95 [U]
- ²Distributor 19020-16110: 0 to 3 @ 1800, 16 to 19 @ 3700, 26 to 30 @ 6600
- ³Distributor 19020-16110: 133 to 573
- ⁴Distributor 19020-16110: 20 to 24
- ⁵H rated tyres: 2.0 / 1.9. 185/70x13: 1.8 / 1.8
- ⁶PAS: +20'±30'
- ⁷Not leaf spring type
- ⁸If noisy, retighten to 273

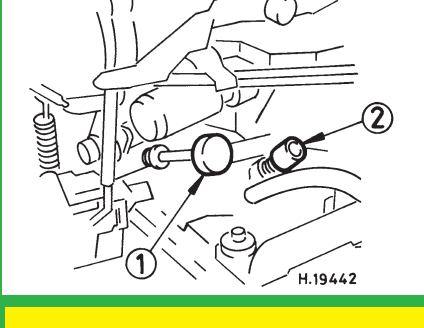
1: Idle speed 2: CO / Mixture



1587 cm³



1587 cm³, 4A-F



Aisan 2V