

TOYOTA

Carina 1.6 (AT151)

1984 to 1988

Engine & Cooling

Fuel

Ignition

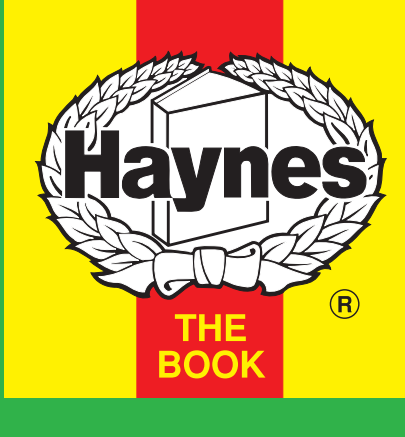
Electrical

Running gear

Torque settings

Capacities

Notes & Illustrations



Automotive Technical
DATA BOOK

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HELP

Engine and cooling system			Carina 1.6 (AT151)	1984 to 1988
Type			4A-L	
Capacity (cm ³) / number of cylinders			1587 / 4	
Compression ratio / pressure		bar	9.3 (86 ▶: 9.5) / 8.8	
Oil pressure		bar	[2.5 to 4.9]	
Oil temperature		°C	80	
Valve clearance - inlet		mm	0.20 H	
- exhaust		mm	0.30 H	
Firing order			1-3-4-2	
No 1 cylinder position			TBE	
Thermostat opening temperature		°C	80 to 84	
Radiator cap pressure		bar	0.75 to 1.00	
Fuel system			Carina 1.6 (AT151)	1984 to 1988
Idle speed - manual [auto]		rpm	700 to 850 [750 to 900]	
Fast idle speed - manual [auto]		rpm	3000±200	
CO @ idle speed [3000 rpm] - see page VI		%	1.5±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			21100-	
Main jet / needle			99, 177	
Injection pressure		bar	—	
Pump pressure		bar	—	
Octane rating		RON	97[RA] ¹	
Ignition system			Carina 1.6 (AT151)	1984 to 1988
Type			Electronic	
Ignition coil			Toyo Denso.	
Primary resistance		ohms	1.2 to 1.5	
Ballast resistor		ohms	—	
Voltage - Tmnl 15(+) to earth		V	—	
Distributor			Toyo Denso	
Points gap (air gap)		mm	[0.20 to 0.40]	
Dwell angle		° (%)	—	
Condenser capacity		µF	—	
Rotation			Clockwise	
Ignition timing - basic [static		° Crankshaft @ rpm	5±2 BTDC @ ≤900	
V = Vacuum NV = No Vacuum			NV	
Total ignition advance		° Crankshaft @ rpm	—	
		° Crankshaft @ rpm	—	
		° Crankshaft @ rpm	—	
Centrifugal check.		° Crankshaft @ rpm	0.4 to 3.4 @ 1300	
		° Crankshaft @ rpm	16.6 to 20.6 @ 3200	
		° Crankshaft @ rpm	22.6 to 26.6 @ 6000	
Vacuum range check		mbar	133 to 480	
Maximum vacuum advance		° Crankshaft	12 to 16	
Spark plugs			NGK/Champion	
Type			BPR5EY / RN11YC	
Electrode gap		mm	0.80	
Electrical system			Carina 1.6 (AT151)	1984 to 1988
Battery		V / CC / RC	12 / 60Ah	
Alternator voltage / full load current / engine rpm			13.8 to 14.8 / _ / 3000	
Starter motor current / voltage - cranking		A / V	90 / 11.5 (no load)	
- locked		A / V	—	
Running gear			Carina 1.6 (AT151)	1984 to 1988
Brakes -				
Front (min. friction material thickness)		mm	1.0	
Rear (min. friction material thickness)		mm	1.0	
Tyres				
Saloon		Size	165x13: 175/70x13	
Estate / Van		Size	—	
Pressure - front / rear - Saloon		bar	165: 1.9 / 1.8 ²	
- Estate / Van		bar	—	
Front suspension / wheel alignment				
Toe-in (+) / Toe-out (–)		mm [°]	0±1.0	
Camber			-30'±30'	
Castor			+1°30'±30'	
King pin inclination			+12°35'±30'	
Rear suspension / wheel alignment				
Toe-in (+) / Toe-out (–)		mm [°]	+4.0±2.0	
Camber			—	
Torque wrench settings			Carina 1.6 (AT151)	1984 to 1988
Cylinder head - stage 1		Nm	54 to 64 in stages	
- stage 2		Nm	—	
- stage 3		Nm	—	
- stage 4		Nm	—	
Big-end bearings		Nm	34 to 44	
Main bearings		Nm	53 to 65	
Clutch cover		Nm	19	
Flywheel [driveplate]		Nm	74 to 83	
Front hubs		Nm	186	
Rear hubs		Nm	123	
Wheel nuts / bolts		Nm	103	
Spark plugs		Nm	15 to 21	
Capacities			Carina 1.6 (AT151)	1984 to 1988
Engine oil & filter		litres	3.3	
Gearbox - 4-speed [5-speed]		litres	2.6	
Automatic transmission - refill		litres	3.1	
Final drive		litres	WT	
Cooling system		litres	5.0 [AT: 6.0]	
Fuel tank		litres	55	

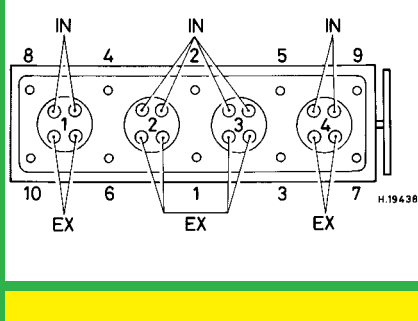
Notes and Illustrations

¹Retard ignition by 2 to 3°

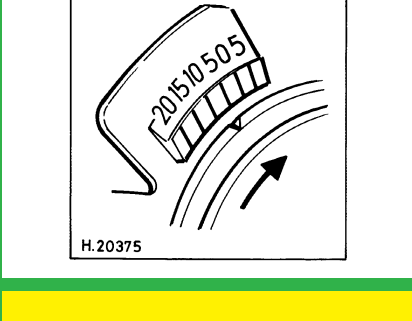
²175/70: 1.9 / 1.9

1: Idle speed

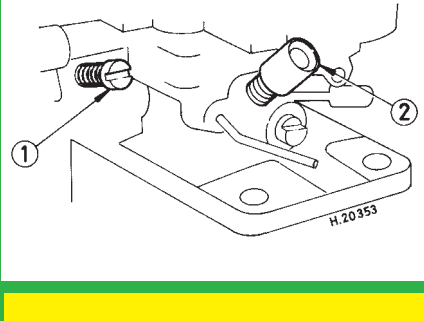
2: CO / Mixture



1587 cm³



1587 cm³, 4A-L



Aisan 21100