

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 system Carina E 2.0i (ST191) 1992 to 1997

Type		3S-FE DOHC 16V 98kW
Capacity (cm <sup>3</sup> ) / number of cylinders		1998 / 4
Compression ratio / pressure	bar	9.8 / ≥9.5
Oil pressure	bar	0.3 [3.0]
Oil temperature	°C	80
Valve clearance - inlet	mm	0.19 to 0.29
- exhaust	mm	0.28 to 0.38
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 system Carina E 2.0i (ST191) 1992 to 1997

Idle speed - manual [auto]	rpm	700±50 N/A
Fast idle speed - manual [auto]	rpm	-
CO @ idle speed [3000 rpm] - see page VI	%	≤0.5 N/A
HC @ idle speed [3000 rpm] - see page VI	ppm	≤100
CO <sub>2</sub> @ idle speed [3000 rpm] - see page VI	%	-
O <sub>2</sub> @ idle speed [3000 rpm] - see page VI	%	-
Carburettor / fuel injection		Toyota
Type / ref		MPI (D-Jetronic) TCCS
Main jet / needle		-
Injection pressure	bar	2.3 to 2.6
Pump pressure	bar	2.7 to 3.0
Octane rating	RON	95[U]

### Ignition system Carina E 2.0i (ST191) 1992 to 1997

Type		TCCS - IIA
Ignition coil		-
Primary resistance	ohms	0.36 to 0.55
Ballast resistor	ohms	-
Voltage - Tmnl 15(+) to earth	V	12.0
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	10 BTDC @ 700±50 <sup>1</sup>
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	10 to 20 BTDC @ 700±50
	° 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
Type		BKR6EYA-11
Electrode gap	mm	1.10

### Electrical system Carina E 2.0i (ST191) 1992 to 1997

Battery	V / CC / RC	12 / 60Ah
Alternator voltage / full load current / engine rpm		14.0 to 15.0 / 70 / 2000
Starter motor current / voltage - cranking	A / V	90 / 11.5
- locked	A / V	-

### Running gear Carina E 2.0i (ST191) 1992 to 1997

<b>Brakes -</b>		
Front (min. friction material thickness)	mm	1.0
Rear (min. friction material thickness)	mm	1.0
<b>Tyres</b>		
Saloon	Size	185/65x14: 195/60x15
Estate / Van	Size	185/65x14
Pressure - front / rear - Saloon	bar	2.2 / 2.2 <sup>2</sup>
- Estate / Van	bar	2.2 / 2.1
<b>Front suspension / wheel alignment</b>		
Toe-in (+) / Toe-out (-)	mm [°]	0±2.0
Camber		-20'±45'
Castor		0±45'. PAS: +30'±45'
King pin inclination		+13°25'±45'
<b>Rear suspension / wheel alignment</b>		
Toe-in (+) / Toe-out (-)	mm [°]	+4.0±2.0
Camber		-30'±30'

### Torque wrench settings Carina E 2.0i (ST191) 1992 to 1997

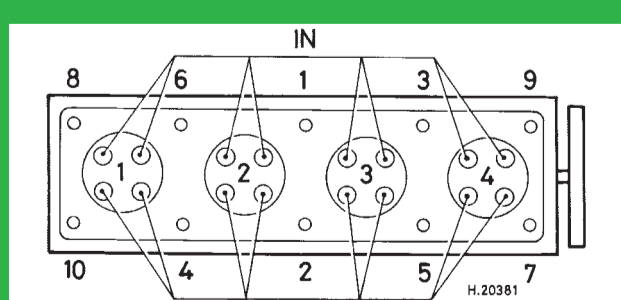
Cylinder head - stage 1	Nm	29
- stage 2	Nm	25 +90°
- stage 3	Nm	+ 90°
- stage 4	Nm	-
Big-end bearings	Nm	49
Main bearings	Nm	59
Clutch cover	Nm	19
Flywheel [driveplate]	Nm	83 N
Front hubs	Nm	226
Rear hubs	Nm	123
Wheel nuts / bolts	Nm	103
Spark plugs	Nm	18

### Capacities Carina E 2.0i (ST191) 1992 to 1997

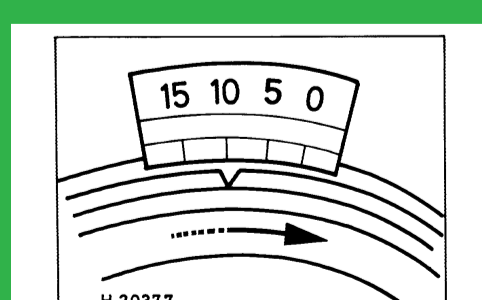
Engine oil & filter	litres	3.9
Gearbox - 4-speed [5-speed]	litres	2.6
Automatic transmission - refill	litres	3.1
Final drive	litres	WT
Cooling system	litres	6.7 [AT: 6.6]
Fuel tank	litres	60

### Notes and Illustrations

- <sup>1</sup>TE1 & E1 shorted
- <sup>2</sup>195/60x15: 2.1 / 2.1



1998 cm<sup>3</sup>



1998 cm<sup>3</sup>, 3S-FE