

Engine & Cooling

Fuel

Ignition

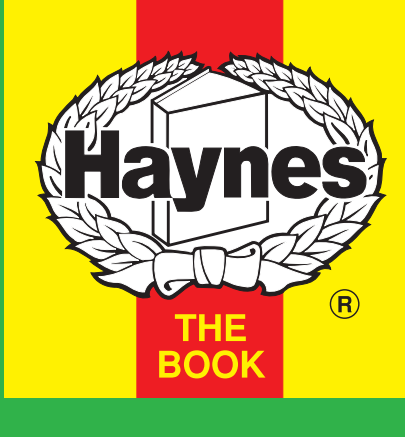
Electrical

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 systemSupra 3.0i & CAT (MA70)1986 to 1993

Type		7M-GE (DOHC)
Capacity (cm ³) / number of cylinders		2954 / 6
Compression ratio / pressure	bar	9.2 / ≥8.8
Oil pressure	bar	[2.5 to 4.9]
Oil temperature	°C	80
Valve clearance - inlet	mm	0.15 to 0.25
- exhaust	mm	0.20 to 0.30
Firing order		1-5-3-6-2-4
No 1 cylinder position		F
Thermostat opening temperature	°C	86 to 90
Radiator cap pressure	bar	0.75 to 1.00

Fuel systemSupra 3.0i & CAT (MA70)1986 to 1993

Idle speed - manual [auto]	rpm	800±50. CAT: 700±50
Fast idle speed - manual [auto]	rpm	—
CO @ idle speed [3000 rpm] - see page VI	%	1.0±0.5. CAT: 0 to 0.5
HC @ idle speed [3000 rpm] - see page VI	ppm	≤1200. CAT: ≤300
CO2 @ idle speed [3000 rpm] - see page VI	%	—
O2 @ idle speed [3000 rpm] - see page VI	%	—
Carburettor / fuel injection		Toyota
Type / ref		Electronic
Main jet / needle		—
Injection pressure	bar	—
Pump pressure	bar	2.3 to 3.0
Octane rating	RON	97[E 95 RON] ¹

Ignition systemSupra 3.0i & CAT (MA70)1986 to 1993

Type		Computerized
Ignition coil		—
Primary resistance	ohms	0.20 to 0.30
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		Clockwise
Ignition timing - basic [static	° Crankshaft @ rpm	10±1 BTDC @ idle
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	—
	° 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		BCPR6EY / RC12YC4
Electrode gap	mm	1.00. CAT: 0.80

Electrical systemSupra 3.0i & CAT (MA70)1986 to 1993

Battery	V / CC / RC	12 / 60Ah
Alternator voltage / full load current / engine rpm		13.5 to 15.1 / _ / 3000
Starter motor current / voltage - cranking	A / V	90 / 11.5 (no load)
- locked	A / V	—

Running gearSupra 3.0i & CAT (MA70)1986 to 1993

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

Tyres		
Saloon	Size	225/50x16
Estate / Van	Size	—
Pressure - front / rear - Saloon	bar	2.3 / 2.5
- Estate / Van	bar	—

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	0±1.0
Camber		-5'±30'. 89 ►: -10'±30'
Castor		+7°30'±30'. 89 ►: +7°40'±30'
King pin inclination		+10°50'±45'

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	+3.0±1.0 ²
Camber		-15'±30'. 89 ►: -45'±30'

Torque wrench settingsSupra 3.0i & CAT (MA70)1986 to 1993

Cylinder head - stage 1	Nm	27
- stage 2	Nm	54
- stage 3	Nm	78
- stage 4	Nm	—
Big-end bearings	Nm	64
Main bearings	Nm	102
Clutch cover	Nm	19
Flywheel [driveplate]	Nm	74
Front hubs	Nm	199
Rear hubs	Nm	213
Wheel nuts / bolts	Nm	88 to 118
Spark plugs	Nm	17

CapacitiesSupra 3.0i & CAT (MA70)1986 to 1993

Engine oil & filter	litres	4.4
Gearbox - 4-speed [5-speed]	litres	2.4. R154: 3.0
Automatic transmission - refill	litres	1.6
Final drive	litres	1.3
Cooling system	litres	8.1 [AT: 8.0]
Fuel tank	litres	70

Notes and Illustrations

¹CAT: 95 [U]
²1989 ►: +7.0±1.0

1: Idle speed 2: CO / Mixture

