

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 systemSunny 1.4 & CAT (B12, N13)1989 to 1991

|                                                   |     |                |
|---------------------------------------------------|-----|----------------|
| Type                                              |     | GA14S SOHC 12V |
| Capacity (cm <sup>3</sup> ) / number of cylinders |     | 1392 / 4       |
| Compression ratio / pressure                      | bar | 9.4 / ≥11.1    |
| Oil pressure                                      | bar | [3.9 to 4.9]   |
| Oil temperature                                   | °C  | —              |
| Valve clearance - inlet                           | mm  | 0.20 to 0.30 H |
| Valve clearance - exhaust                         | mm  | 0.25 to 0.35 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 systemSunny 1.4 & CAT (B12, N13)1989 to 1991

|                                           |     |                           |
|-------------------------------------------|-----|---------------------------|
| Idle speed - manual [auto]                | rpm | 800±50 [850±50]           |
| Fast idle speed - manual [auto]           | rpm | 2700±200 [3400±200]       |
| CO @ idle speed [3000 rpm] - see page VI  | %   | 1.5±0.5                   |
| HC @ idle speed [3000 rpm] - see page VI  | ppm | ≤200                      |
| CO2 @ idle speed [3000 rpm] - see page VI | %   | —                         |
| O2 @ idle speed [3000 rpm] - see page VI  | %   | —                         |
| Carburettor / fuel injection              |     | Hitachi                   |
| Type / ref                                |     | 21L282-05 [AT: -06]       |
| Main jet / needle                         |     | 96, 155                   |
| Injection pressure                        | bar | —                         |
| Pump pressure                             | bar | 0.21 to 0.34              |
| Octane rating                             | RON | 91[E 91 RON] <sup>1</sup> |

Ignition systemSunny 1.4 & CAT (B12, N13)1989 to 1991

|                                 |                    |                         |
|---------------------------------|--------------------|-------------------------|
| Type                            |                    | Electronic              |
| Ignition coil                   |                    | Hanshin STC-143         |
| Primary resistance              | ohms               | 1.0 to 1.3              |
| Ballast resistor                | ohms               | —                       |
| Voltage - Tmnl 15(+) to earth   | V                  | —                       |
| Distributor                     |                    | Hitachi/Mitsubishi      |
| Points gap (air gap)            | mm                 | [0.30 to 0.50]          |
| Dwell angle                     | ° (%)              | —                       |
| Condenser capacity              | µF                 | —                       |
| Rotation                        |                    | Anticlockwise           |
| Ignition timing - basic [static | ° Crankshaft @ rpm | 4±5 BTDC @ idle         |
| V = Vacuum    NV = No Vacuum    |                    | V                       |
| Total ignition advance          | ° Crankshaft @ rpm | —                       |
|                                 | ° Crankshaft @ rpm | —                       |
|                                 | ° Crankshaft @ rpm | —                       |
| Centrifugal check.              | ° Crankshaft @ rpm | 0 @ 600                 |
|                                 | ° Crankshaft @ rpm | 14 @ 2800               |
|                                 | ° Crankshaft @ rpm | 28 to 32 @ 5600         |
| Vacuum range check              | mbar               | 147 to 547 <sup>2</sup> |
| Maximum vacuum advance          | ° Crankshaft       | 29 <sup>2</sup>         |
| Spark plugs                     |                    | NGK/Champion            |
| Type                            |                    | BCPR6ES / RC9YC         |
| Electrode gap                   | mm                 | 0.80 to 0.90            |

Electrical systemSunny 1.4 & CAT (B12, N13)1989 to 1991

|                                                     |             |                         |
|-----------------------------------------------------|-------------|-------------------------|
| 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 / 11.5 (no load)     |
| - locked                                            | A / V       | —                       |

Running gearSunny 1.4 & CAT (B12, N13)1989 to 1991

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

|                                  |      |                   |
|----------------------------------|------|-------------------|
| Tyres                            |      |                   |
| Saloon                           | Size | 155x13: 175/70x13 |
| Estate / Van                     | Size | —                 |
| Pressure - front / rear - Saloon | bar  | 2.1 / 2.1         |
| - Estate / Van                   | bar  | —                 |

|                                    |        |                      |
|------------------------------------|--------|----------------------|
| Front suspension / wheel alignment |        |                      |
| Toe-in (+) / Toe-out (–)           | mm [°] | -0.5 to +1.5         |
| Camber                             |        | -50' to +40'         |
| Castor                             |        | +35' to 2°5' N/A     |
| King pin inclination               |        | +13°5' to 14°35' N/A |

|                                   |        |                               |
|-----------------------------------|--------|-------------------------------|
| Rear suspension / wheel alignment |        |                               |
| Toe-in (+) / Toe-out (–)          | mm [°] | 0 to -4.0                     |
| Camber                            |        | -1°45' to -15' [B12: to -25'] |

Torque wrench settingsSunny 1.4 & CAT (B12, N13)1989 to 1991

|                         |    |                       |
|-------------------------|----|-----------------------|
| Cylinder head - stage 1 | Nm | 29                    |
| - stage 2               | Nm | 64                    |
| Cylinder head - stage 3 | Nm | Loosen, then 29       |
| - stage 4               | Nm | <sup>3</sup>          |
| Big-end bearings        | Nm | 15 + 35 to 40°        |
| Main bearings           | Nm | 46 to 52              |
| Clutch cover            | Nm | 22 to 29              |
| Flywheel [driveplate]   | Nm | 83 to 93 <sup>4</sup> |
| Front hubs              | Nm | 196 to 275            |
| Rear hubs               | Nm | 186 to 255            |
| Wheel nuts / bolts      | Nm | 98 to 118             |
| Spark plugs             | Nm | 20 to 29              |

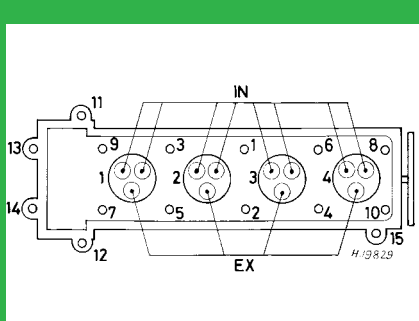
CapacitiesSunny 1.4 & CAT (B12, N13)1989 to 1991

|                                 |        |                  |
|---------------------------------|--------|------------------|
| Engine oil & filter             | litres | 3.2              |
| Gearbox - 4-speed [5-speed]     | litres | 2.8              |
| Automatic transmission - refill | litres | 6.3              |
| Final drive                     | litres | WT               |
| Cooling system                  | litres | 5.0 [AT: 5.4]    |
| Fuel tank                       | litres | B12: 52. N13: 50 |

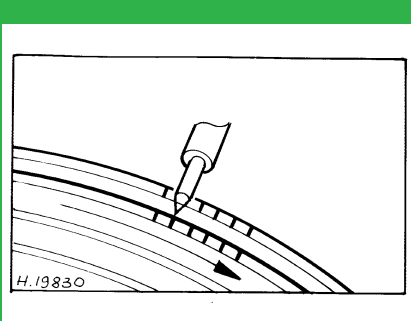
Notes and Illustrations

- <sup>1</sup>CAT: [U]
- <sup>2</sup>AT: 147 to 333 @ 10°
- <sup>3</sup>Bolt 1: + 80 to 85°. Bolts 2 to 10: + 60 to 65°. Bolts 11 to 15: 6.3 to 8.3
- <sup>5</sup>Driveplate: [93 to 103]

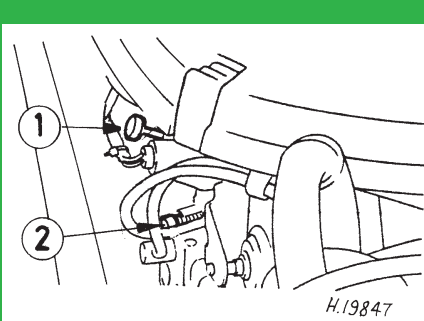
1: Idle speed      2: CO / Mixture



1392 cm<sup>3</sup>, 12V



1392 cm<sup>3</sup>, 12V



Hitachi 21L