

Engine & Cooling

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Automotive Technical  
**DATA BOOK**

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Engine and cooling systemSportrak1989 to 1991

|                                      |     |                    |
|--------------------------------------|-----|--------------------|
| Type                                 |     | HD-C SOHC 16 valve |
| Capacity (cm³) / number of cylinders |     | 1589 / 4           |
| Compression ratio / pressure         | bar | 9.5 / ≥13.7        |
| Oil pressure                         | bar | [2.4 to 4.8]       |
| Oil temperature                      | °C  | 80                 |
| Valve clearance - inlet              | mm  | 0.25 H             |
| Valve clearance - exhaust            | mm  | 0.33 H             |
| Firing order                         |     | 1-3-4-2            |
| No 1 cylinder position               |     | TBE                |
| Thermostat opening temperature       | °C  | 84                 |
| Radiator cap pressure                | bar | 0.88               |

Fuel systemSportrak1989 to 1991

|                                           |     |                      |
|-------------------------------------------|-----|----------------------|
| Idle speed - manual [auto]                | rpm | 800±50               |
| Fast idle speed - manual [auto]           | rpm | 1800                 |
| CO @ idle speed [3000 rpm] - see page VI  | %   | ≤0.5 N/A             |
| HC @ idle speed [3000 rpm] - see page VI  | ppm | ≤100                 |
| CO2 @ idle speed [3000 rpm] - see page VI | %   | —                    |
| O2 @ idle speed [3000 rpm] - see page VI  | %   | —                    |
| Carburettor / fuel injection              |     | Aisan                |
| Type / ref                                |     | 2V 28-32 downdraught |
| Main jet / needle                         |     | 98, 174              |
| Injection pressure                        | bar | —                    |
| Pump pressure                             | bar | ≤0.30                |
| Octane rating                             | RON | 98[E 95 RON]         |

Ignition systemSportrak1989 to 1991

|                                 |                    |                   |
|---------------------------------|--------------------|-------------------|
| Type                            |                    | Electronic        |
| Ignition coil                   |                    | Nippon Denso      |
| Primary resistance              | ohms               | 1.5               |
| Ballast resistor                | ohms               | —                 |
| Voltage - Tmnl 15(+) to earth   | V                  | 12.0              |
| Distributor                     |                    | Nippon Denso      |
| Points gap (air gap)            | mm                 | [0.20 to 0.40]    |
| Dwell angle                     | ° (%)              | —                 |
| Condenser capacity              | µF                 | —                 |
| Rotation                        |                    | Anticlockwise     |
| Ignition timing - basic [static | ° Crankshaft @ rpm | 3±2 BTDC @ 800±50 |
| V = Vacuum   NV = No Vacuum     |                    | NV                |
| Total ignition advance          | ° Crankshaft @ rpm | —                 |
|                                 | ° Crankshaft @ rpm | —                 |
|                                 | ° Crankshaft @ rpm | —                 |
| Centrifugal check.              | ° Crankshaft @ rpm | 0 to 2 @ 1200     |
|                                 | ° Crankshaft @ rpm | 13 to 16 @ 3000   |
|                                 | ° Crankshaft @ rpm | 28 to 32 @ 6000   |
| Vacuum range check              | mbar               | 132 to 532        |
| Maximum vacuum advance          | ° Crankshaft       | 18 to 22          |
| Spark plugs                     |                    | NGK/Champion      |
| Type                            |                    | BKR6E-11 / RC9YC4 |
| Electrode gap                   | mm                 | 1.00 to 1.10      |

Electrical systemSportrak1989 to 1991

|                                                     |             |                         |
|-----------------------------------------------------|-------------|-------------------------|
| Battery                                             | V / CC / RC | 12 / 36Ah               |
| Alternator voltage / full load current / engine rpm |             | 14.2 to 14.8 / _ / 3000 |
| Starter motor current / voltage - cranking          | A / V       | 50 / 11.5               |
| - locked                                            | A / V       | —                       |

Running gearSportrak1989 to 1991

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

|                                  |      |           |
|----------------------------------|------|-----------|
| Tyres                            |      |           |
| Saloon                           | Size | —         |
| Estate / Van                     | Size | 195x15    |
| Pressure - front / rear - Saloon | bar  | —         |
| - Estate / Van                   | bar  | 1.6 / 1.6 |

|                                    |        |             |
|------------------------------------|--------|-------------|
| Front suspension / wheel alignment |        |             |
| Toe-in (+) / Toe-out (–)           | mm [°] | +1.0 to 4.0 |
| Camber                             |        | +1°±30'     |
| Castor                             |        | +2°±30'     |
| King pin inclination               |        | +9°30'      |

|                                   |        |   |
|-----------------------------------|--------|---|
| Rear suspension / wheel alignment |        |   |
| Toe-in (+) / Toe-out (–)          | mm [°] | — |
| Camber                            |        | — |

Torque wrench settingsSportrak1989 to 1991

|                         |    |     |
|-------------------------|----|-----|
| Cylinder head - stage 1 | Nm | 60  |
| - stage 2               | Nm | —   |
| Cylinder head - stage 3 | Nm | —   |
| - stage 4               | Nm | —   |
| Big-end bearings        | Nm | 40  |
| Main bearings           | Nm | 49  |
| Clutch cover            | Nm | 19  |
| Flywheel [driveplate]   | Nm | 88  |
| Front hubs              | Nm | 122 |
| Rear hubs               | Nm | WSM |
| Wheel nuts / bolts      | Nm | 95  |
| Spark plugs             | Nm | 18  |

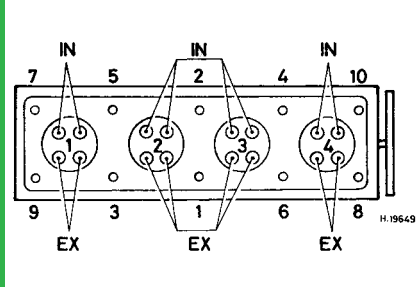
CapacitiesSportrak1989 to 1991

|                                 |        |                       |
|---------------------------------|--------|-----------------------|
| Engine oil & filter             | litres | 3.3                   |
| Gearbox - 4-speed [5-speed]     | litres | 1.7. Transfer: 1.4    |
| Automatic transmission - refill | litres | —                     |
| Final drive                     | litres | Front: 0.9. Rear: 2.0 |
| Cooling system                  | litres | 5.2                   |
| Fuel tank                       | litres | 60                    |

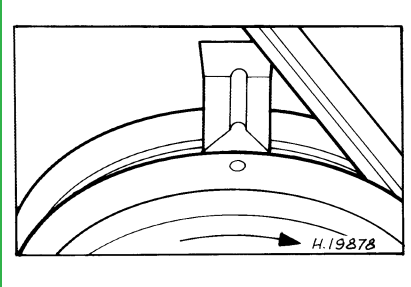
Notes and Illustrations



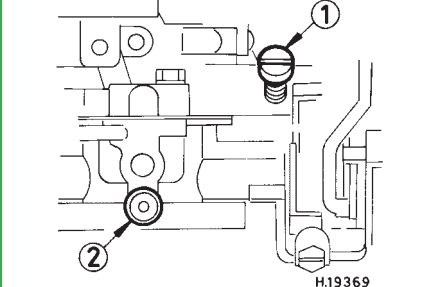
1: Idle speed      2: CO / Mixture



1589 cm³



1589 cm³



Aisan 2V, 1589 cm³