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# Automotive Technical DATA BOOK

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HELP

### Engine and cooling system 80, 1.8 & 4x4 CAT 1986 to 1991

|   |                      |            |
|---|----------------------|------------|
| Type  | SF (65 or 66kW) SOHC |            |
| Capacity (cm <sup>3</sup> ) / number of cylinders | 1781 / 4             |            |
| Compression ratio / pressure                      | bar                  | 9.0 / ≥7.5 |
| Oil pressure                                      | bar                  | [2.0]      |
| Oil temperature                                   | °C                   | 80         |
| Valve clearance - inlet                           | mm                   | 0: Hyd.    |
| Valve clearance - exhaust                         | mm                   | 0: Hyd.    |
| Firing order                                      | 1-3-4-2              |            |
| No 1 cylinder position                            | TBE                  |            |
| Thermostat opening temperature                    | °C                   | 85         |
| Radiator cap pressure                             | bar                  | 1.2 to 1.5 |

### Fuel system 80, 1.8 & 4x4 CAT 1986 to 1991

|   |                             |                             |
|---|-----------------------------|-----------------------------|
| Idle speed - manual [auto]                            | rpm                         | 900±50                      |
| Fast idle speed - manual [auto]                       | rpm                         | KI: 3200±200. KII: 3500±200 |
| CO @ idle speed [3000 rpm] - see page VI              | %                           | 1.0-0.5                     |
| HC @ idle speed [3000 rpm] - see page VI              | ppm                         | ≤1200                       |
| 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                          | Keihin I/Keihin II          |                             |
| Type / ref  | KI: 26-30 DC. KII: EF       |                             |
| Main jet / needle                                     | KI: 110, 150. KII: 100, 145 |                             |
| Injection pressure                                    | bar                         | -                           |
| Pump pressure   | bar                         | 0.35 to 0.40                |
| Octane rating   | RON                         | 91[U]                       |

### Ignition system 80, 1.8 & 4x4 CAT 1986 to 1991

|                                 |                    |                                  |
|---------------------------------|--------------------|----------------------------------|
| Type                            | TSZ                |                                  |
| Ignition coil                   | Bosch              |                                  |
| Primary resistance              | ohms               | 0.52 to 0.76                     |
| Ballast resistor                | ohms               | -                                |
| Voltage - Tmnl 15(+) to earth   | V                  | -                                |
| Distributor                     | Bosch              |                                  |
| Points gap (air gap)            | mm                 | -                                |
| Dwell angle                     | ° (%)              | N/A                              |
| Condenser capacity              | µF                 | -                                |
| Rotation                        | Clockwise          |                                  |
| Ignition timing - basic [static | ° Crankshaft @ rpm | 18±1 BTDC @ 900±50               |
| V = Vacuum NV = No Vacuum       | V                  |                                  |
| Total ignition advance          | ° Crankshaft @ rpm | -                                |
|                                 | ° Crankshaft @ rpm | -                                |
|                                 | ° Crankshaft @ rpm | -                                |
| Centrifugal check.              | ° Crankshaft @ rpm | KI: 0 @ 900 to 1200 <sup>1</sup> |
|                                 | ° Crankshaft @ rpm | KI: 18 to 23 @ 3000 <sup>2</sup> |
|                                 | ° Crankshaft @ rpm | KI: 28 to 32 @ 5000 <sup>3</sup> |
| Vacuum range check              | mbar               | KI: 60 to 320 <sup>4</sup>       |
| Maximum vacuum advance          | ° Crankshaft       | KI: 13 to 15 <sup>5</sup>        |
| Spark plugs                     | NGK                |                                  |
| Type                            | BUR5ET-10          |                                  |
| Electrode gap                   | mm                 | 0.70 to 0.90                     |

### Electrical system 80, 1.8 & 4x4 CAT 1986 to 1991

|   |                         |        |
|---|-------------------------|--------|
| Battery   | V / CC / RC             | 12 / - |
| Alternator voltage / full load current / engine rpm | 12.5 to 14.5 / - / 2000 |        |
| Starter motor current / voltage - cranking          | A / V                   | -      |
| - locked  | A / V                   | -      |

### Running gear 80, 1.8 & 4x4 CAT 1986 to 1991

|  |    |     |
|--|----|-----|
| <b>Brakes -</b>                          |    |     |
| Front (min. friction material thickness) | mm | 2.0 |
| Rear (min. friction material thickness)  | mm | 2.5 |

|                                  |      |                      |
|----------------------------------|------|----------------------|
| <b>Tyres</b>                     |      |                      |
| Saloon                           | Size | 175/70x14: 195/60x14 |
| Estate / Van                     | Size | -                    |
| Pressure - front / rear - Saloon | bar  | 1.9 / 1.9            |
| - Estate / Van                   | bar  | -                    |

### Front suspension / wheel alignment

|                          |                               |            |
|--------------------------|-------------------------------|------------|
| Toe-in (+) / Toe-out (-) | mm [°]                        | [+10'±10'] |
| Camber                   | -45'±30'. 4x4: -50'±30'       |            |
| Castor                   | +1°15'±30'. Sport: +1°25'±30' |            |
| King pin inclination     | -                             |            |

### Rear suspension / wheel alignment

|                          |                        |                             |
|--------------------------|------------------------|-----------------------------|
| Toe-in (+) / Toe-out (-) | mm [°]                 | [+20'±20']. 4x4: [+20'±10'] |
| Camber                   | -1°±20'. 4x4: -45'±30' |                             |

### Torque wrench settings 80, 1.8 & 4x4 CAT 1986 to 1991

|                         |    |                      |
|-------------------------|----|----------------------|
| Cylinder head - stage 1 | Nm | 40 N                 |
| - stage 2               | Nm | 60                   |
| Cylinder head - stage 3 | Nm | + 90°                |
| - stage 4               | Nm | + 90°                |
| Big-end bearings        | Nm | 30 + 90°             |
| Main bearings           | Nm | 65                   |
| Clutch cover            | Nm | 25                   |
| Flywheel [driveplate]   | Nm | 60 + 90° N           |
| Front hubs              | Nm | 265 LkC <sup>6</sup> |
| Rear hubs               | Nm | WSM                  |
| Wheel nuts / bolts      | Nm | 110                  |
| Spark plugs             | Nm | 25                   |

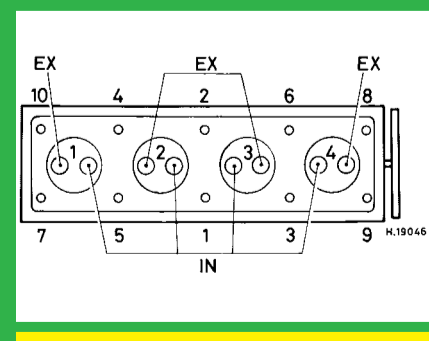
### Capacities 80, 1.8 & 4x4 CAT 1986 to 1991

|                                 |        |                |
|---------------------------------|--------|----------------|
| Engine oil & filter             | litres | 3.0            |
| Gearbox - 4-speed [5-speed]     | litres | 2.4. 4x4: 2.9  |
| Automatic transmission - refill | litres | 3.0            |
| Final drive                     | litres | AT & 4x4: 0.75 |
| Cooling system                  | litres | 7.0            |
| Fuel tank                       | litres | 68. 4x4: 70    |

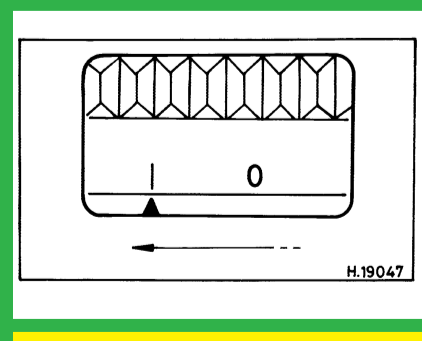
### Notes and Illustrations

- <sup>1</sup>KII: 0 @ 1000 to 1200
- <sup>2</sup>KII: 8 to 12 @ 1600
- <sup>3</sup>KII: 26 to 30 @ 5800
- <sup>4</sup>KII: 100 to 260
- <sup>5</sup>KII: 10 to 14
- <sup>6</sup>PAS M14: 120 + 90°. PAS M16: 200 + 90°

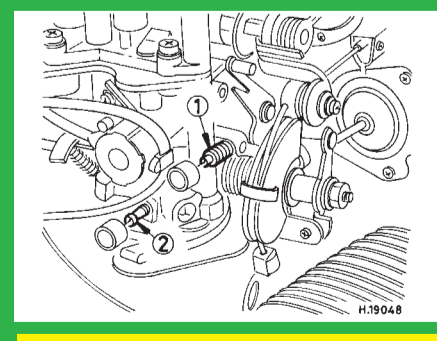
1: Idle speed 2: CO / Mixture



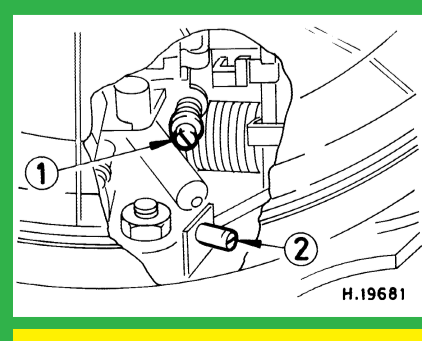
1781 cm<sup>3</sup>, 8V



1781 cm<sup>3</sup>, 8V



Keihin 26-30 DC



Keihin II EF