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# Automotive Technical DATA BOOK

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## Engine and cooling system 4x4 Wagon 3.0i CAT (D21) 1990 to 1994

|   |     |              |
|---|-----|--------------|
| Type  |     | VG30E SOHC   |
| Capacity (cm <sup>3</sup> ) / number of cylinders |     | 2960 / 6     |
| Compression ratio / pressure                      | bar | 9.0 / ≥8.8   |
| Oil pressure                                      | bar | [3.6 to 4.5] |
| Oil temperature                                   | °C  | 80           |
| Valve clearance - inlet                           | mm  | 0: Hyd.      |
| Valve clearance - exhaust                         | mm  | 0: Hyd.      |
| Firing order                                      |     | 1-2-3-4-5-6  |
| No 1 cylinder position                            |     | FR           |
| Thermostat opening temperature                    | °C  | 76.5         |
| Radiator cap pressure                             | bar | 0.78 to 0.98 |

## Fuel system 4x4 Wagon 3.0i CAT (D21) 1990 to 1994

|   |     |                |
|---|-----|----------------|
| Idle speed - manual [auto]                            | rpm | 750±50         |
| Fast idle speed - manual [auto]                       | rpm | —              |
| CO @ idle speed [3000 rpm] - see page VI              | %   | 0.2 to 8.0 N/A |
| HC @ idle speed [3000 rpm] - see page VI              | ppm | ≤200           |
| 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                          |     | Nissan         |
| Type / ref  |     | MPI ECCS       |
| Main jet / needle                                     |     | —              |
| Injection pressure                                    | bar | 2.4            |
| Pump pressure   | bar | 2.99           |
| Octane rating   | RON | 91[U]          |

## Ignition system 4x4 Wagon 3.0i CAT (D21) 1990 to 1994

|                                 |                    |                    |
|---------------------------------|--------------------|--------------------|
| Type                            |                    | Electronic         |
| Ignition coil                   |                    | —                  |
| Primary resistance              | ohms               | 1.0                |
| Ballast resistor                | ohms               | —                  |
| Voltage - Tmnl 15(+) to earth   | V                  | 12.0               |
| Distributor                     |                    | Mitsubishi         |
| Points gap (air gap)            | mm                 | [0.30 to 0.50]     |
| Dwell angle                     | ° (%)              | —                  |
| Condenser capacity              | µF                 | —                  |
| Rotation                        |                    | —                  |
| Ignition timing - basic [static | ° Crankshaft @ rpm | 15±2 BTDC @ 750±50 |
| V = Vacuum NV = No Vacuum       |                    | V                  |
| 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                |
| Type                            |                    | BKR6EY             |
| Electrode gap                   | mm                 | 0.80 to 0.90       |

## Electrical system 4x4 Wagon 3.0i CAT (D21) 1990 to 1994

|   |             |                          |
|---|-------------|--------------------------|
| Battery   | V / CC / RC | 12 / 210 / 70Ah          |
| Alternator voltage / full load current / engine rpm |             | 14.1 to 14.7 / 70 / 2500 |
| Starter motor current / voltage - cranking          | A / V       | 90 / 11.0                |
| - locked  | A / V       | —                        |

## Running gear 4x4 Wagon 3.0i CAT (D21) 1990 to 1994

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

|                                  |      |                |
|----------------------------------|------|----------------|
| <b>Tyres</b>                     |      |                |
| Saloon                           | Size | —              |
| Estate / Van                     | Size | 205x16: 215x15 |
| Pressure - front / rear - Saloon | bar  | —              |
| - Estate / Van                   | bar  | WSM            |

## Front suspension / wheel alignment

|                          |        |            |
|--------------------------|--------|------------|
| Toe-in (+) / Toe-out (-) | mm [°] | +4.0±1.0   |
| Camber                   |        | +40'±30'   |
| Castor                   |        | +1°18'±30' |
| King pin inclination     |        | +8°6'±30'  |

## Rear suspension / wheel alignment

|                          |        |            |
|--------------------------|--------|------------|
| Toe-in (+) / Toe-out (-) | mm [°] | 245 to 294 |
| Camber                   |        | —          |

## Torque wrench settings 4x4 Wagon 3.0i CAT (D21) 1990 to 1994

|                         |    |                 |
|-------------------------|----|-----------------|
| Cylinder head - stage 1 | Nm | 29              |
| - stage 2               | Nm | 59              |
| Cylinder head - stage 3 | Nm | Loosen, then 29 |
| - stage 4               | Nm | + 60 to 65°     |
| Big-end bearings        | Nm | 15 + 60 to 65°  |
| Main bearings           | Nm | 90 to 100       |
| Clutch cover            | Nm | 22 to 29        |
| Flywheel [driveplate]   | Nm | 83 to 93        |
| Front hubs              | Nm | WSM             |
| Rear hubs               | Nm | —               |
| Wheel nuts / bolts      | Nm | 118 to 147      |
| Spark plugs             | Nm | 20 to 29        |

## Capacities 4x4 Wagon 3.0i CAT (D21) 1990 to 1994

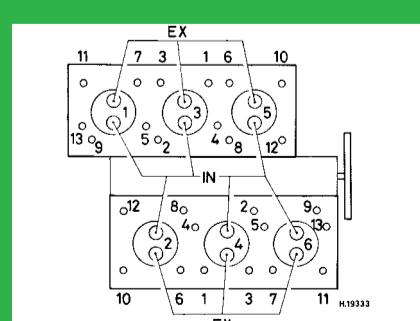
|                                 |        |                         |
|---------------------------------|--------|-------------------------|
| Engine oil & filter             | litres | 3.4                     |
| Gearbox - 4-speed [5-speed]     | litres | 3.6 <sup>1</sup>        |
| Automatic transmission - refill | litres | 8.5                     |
| Final drive                     | litres | Front: 1.5 <sup>2</sup> |
| Cooling system                  | litres | 10.9                    |
| Fuel tank                       | litres | 80                      |

## Notes and Illustrations

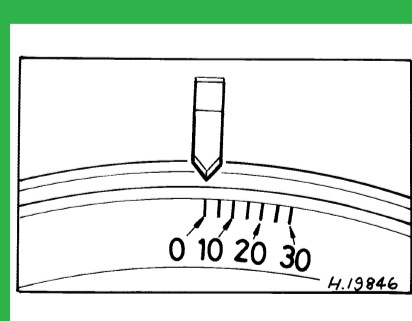
<sup>1</sup>Transfer: 2.2

<sup>2</sup>Rear: 2.8

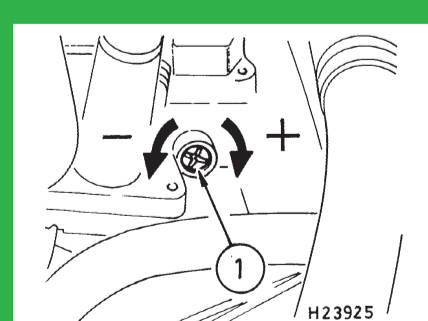
1: Idle speed 2: CO / Mixture



2960 cm<sup>3</sup>



2960 cm<sup>3</sup>



Nissan MPI ECCS