

Telephone:
Fax:
BR. Registracione tablice:

| Notes | | | Specified value | Measured value |
|---|--------------------|------------------------|-----------------|----------------|
| Vehicle identification | | | | |
| No. of cylinders | Type | 4/DOHC | | |
| Capacity (Fiscal) | cc | 1399 | | |
| Compression ratio | :1 | 9,5 | | |
| Suitable for unleaded petrol | | Yes | | |
| Minimum octane rating | RON | 91 | | |
| Ignition system | Make | DWMC | | |
| Ignition system | Description | Map-DIS | | |
| Trigger location | | Crankshaft | | |
| Fuel system | Make | DWMC | | |
| Fuel system | Description | MFI-i | | |
| Air metering | Type | MAP | | |
| Combined ignition and fuel ECM | | Yes | | |
| Diagnostic socket | | Yes | | |
| Ignition system | | | | |
| Ignition coil supply voltage | + with ballast V | 12,0 | | |
| Firing order | | 1-3-4-2 | | |
| Tuning and emissions | | | | |
| Ignition timing - basic BTDC | °Engine/rpm | Not adjustable | | |
| Ignition advance checks | °Engine/rpm | ECM Controlled | | |
| Idle speed | rpm | 800 Not adjustable | | |
| Oil temperature for CO test | °C | 80 | | |
| CO level at idle speed - tailpipe | Vol. % CO | 0,3 Max Not adjustable | | |
| HC level at idle speed | ppm | 100 | | |
| CO2 level at idle speed | Vol. % CO2 | 14,5-16 | | |
| O2 level at idle speed | Vol. % O2 | 0,1-0,5 | | |
| Increased idle speed for CO test | rpm | 2800-3100 | | |
| CO content at increased idle speed | Vol. % | 0,3 | | |
| Lambda at increased idle | λ | 0,98-1,02 | | |
| Spark plugs | | | | |
| Spark plugs | Original equipment | Selim | | |
| Spark plug | Type | RN9YC | | |
| Electrode gap | mm | 1,0-1,1 | | |
| Spark plugs | Make | Woojin | | |
| Spark plug | Type | BKR6E-11 | | |
| Electrode gap | mm | 1,0-1,1 | | |
| Fuel system | | | | |
| Engine coolant temperature (ECT) sensor | Ohm/°C | 70/130 | | |
| Service checks and adjustments | | | | |
| Valve clearance -INLET | mm | Hydraulic | | |
| Valve clearance -EXHAUST | mm | Hydraulic | | |
| Oil pressure | bar/rpm | 0,3 Min | | |
| Radiator cap | bar | 1,20-1,60 | | |
| Thermostat opens | °C | 87 | | |
| Lubricants and capacities | | | | |

| | | | | |
|--|--|------------------|-----------------------|--|
| Engine oil options | | | | |
| | Ambient temperature range | | -30°C —> 30°C | |
| | Engine oil grade | SAE | 5W/30 | |
| | Engine oil classification | API/ACEA | SL/A1 | |
| | Ambient temperature range | | -20°C —> 30°C | |
| | Engine oil grade | SAE | 10W/30 | |
| | Engine oil classification | API/ACEA | SL/A1 | |
| | Ambient temperature range | | -15°C —> 40°C | |
| | Engine oil grade | SAE | 15W/40 | |
| | Engine oil classification | API/ACEA | SL/A1 | |
| | Engine with filter(s) | litres | 3,75 | |
| Other lubricants and capacities | | | | |
| | Manual gearbox oil grade | SAE | 75W/80 | |
| | Manual gearbox | litres | 1,8 | |
| | Automatic transmission fluid | Type | Dexron III | |
| | Automatic transmission (drain & refill) | litres | 2,1 | |
| | Cooling system | litres | 7,0 | |
| | Brake fluid | Type | DOT 3/4 | |
| | Brake fluid | litres | 0,5 | |
| | Power steering fluid | Type | Dexron III/Dexron IID | |
| | Power steering fluid | litres | 1,1 | |
| Tightening torques | | | | |
| | Cylinder head instructions | | | |
| Cylinder head | | | | |
| | | Renew bolts | No | |
| | Stage 1 | Tighten | 25 Nm | |
| | Stage 2 | Tighten | 60° | |
| | Stage 3 | Tighten | 60° | |
| | Stage 4 | Tighten | 60° | |
| | Stage 5 | Tighten | 10° | |
| Other engine tightening torques | | | | |
| | Main bearings | Renew bolts/nuts | Yes | |
| | Main bearings | Stage 1 | 50 Nm | |
| | Main bearings | Stage 2 | 45°+15° | |
| | Big end bearings | Renew bolts/nuts | No | |
| | Big end bearings | Stage 1 | 25 Nm | |
| | Big end bearings | Stage 2 | 30°+15° | |
| | Oil pump to cylinder block | | 10 Nm | |
| | Sump bolts | | 10 Nm | |
| | Flywheel/driveplate | | 35 Nm+30°+15° | |
| | Clutch pressure plate | | 15 Nm | |
| | Crankshaft pulley/damper centre bolt | | 95 Nm+30°+15° | |
| | Camshaft sprocket/gear | | 68 Nm | |
| | Camshaft carrier/cap | | 16 Nm | |
| | Camshaft/rocker cover | | 9 Nm | |
| | Inlet manifold to cylinder head | | 25 Nm | |
| | Exhaust manifold to cylinder head | | 25 Nm | |
| | Exhaust downpipe to manifold | | 40 Nm | |
| | Water pump | | 10 Nm | |
| | Spark plugs | | 25 Nm | |
| | Fuel rail | | 25 Nm | |
| | Crankshaft position (CKP) sensor/engine speed (RPM) sensor | | 7 Nm | |
| | Camshaft position (CMP) sensor | | 12 Nm | |
| | Engine coolant temperature (ECT) sensor | | 20 Nm | |
| | Lambda sensor (Oxygen) | | 42 Nm | |
| | Knock sensor (KS) | | 20 Nm | |
| | Engine oil pressure switch | | 40 Nm | |
| Chassis tightening torques | | | | |

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|--|------------------------------|-------|--------|--|
| | Front hub | | 300 Nm | |
| | Rear hub | | 200 Nm | |
| | Steering rack/box mounting | | 60 Nm | |
| | Steering track rod end | | 50 Nm | |
| | Brake disc to hub | Front | 4 Nm | |
| | Brake caliper to carrier | Front | 27 Nm | |
| | Brake caliper carrier to hub | Front | 95 Nm | |
| | Back plate to hub | Rear | 28 Nm | |
| | ABS sensor | Front | 9 Nm | |
| | ABS sensor | Rear | 9 Nm | |
| | Road wheels | | 120 Nm | |

Starting and charging

| | | | | |
|--|-----------------------------------|----------|---------|--|
| | Battery | V/RC(Ah) | 12 (55) | |
| | Alternator output at engine speed | AV/rpm | 85/12/- | |

Brake disc and drum dimensions

| | | | | |
|----|-------------------------------------|-------|---------|--|
| | Minimum disc thickness - ventilated | Front | 18 mm | |
| | Disc thickness variation | Front | 0,1 mm | |
| | Disc runout | Front | 0,06 mm | |
| | Maximum drum diameter | Rear | 201 mm | |
| 13 | Minimum pad thickness | Front | 7 mm | |
| | Minimum shoe thickness | Rear | 0,5 mm | |

Air conditioning

| | | | | |
|--|---------------------------------------|-----------------|-------------|--|
| | Air conditioning refrigerant | Type | R134a | |
| | Air conditioning refrigerant quantity | grams | 600±20 | |
| | Air conditioning oil | Type | UCON RL 488 | |
| | Air conditioning oil quantity | cm ^l | 220 | |
| | Air conditioning oil viscosity | ISO | 150 | |

Tightening sequence

