

Cruze NB4 Technical Spec Gasoline Engine

- Model year : 2009
- Market : Euro
- Update date : March 2010

	1.6 XER M/T (Euro)	1.6 XER A/T (Euro)	1.8 XER M/T (2H0) (Euro)	1.8 XER A/T (2H0) (Euro)
Engine Data				
Engine, location	front, transverse in front of axle	front, transverse in front of axle	front, transverse in front of axle	front, transverse in front of axle
Cooling system	with liquid, sealed circuit	with liquid, sealed circuit	with liquid, sealed circuit	with liquid, sealed circuit
Cylinders, number	4	4	4	4
Bore (mm)	79	79	80,5	80,5
Stroke (mm)	81,5	81,5	88,2	88,2
Displacement (cc)	1598	1598	1796	1796
Compression ratio	10.8 : 1	10.8 : 1	10.5 : 1	10.5 : 1
Engine, type	in line; 5 main bearings	in line; 5 main bearings	in line; 5 main bearings	in line; 5 main bearings
Cylinder block/head, material	cast iron/aluminum	cast iron/aluminum	cast iron/aluminum	cast iron/aluminum
Camshaft(s), location	2 overhead (DOHC), driven by toothed belt	2 overhead (DOHC), driven by toothed belt	2 overhead (DOHC), driven by toothed belt	2 overhead (DOHC), driven by toothed belt
Valve train	DOHC 16 valve	DOHC 16 valve	DOHC 16 valve	DOHC 16 valve
Valve, arrangement	v; 4 per cylinder	v; 4 per cylinder	v; 4 per cylinder	v; 4 per cylinder
Valve adjustment	mechanical tappet	mechanical tappet	mechanical tappet	mechanical tappet
Fuel system	Multi-Point Injection	Multi-Point Injection	Multi-Point Injection	Multi-Point Injection
Ignition system	DIS	DIS	DIS	DIS
Fuel pump	Electric Motor	Electric Motor	Electric Motor	Electric Motor
Emission control system	Siemens SIM2K-76	Siemens SIM2K-76	Siemens SIM2K-76	Siemens SIM2K-76
Output (kW/PS at 1/min)	(83 / 113 @6400)	(83 / 113 @6400)	(104 / 141@6200)	(104 / 141@6200)
Specific power (kW/l;PS/l)	51.9 ; 70.7	51.9 ; 70.7	57.8 ; 78.3	57.8 ; 78.3
Max. torque (Nm at 1/min)	(153@4200)	(153@4200)	(176 @3800)	(176 @3800)
Specific torque (Nm/liter)	95,7	95,7	97,8	97,8
Mean effective pressure at max. power/max. torque (kPa)	973.9 @ max power 1202.5 @ max torque	973.9 @ max power 1202.5 @ max torque	1120.8 @ max power 1230.8 @ max torque	1120.8 @ max power 1230.8 @ max torque
Average piston speed (m/s)	17,4	17,4	18,2	18,2
Engine oil, capacity (l)	4,5	4,5	4,5	4,5
Cooling capacity (l)	6,3	6,3	6,3	6,3
Batery 12 V, capacity (Ah)	60	60	60	60
Alternator 14.2 V, capacity (W)	100A	100A	100A	100A
Transmission				
Drive axle	front wheel drive	front wheel drive	front wheel drive	front wheel drive
Transmission, type	Manual	Manual	Manual	Manual
Gear ratios	1st ratio : 3.818, 2nd ratio : 2.158, 3rd ratio : 1.481 4th ratio : 1.121, 5th ratio : 0.886, reverse ratio : 3.333, Final drive ratio : 3.944	1st ratio: 4.584, 2nd ratio: 2.964, 3rd ratio: 1.912, 4th ratio: 1.121, 5th ratio: 0.746, reverse ratio: -2.94 Final drive ratio:3.87	1st ratio : 3.818, 2nd ratio : 2.158, 3rd ratio : 1.481 4th ratio : 1.121, 5th ratio : 0.886, reverse ratio : 3.333 Final drive ratio : 3.722	1st ratio: 4.584, 2nd ratio: 2.964, 3rd ratio: 1.912, 4th ratio: 1.121, 5th ratio: 0.746, reverse ratio: -2.94 , Final drive ratio:3.23
Clutch, type	dry, single disc		dry, single disc	
Body				
Seats	5	5	5	5
Drag coefficient (c d)	0,306	0,306	0,306	0,306
Frontal area (A in m2)	2,217	2,217	2,217	2,217
Index (c w xA)	0,678	0,678	0,678	0,678
Chassis				
Wheel suspension front	McPherson Strut	McPherson Strut	McPherson Strut	McPherson Strut
Wheel suspension rear	Compound Crank Axle	Compound Crank Axle	Compound Crank Axle	Compound Crank Axle
Brakes				
Brake circuits	X-diagonal s	X-diagonal s	X-diagonal s	X-diagonal s
Brakes front, diameter (mm)	15" Vent Disk	15" Vent Disk	15" Vent Disk	15" Vent Disk
Brakes rear, diameter (mm)	15" Solid Disk	15" Solid Disk	15" Solid Disk	15" Solid Disk
ABS	4ch, 4 sensor	4ch, 4 sensor	4ch, 4 sensor	4ch, 4 sensor
Weights and dimensions				
Exterior Dimension				
Length (mm)	4597	4597	4597	4597
Width (mm)	1788	1788	1788	1788
Height (mm)	1477	1477	1477	1477
Wheelbase (mm)	2685	2685	2685	2685
Track front/rear (mm)	1544/1558	1544/1558	1544/1558	1544/1558
Interior Dimension				

Length (mm)	N/A	N/A	N/A	N/A
Width (mm)	N/A	N/A	N/A	N/A
Height (mm)	N/A	N/A	N/A	N/A
Leg Room front/rear (mm)	1074/917	1074/917	1074/917	1074/917
Shoulder Room front/rear (mm)	1391/1370	1391/1370	1391/1370	1391/1370
Head Room front/rear (mm)	999/963	999/963	999/963	999/963
Luggage capacity (Seat-up/Folded) (l)	450(VDA)	450(VDA)	450(VDA)	450(VDA)
Rim Width (inch)(mm)/tire size	6.5Jx15/205/65R15 6.5Jx16/205/60R16 7Jx17/215/50R17	6.5Jx15/205/65R15 6.5Jx16/205/60R16 7Jx17/215/50R17	6.5Jx15/205/65R15 6.5Jx16/205/60R16 7Jx17/215/50R17	6.5Jx15/205/65R15 6.5Jx16/205/60R16 7Jx17/215/50R17
Turning Radius; Minimum/Wall to Wall (m)	10.9/11.4	10.9/11.4	10.9/11.4	10.9/11.4
Steer. Wheel turns lock/lock	mechanical / Electrical type	mechanical / Electrical type	mechanical / Electrical type	mechanical / Electrical type
Steering	hydraulic power steering	hydraulic power steering	hydraulic power steering	hydraulic power steering
Steering wheel outside diameter (mm)	370	370	370	370
Kerb weight/max.allowable weight(GVW) (kg)	1285kg / 1788kg	1310kg / 1813kg	1290kg / 1793kg	1315kg / 1818kg
Power to weight ratio (kg/kW; kg/PS)(empty)				
Max. axle load front/rear (kg)	776kg / 509kg (curb)	806kg / 504kg (curb)	782kg / 508kg (curb)	811kg / 504kg (curb)
Trailer weight - w/o brake(kg)				
- w brake(kg)	1200	1200	1200	1200
Mechanical coupling weight (kg)	75kg	75kg	75kg	75kg
Ball weight (kg)	25kg	25kg	25kg	25kg
Roof Load (kg)	N/A	N/A	N/A	N/A
Fuel tank capacity (l)	60l	60l	60l	60l
Performance				
Top speed (km/h)	185	180	200	190
Acceleration 0 - 100km/h (sec)	11,8	12,9	10,0	11,5
Acc. 60 - 100 km/h in 4th gear (sec)				
Acc. 80 - 120 km/h in 5th gear (sec)				
Pass-by noise (dBA)	71.8dBA	71.5dBA	72.5dBA	71.6dBA
Fuel	unleaded	unleaded	Unleaded	Unleaded
Fuel consumption (liter/100 km)	6,8	7,8	6,8	7,8
CO2 emission (g/km)	159	184	159	184
Emission class	Euro5	Euro5	Euro5	Euro5