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NISSAN VERSA

MODEL C11 SERIES

QUICK REFERENCE INDEX

A GENERAL INFORMATION	GI General Information
B ENGINE	EM Engine Mechanical
	LU Engine Lubrication System
	CO Engine Cooling System
	EC Engine Control System
	FL Fuel System
	EX Exhaust System
	ACC Accelerator Control System
C TRANSMISSION/ TRANSAXLE	CL Clutch System
	MT Manual Transaxle
	AT Automatic Transaxle
	CVT CVT
D DRIVELINE/AXLE	FAX Front Axle
	RAX Rear Axle
E SUSPENSION	FSU Front Suspension
	RSU Rear Suspension
	WT Road Wheels & Tires
F BRAKES	BR Brake System
	PB Parking Brake System
	BRC Brake Control System
	PS Power Steering System
G STEERING	STC Steering Control System
	SB Seat Belts
H RESTRAINTS	SRS Supplemental Restraint System (SRS)
	BL Body, Lock & Security System
I BODY	GW Glasses, Window System & Mirrors
	RF Roof
	EI Exterior & Interior
	IP Instrument Panel
	SE Seat
	MTC Manual Air Conditioner
	SC Starting & Charging System
J AIR CONDITIONER	LT Lighting System
	DI Driver Information System
	WW Wiper, Washer & Horn
	BCS Body Control System
	LAN LAN System
	AV Audio Visual, Navigation & Telephone System
	ACS Auto Cruise Control System
	PG Power Supply, Ground & Circuit Elements
	MA Maintenance
K ELECTRICAL	
L MAINTENANCE	

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FOREWORD

This manual contains maintenance and repair procedures for the 2009 NISSAN VERSA.

In order to assure your safety and the efficient functioning of the vehicle, this manual should be read thoroughly. It is especially important that the PRECAUTIONS in the GI section be completely understood before starting any repair task.

All information in this manual is based on the latest product information at the time of publication. The right is reserved to make changes in specifications and methods at any time without notice.

IMPORTANT SAFETY NOTICE

The proper performance of service is essential for both the safety of the technician and the efficient functioning of the vehicle.

The service methods in this Service Manual are described in such a manner that the service may be performed safely and accurately. Service varies with the procedures used, the skills of the technician and the tools and parts available. Accordingly, anyone using service procedures, tools or parts which are not specifically recommended by NISSAN must first be completely satisfied that neither personal safety nor the vehicle's safety will be jeopardized by the service method selected.



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Technical Publications Department



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SERVICE MANUAL: Model: _____ Year: _____

PUBLICATION NO. (Refer to Quick Reference Index): _____

Please describe any Service Manual issues or problems in detail:

Page number(s) _____ *Note: Please include a copy of each page, marked with your comments.*

Are the trouble diagnosis procedures logical and easy to use? (circle your answer) YES NO

If no, what page number(s)? _____ *Note: Please include a copy of each page, marked with your comments.*

Please describe the issue or problem in detail: _____

Is the organization of the manual clear and easy to follow? (circle your answer) YES NO

Please comment: _____

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DEALER: _____ DEALER NO.: _____ ADDRESS: _____

CITY: _____ STATE/PROV./COUNTRY: _____ ZIP/POSTAL CODE: _____

QUICK REFERENCE CHART: VERSA

Engine Tune-up Data

INFOID:0000000001903528

GENERAL SPECIFICATIONS

Engine type		MR18DE
Cylinder arrangement		In-line 4
Displacement	cm ³ (cu in)	1,797 (109.65)
Bore and stroke	mm (in)	84.0 x 81.1 (3.307 x 3.192)
Valve arrangement		DOHC
Firing order		1-3-4-2
Number of piston rings	Compression	2
	Oil	1
Compression ratio		9.9
Compression pressure kPa (bar, kg/cm ² , psi) / 250 rpm	Standard	1,500 (15.0, 15.3, 217.6)
	Minimum	1,200 (12.0, 12.2, 174)
	Differential limit between cylinders	100 (1.0, 1.0, 15)

SPARK PLUG

Unit: mm (in)

Plug type	Iridium-tipped TYPE
Make	DENSO
Standard type	FXE20HR11
Spark plug gap	Nominal: 1.1 (0.043)

Front Wheel Alignment (Unladen*)

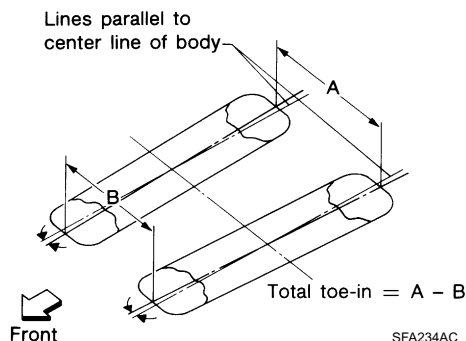
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Camber Degree minute (Decimal degree)	RH	Minimum	- 1° 05' (- 1.08°)
		Nominal	- 0° 20' (- 0.33°)
		Maximum	0° 25' (0.42°)
	LH	Minimum	- 0° 55' (- 0.92°)
		Nominal	- 0° 10' (- 0.17°)
		Maximum	0° 35' (0.58°)
	Left and right difference (RH - LH)	Minimum	-0° 45' (-0.75°) or less
		Nominal	-0° 12' (-0.20°) or less
		Maximum	0° 21' (0.35°) or less
Caster Degree minute (Decimal degree)	RH	Minimum	4° 05' (4.08°)
		Nominal	4° 50' (4.83°)
		Maximum	5° 35' (5.58°)
	LH	Minimum	3° 55' (3.92°)
		Nominal	4° 40' (4.67°)
		Maximum	5° 25' (5.42°)
	Left and right difference (RH - LH)	Minimum	-0° 21' (-0.35°) or less
		Nominal	0° 12' (0.20°) or less
		Maximum	0° 45' (0.75°) or less

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Kingpin inclination Degree minute (Decimal degree)	Minimum	9° 10' (9.17°)
	Nominal	9° 55' (9.92°)
	Maximum	10° 40' (10.67°)



Total toe-in	Distance (A - B)	Minimum	0 mm (0 in)
		Nominal	1 mm (0.04 in)
		Maximum	2 mm (0.08 in)
	Angle (left or right, each side) Degree minute (Decimal degree)	Minimum	0° 0' (0°)
		Nominal	0° 3' (0.05°)
		Maximum	0° 6' (0.10°)

*: Fuel, engine coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

Rear Wheel Alignment (Unladen*)

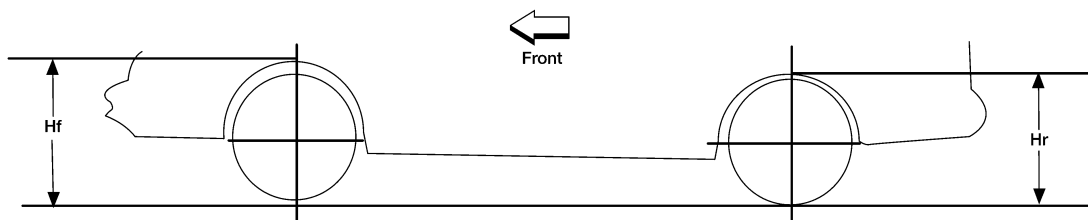
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Camber Degree minute (Decimal degree)		Minimum	– 2° 01' (– 2.02°)
		Nominal	– 1° 31' (– 1.52°)
		Maximum	– 1° 01' (– 1.02°)
Total toe-in	Distance (A - B)	Minimum	– 1.0 mm (– 0.039 in)
		Nominal	3.0 mm (0.118 in)
		Maximum	7.0 mm (0.276 in)
	Angle Degree minute (Decimal degree)	Minimum	– 0° 4' (– 0.07°)
		Nominal	0° 14' (0.23°)
		Maximum	0° 32 (0.53°)

*: Fuel, engine coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

Wheelarch Height (Unladen*)

INFOID:000000001903530



LEIA0085E

Tire size	P185/65R15
Front (Hf)	686 mm (27.01 in)
Rear (Hr)	684 mm (26.93 in)

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*: Fuel, engine coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

General Specification

INFOID:0000000001903532

Front brake	Brake model	CLZ25VA
	Cylinder bore diameter	57.2 mm (2.252 in)
	Pad Length × width × thickness	125.6 mm × 46.0 mm × 9.5 mm (4.945 in × 1.811 in × 0.374 in)
	Rotor outer diameter × thickness	280 mm × 24.0 mm (11.02 in × 0.945 in)
Rear brake	Brake model	LT20D
	Cylinder bore diameter	15.87 mm (0.625 in)
	Lining Length × width × thickness	194.1 mm × 30.0 mm × 4.0 mm (7.642 in × 1.181 in × 0.157 in)
	Drum outer diameter	228.6 mm (9.000 in)
Master cylinder	Cylinder bore diameter	22.22 mm (0.875 in)
Control valve	Valve model	Electric brake force distribution
Brake booster	Booster model	C255
	Diaphragm diameter	255 mm (10.04 in)

Brake Pedal

INFOID:0000000001903533

Unit: mm (in)

Brake pedal free height (from dash panel top surface)	A/T, CVT model	172.4 - 182.4 (6.79 - 7.18)
	M/T model	162.3 - 172.3 (6.39 - 6.78)
Brake pedal depressed height [under a force of 490 N (50 kg-f, 110 lb-f) with the engine running]	A/T, CVT model	98 (3.86) or more
	M/T model	90 (3.54) or more
Clearance between brake pedal lever and the threaded end of stop lamp switch		0.74 - 1.96 (0.0291 - 0.0772)
Pedal play		3 - 11 (0.12 - 0.43)

Front Disc Brake

INFOID:0000000001903534

Unit: mm (in)

Brake model		CLZ25VA
Brake pad	Standard thickness (new)	9.5 (0.374)
	Repair limit thickness	2.0 (0.079)
Disc rotor	Standard thickness (new)	24.0 (0.945)
	Repair limit thickness	22.0 (0.866)
	Runout limit	0.04 (0.0016)
	Maximum uneven wear (measured at 8 positions)	0.02 mm (0.0008 in) or less

Rear Drum Brake

INFOID:0000000001903535

Unit: mm (in)

Brake model		LT20D
Brake lining	Standard thickness (new)	4.0 (0.157)
	Repair limit thickness	1.5 (0.059)
Drum	Standard inner diameter (new)	228.6 (9.000)
	Repair limit inner diameter	230.0 (9.055)

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Fluids and Lubricants

INFOID:000000001903536

Description		Capacity (Approximate)		
		Liter	US measure	Imp measure
Fuel		52.0	13 3/4 gal	11 1/2 gal
Engine oil Drain and refill	With oil filter change	3.9	4 1/8 qt	3 3/8 qt
	Without oil filter change	3.7	3 7/8 qt	3 1/4 qt
Dry engine (engine overhaul)		4.9	5 1/8 qt	4 3/8 qt
Cooling system (with reservoir at max level)		6.8	7 1/4 qt	6 qt
Manual transaxle fluid (MTF)		2.0	4 1/4 pt	3 1/2 pt
Automatic transaxle fluid (ATF)		7.9	8 3/8 qt	7 qt
CVT fluid		8.3	8 3/4 qt	7 1/4 qt
Brake and clutch fluid		—	—	—
Multi-purpose grease		—	—	—
Windshield washer fluid		4.5	4 3/4 qt	4 qt
Air conditioning system refrigerant		0.45 ± 0.05 kg	0.99 ± 0.11 lb	0.99 ± 0.11 lb
Air conditioning system oil	Type 1	120 mℓ	4.1 fl oz	4.2 fl oz
	Type 2	100 mℓ	3.4 fl oz	3.5 fl oz