

Edition: July 2011

Revision: July 2011

Publication No. SM2E-1N17U0

NISSAN VERSA

MODEL N17 SERIES

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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
C	STR Starting System
	ACC Accelerator Control System
D TRANSMISSION & DRIVE-LINE	CL Clutch
	TM Transaxle & Transmission
	DLN Driveline
	FAX Front Axle
	RAX Rear Axle
	FSU Front Suspension
E SUSPENSION	RSU Rear Suspension
	SCS Suspension Control System
	WT Road Wheels & Tires
F BRAKES	BR Brake System
	PB Parking Brake System
	BRC Brake Control System
G STEERING	ST Steering System
	STC Steering Control System
H RESTRAINTS	SB Seat Belt
	SBC Seat Belt Control System
	SR SRS Airbag
	SRC SRS Airbag Control System
	VTL Ventilation System
I VENTILATION, HEATER & AIR CONDITIONER	HA Heater & Air Conditioning System
	HAC Heater & Air Conditioning Control System
J BODY INTERIOR	INT Interior
	IP Instrument Panel
	SE Seat
	ADP Automatic Drive Positioner
K BODY EXTERIOR, DOORS, ROOF & VEHICLE SECURITY	DLK Door & Lock
	SEC Security Control System
	GW Glass & Window System
	PWC Power Window Control System
	RF Roof
	EXT Exterior
	BRM Body Repair Manual
L DRIVER CONTROLS	MIR Mirrors
	EXL Exterior Lighting System
	INL Interior Lighting System
	WW Wiper & Washer
	DEF Defogger
	HRN Horn
M ELECTRICAL & POWER CONTROL	PWO Power Outlet
	BCS Body Control System
	LAN LAN System
	PCS Power Control System
	CHG Charging System
	PG Power Supply, Ground & Circuit Elements
N DRIVER INFORMATION & MULTIMEDIA	MWI Meter, Warning Lamp & Indicator
	WCS Warning Chime System
	SN Sonar System
	AV Audio, Visual & Navigation System
O CRUISE CONTROL	CCS Cruise Control System
P MAINTENANCE	MA Maintenance

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FOREWORD

This manual contains maintenance and repair procedure for the 2012 NISSAN VERSA SEDAN.

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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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.*

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What information should be included in NISSAN Service Manuals to better support you in servicing or repairing customer vehicles?

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DEALER: _____ DEALER NO.: _____ ADDRESS: _____

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

QUICK REFERENCE CHART: VERSA SEDAN

Engine Tune-up Data

INFOID:000000007795940

GENERAL SPECIFICATIONS

Engine type		HR16DE
Cylinder arrangement		In-line 4
Displacement	cm ³ (cu in)	1,598 (97.51)
Bore and stroke	mm (in)	78.0× 83.6 (3.071 ×3.291)
Valve arrangement		DOHC
Firing order		1-3-4-2
Number of piston rings	Compression	2
	Oil	1
Compression ratio		9.8
Compression pressure kPa (kg/cm ² , psi) / 200 rpm	Standard	1,510 (15.4, 219)
	Minimum	1,270 (12.95, 184)
	Differential limit between cylinders	100 (1.0, 14.5)

Valve Timing

Unit: degree

Valve timing ⇐: Intake valve ⇐: Exhaust valve						
	a	b	c	d	e	f
	216	228	11 (-27) ATDC	59 (-21) ABDC	-1 (49) ATDC	37 (-13) BBDC

() : Valve timing control "ON"

Drive Belt

INFOID:000000007795941

DRIVE BELT

Belt Deflection

Location		Deflection adjustment *			Unit: mm (in)
		Used belt		New belt	
		Limit	After adjusted		
Drive belt	With A/C	10 (0.39)	4.9 - 5.2 (0.19 - 0.20)	4.1 - 4.4 (0.16 - 0.17)	
	Without A/C	9.1 (0.36)	4.3 - 4.7 (0.17 - 0.19)	3.7 - 3.9 (0.14 - 0.15)	
Applied pushing force		98 N (10 kg-f, 22 lb-f)			

*: When engine is cold.

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Belt Tension and Frequency

Location		Tension adjustment *		Unit: N (kg-f, lb-f)	Frequency adjustment *		Unit: Hz
		Used belt		New belt	Used belt		New belt
		Limit	After adjusted		Limit	After adjusted	
Drive belt	With A/C	350 (35.7, 78.7)	881 - 951 (89.8 - 97.0, 198.1 - 213.8)	1070 - 1138 (109.1 - 116.0, 240.6 - 255.8)	145.5	230.5 - 239.5	254 - 262
	Without A/C		876 - 964 (89.3 - 98.3, 196.9 - 216.7)	1064 - 1152 (108.5 - 117.5, 239.2 - 259.0)	162	256.5 - 268.5	282.5 - 293.5

*: When engine is cold.

Spark Plug

INFOID:000000007795942

SPARK PLUG (PLATINUM-TIPPED TYPE)

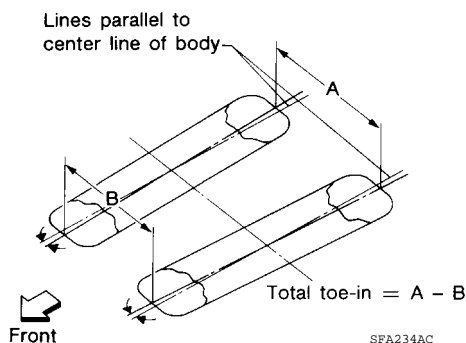
Make	NGK
Standard type*	PLZKAR6A-11
Gap (nominal)	1.1 mm (0.043 in)

*: Always check with the Parts Department for the latest parts information.

Front Wheel Alignment

INFOID:000000007795939

Item	Standard	
Camber Degree minute (Decimal degree)	Minimum	-0° 50' (-0.83°)
	Nominal	-0° 05' (-0.08°)
	Maximum	0° 40' (0.66°)
	Left and right difference	0° 35' (0.58°)
Caster Degree minute (Decimal degree)	Minimum	2° 55' (2.92°)
	Nominal	3° 40' (3.67°)
	Maximum	4° 25' (4.41°)
	Left and right difference	0° 45' (0.75°)
Kingpin inclination Degree minute (Decimal degree)	Minimum	11° 00' (11.00°)
	Nominal	11° 45' (11.75°)
	Maximum	12° 30' (12.50°)



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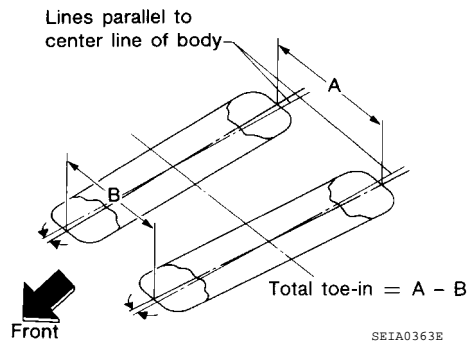
Item			Standard
Total toe-in	Distance (A - B)	Minimum	0 mm (0 in)
		Nominal	In 1.0 mm (0.05 in)
		Maximum	In 2.0 mm (0.07 in)
	Angle (left or right, each side) Degree minute second (Decimal degree)	Minimum	0° 0' 0" (0.00°)
		Nominal	In 0° 5' 0" (0.08°)
		Maximum	In 0° 10' 0" (0.17°)

Measure value under unladen* conditions.

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

Rear Wheel Alignment

INFOID:000000007795937



Item			Standard	
Camber Degree minute (Decimal degree)	Minimum		-1° 55' (-1.91°)	
	Nominal		-1° 25' (-1.42°)	
	Maximum		-0° 55' (-0.92°)	
Toe-in	Distance (A - B)	Minimum	Out 2.0 mm (Out 0.079 in)	
		Nominal	In 2.0 mm (In 0.079 in)	
		Maximum	In 6.0 mm (In 0.236 in)	
	Angle left side or right side Degree minute (Decimal degree)	Minimum		Out 0° 15' (Out 0.25°)
		Nominal		In 0° 10' (In 0.17°)
		Maximum		In 0° 35' (In 0.58°)

Measure value under unladen*² conditions.

*1: Since adjustment mechanism is not included, the value of the left and right wheels (both wheels) must be used as the standard value.

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

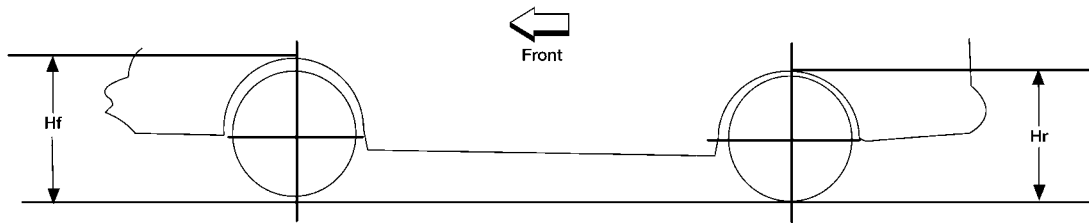
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Wheelarch Height

INFOID:000000007795938

Unit: mm (in)



LEIA0085E

Market	United States	Canada
Front (Hf)	683 (26.89)	684 (26.93)
Rear (Hr)	668 (26.30)	668 (26.30)

Measure value under unladen* conditions.

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

Brake Specifications

INFOID:000000007795935

Unit: mm (in)

Front brake	Cylinder bore diameter	54.025 (2.13)
	Pad length × width × thickness	115.0 × 41.0 × 9.0 (4.53 × 1.614 × 0.354)
	Rotor outer diameter × thickness	260 × 22.0 (10.24 × 0.87)
Rear brake	Cylinder bore diameter	19.05 (3/4)
	Lining length × width × thickness	Trailing: 172 × 37 × 4.8 (6.77 × 1.46 × 0.19) Leading: 155 × 37 × 4.8 (6.10 × 1.46 × 0.19)
	Drum inner diameter - new	203.2 (8.00)
Master cylinder	Cylinder bore diameter	19 (0.75)
Control valve	Valve type	Electric brake force distribution
Brake booster	Diaphragm diameter	255 (10)

Brake Pedal

INFOID:000000007795936

Unit: mm (in)

Item	Standard
Brake pedal height	158 ±5 (6.22 ±0.20)
Clearance among the brake pedal lever and the stop lamp switch threaded end	0.2 – 1.96 (0.008 – 0.0772)
Brake pedal full stroke	128 (5.04)

Front Disc Brake

INFOID:000000007795933

Unit: mm (in)

Item	Limit	
Brake pad	Wear thickness	2.0 (0.08)
Disc rotor	Wear thickness	20.0 (0.787)
	Thickness variation (measured at 8 positions)	0.013 (0.001)
	Runout (with it attached to the vehicle)	0.055 (0.002)

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Rear Drum Brake

INFOID:000000007795934

Unit: mm (in)

Item		Limit
Brake lining	Wear thickness	1.0 (0.04)
Brake drum	Wear inner diameter- maximum	204.2 (8.04)

Fluids and Lubricants

INFOID:000000007795932

Description		Capacity (Approximate)			
		Metric	US measure	Imp measure	
Fuel		42.6 ℓ	11 1/4 gal	9 3/8 gal	
Engine oil Drain and refill	With oil filter change	3.0 ℓ	3 1/8 qt	2 5/8 qt	
	Without oil filter change	2.7 ℓ	2 7/8 qt	2 3/8 qt	
Dry engine (engine overhaul)		3.5 ℓ	3 3/4 qt	3 1/8 qt	
Cooling system	With reservoir tank at "MAX" level	CVT	7.2 ℓ	7 5/8 qt	6 3/8 qt
		M/T	6.3 ℓ	6 5/8 qt	5 1/2 qt
	Reservoir tank capacity (at "MAX" level)	0.7 ℓ	3/4 qt	5/8 qt	
Manual transaxle fluid (MTF)		2.67 ℓ	5 5/8 pt	4 3/4 pt	
CVT fluid		6.9 ℓ	7 1/4 qt	6 1/8 qt	
Brake and clutch fluid		—	—	—	
Multi-purpose grease		—	—	—	
Windshield washer fluid		4.5 ℓ	4 3/4 qt	4 qt	
Air conditioning system refrigerant		0.40 kg	0.88 lb	0.88 lb	
Air conditioning system oil		120 m ℓ	4.1 fl oz	4.2 fl oz	