

Edition: December 2015
Revision: December 2015
Pub. No. SM16EM0B17U0

NISSAN SENTRA

MODEL B17 SERIES

All rights reserved. No part of this Service Manual may be reproduced or stored in a retrieval system, or transmitted in any form, or by any means, electronic, mechanical, photo-copying, recording or otherwise, without the prior written permission of Nissan Mexicana, S.A. DE C.V.

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
	STR Starting System
	ACC Accelerator Control System
	HBC Hybrid Control System
	CL Clutch
C HYBRID	TM Transaxle & Transmission
	DLN Driveline
	FAX Front Axle
D TRANSMISSION & DRIVE-LINE	RAX Rear Axle
	FSU Front Suspension
	RSU Rear Suspension
E SUSPENSION	SCS Suspension Control System
	WT Road Wheels & Tires
	BR Brake System
F BRAKES	PB Parking Brake System
	BRC Brake Control System
	ST Steering System
G STEERING	STC Steering Control System
	SB Seat Belt
H RESTRAINTS	SBC Seat Belt Control System
	SRS SRS Airbag
	SRC SRS Airbag Control System
I VENTILATION, HEATER & AIR CONDITIONER	VTL Ventilation System
	HA Heater & Air Conditioning System
	HAC Heater & Air Conditioning Control System
J BODY INTERIOR	INT Interior
	IP Instrument Panel
	SE Seat
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
	MIR Mirrors
	EXL Exterior Lighting System
	INL Interior Lighting System
WW Wiper & Washer	
L DRIVER CONTROLS	DEF Defogger
	HRN Horn
	PWO Power Outlet
	BCS Body Control System
	LAN LAN System
	PCS Power Control System
	CHG Charging System
	PG Power Supply, Ground & Circuit Elements
	MWI Meter, Warning Lamp & Indicator
	WCS Warning Chime System
M ELECTRICAL & POWER CONTROL	SN Sonar System
	AV Audio, Visual & Navigation System
	CCS Cruise Control System
	DMS Drive Mode System
N DRIVER INFORMATION & MULTIMEDIA	DAS Driver Assistance System
	MA Maintenance
	IDX Index
O CRUISE CONTROL & DRIVER ASSISTANCE	
P MAINTENANCE	
Q INDEX	

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

FOREWORD

This manual contains maintenance and repair procedures for the 2016 NISSAN SENTRA.

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.



Nissan Mexicana S.A. de C.V.
Av. Insurgentes Sur No. 1958
Col. Florida C.P. 01030
México D.F.



PLEASE HELP MAKE THIS SERVICE MANUAL BETTER!

Your comments are important to NISSAN and will help us to improve our Service Manuals.
Use this form to report any issues or comments you may have regarding our Service Manuals.

Please print this form and type or write your comments below. Mail or fax to:

Nissan North America, Inc.
Technical Service Information
39001 Sunrise Drive, P.O. Box 9200
Farmington Hills, MI USA 48331
FAX: (248) 488-3880

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: _____

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

DATE: _____ YOUR NAME: _____ POSITION: _____

DEALER: _____ DEALER NO.: _____ ADDRESS: _____

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

QUICK REFERENCE CHART: SENTRA

Engine Tune-up Data

INFOID:0000000013526149

GENERAL SPECIFICATIONS

Engine type		MRA8DE
Cylinder arrangement		In-line 4
Displacement cm ³ (cu. in)		1,798 (109.7)
Bore and stroke mm (in)		79.7x90.1 (3.138x3.547)
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	1,380 (13.8, 14.1, 200.2)
	Minimum	1,220 (12.2, 12.4, 176.9)
	Differential limit between cylinders	100 (1.0, 1.0, 14.5)

Unit: degree

Valve timing ◁ Intake valve ◀ Exhaust valve	<p style="text-align: right; font-size: small;">JPBIA4228ZZ</p>					
	a	b	c	d	e	f
	220	228	-4 (35) ATDC	52 (13) ABDC	4 (64) ATDC	36 (-24) BBDC

() : Valve timing control "ON"

Drive Belt

INFOID:0000000013526148

Tension of drive belt	Belt tension is not necessary, as it is automatically adjusted by drive belt auto-tensioner.
-----------------------	--

Spark Plug

INFOID:0000000013526147

Unit: mm (in)

Make		NGK
Standard type*		DILKAR6A-11 (California) or PLZKAR6A-11 (except California)
Gap (Nominal)	Standard	0.9 (0.035)
	Limit	1.1 (0.043)

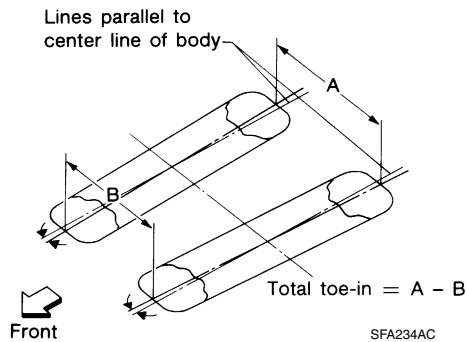
*:Always check with the Parts Department for the latest parts information.

Front Wheel Alignment (Unladen*¹)

INFOID:0000000013526146

UNITED STATES and CANADA

Camber Degree minute (Decimal degree)	Minimum	-1° 04' (-1.07°)
	Nominal	-0° 25' (-0.42°)
	Maximum	0° 14' (0.23°)
	(LH) and (RH) difference* ²	-0° 35' (-0.58°) - 0° 35' (0.58°)
Caster Degree minute (Decimal degree)	Minimum	4° 05' (4.08°)
	Nominal	4° 50' (4.83°)
	Maximum	5° 35' (5.58°)
	(LH) and (RH) difference* ²	-0° 45' (-0.75°) - 0° 45' (0.75°)
Kingpin inclination Degree minute (Decimal degree)	Minimum	11° 20' (11.33°)
	Nominal	12° 05' (12.08°)
	Maximum	12° 50' (12.83°)



Total toe-in	Distance (A - B)	Minimum	0 mm (0.0 in)
		Nominal	In 2 mm (In 0.08 in)
		Maximum	In 4 mm (In 0.16 in)
	Angle (LH and RH) Degree minute (Decimal degree)	Minimum	0° 0' (0°)
		Nominal	In 0° 10' (In 0.17°)
		Maximum	In 0° 20' (In 0.34°)

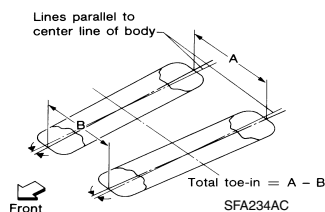
*1: Fuel, engine coolant, and lubricants are full. Spare tire, jack, hand tools, and mats are in designated positions.

*2: The difference when assuming the (LH) side is the standard.

Rear Wheel Alignment (Unladen*¹)

INFOID:0000000013526145

Camber Degree minute (Decimal degree)	Minimum	-2° 00' (-2.00°)
	Nominal	-1° 30' (-1.50°)
	Maximum	-1° 00' (-1.00°)



QUICK REFERENCE CHART: SENTRA

2016

Total toe-in	Distance (A - B)	Minimum	Out 1.0 mm (Out 0.039 in)
		Nominal	In 3.5 mm (In 0.138 in)
		Maximum	In 8.0 mm (In 0.315 in)
	Angle (LH and RH)* ² Degree minute (Decimal degree)	Minimum	Out 0° 03' (Out 0.05°)
		Nominal	In 0° 20' (In 0.33°)
		Maximum	In 0° 43' (In 0.72°)

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

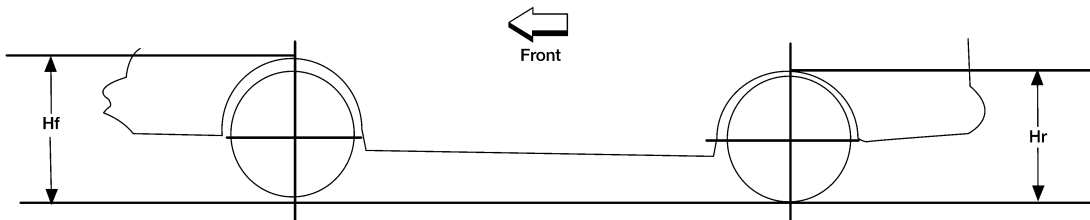
*2: Since an adjustment mechanism is not included, the value of the left and right wheels (both wheels) must be used as the standard value.

Wheelarch Height (Unladen*)

INFOID:000000013526144

UNITED STATES

Unit: mm (in)



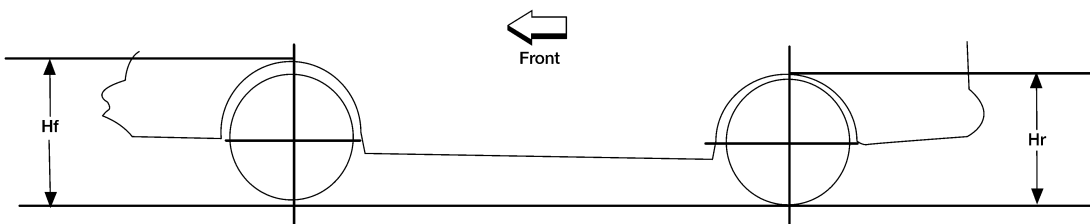
LEIA0085E

Transaxle	6M/T or CVT	CVT	
Tire size	205/55R16 (Except FE)	205/55R16 (FE)	205/50R17
Front (Hf)	703 (27.68)	706 (27.80)	708 (27.87)
Rear (Hr)	703 (27.68)	706 (27.80)	707 (27.83)

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

CANADA

Unit: mm (in)



LEIA0085E

Transaxle	6M/T or CVT	CVT
Tire size	205/55R16	205/50R17
Front (Hf)	704 (27.72)	709 (27.91)
Rear (Hr)	704 (27.72)	708 (27.87)

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

QUICK REFERENCE CHART: SENTRA

2016

Brake Specifications

INFOID:000000013526143

Unit: mm (in)

Front brake	Cylinder bore diameter	57.2 (2.252)
	Pad length × width × thickness	123.6 × 50.0 × 11.0 (4.866 × 1.969 × 0.433)
	Rotor outer diameter × thickness	280 × 24.0 (11.024 × 0.945)
Rear brake - drum	Cylinder bore diameter	19.05 (0.750)
	Lining length × width × thickness	Leading: 183.2 × 40 × 4.9 (7.213 × 1.575 × 0.193) Trailing: 219 × 40 × 4.9 (8.622 × 1.575 × 0.193)
	Drum inner diameter - new	228 (8.976)
Rear brake - disc	Cylinder bore diameter	34.93 (1.375)
	Pad length × width × thickness	83.0 × 33.0 × 8.5 (3.268 × 1.299 × 0.335)
	Rotor outer diameter × thickness	292 × 9.0 (11.496 × 0.354)
Master cylinder	Cylinder bore diameter	23.81 (0.937)
Control valve	Valve type	Electric brake force distribution
Brake booster	Diaphragm diameter	257 (10.118)

Brake Pedal

INFOID:000000013526142

Unit: mm (in)

Item	Standard
Brake pedal height	160.4 – 170.4 (6.31 – 6.71)
Depressed brake pedal height [Depressing 490 N (50 kg, 110 lb) while turning the engine ON]	70.0 (2.756) or more
Brake pedal full stroke	128.5 (5.06)
Clearance between stop lamp switch and brake pedal position switch threaded end and the brake pedal lever	0.74 – 1.96 (0.03 – 0.08)

Front Disc Brake

INFOID:000000013526141

Unit: mm (in)

Item	Limit	
Brake pad	Wear thickness	2.0 (0.079)
Disc rotor	Wear thickness	22.0 (0.866)
	Thickness variation (measured at 8 positions)*	0.008 (0.0003)
	Runout (with it attached to the vehicle)	0.035 (0.0014)

*To check if rotor imbalance, rotor runout or rotor deformation exists.

Rear Drum Brake

INFOID:000000013526140

Unit: mm (in)

Item	Limit	
Brake lining	Wear thickness	1.0 (0.039)
Brake drum	Wear inner diameter- maximum	230 (9.055)

Rear Disc Brake

INFOID:000000013526139

Unit: mm (in)

Item	Limit	
Brake pad	Wear thickness	1.0 (0.039)

QUICK REFERENCE CHART: SENTRA

2016

Item		Limit
Disc rotor	Wear thickness	8.0 (0.315)
	Thickness variation (measured at 8 positions)*	0.016 (0.0006)
	Runout (with it attached to the vehicle)	0.1 (0.0039)

*To check if rotor imbalance, rotor runout or rotor deformation exists.

Fluids and Lubricants

INFOID:0000000013526138

NOTE:

The following are approximate capacities. The actual capacities may be slightly different. When refilling, follow the procedure described elsewhere in this manual.

Fluid types		Capacity (Approximate)		
		Metric	US measure	Imp measure
Fuel		50.0 ℓ	13-1/4 gal	11 gal
Engine oil Drain and refill	With oil filter change	4.0 ℓ	4-1/4 qt	3-1/2 qt
	Without oil filter change	3.8 ℓ	4 qt	3-3/8 qt
Dry engine (engine overhaul)		4.8 ℓ	5-1/8 qt	4-1/4 qt
Engine coolant (with reservoir tank at MAX level)	CVT model	6.6 ℓ	7 qt	5-7/8 qt
	M/T model			
	Reservoir tank (at MAX level)	0.6 ℓ	5/8 qt	1/2 qt
CVT fluid		6.9 ℓ	7-1/4 qt	6-1/8 qt
Manual transaxle gear oil		2.0 ℓ	4-1/4 pt	3-1/2 pt
Brake and clutch fluid		—	—	—
Multi-purpose grease		—	—	—
Windshield washer fluid		4.5 ℓ	4-3/4 qt	4 qt
Air conditioner system refrigerant		0.45 ± 0.05 kg	0.992 ± 0.110 lb	0.992 ± 0.110 lb
Air conditioner system oil		90 m ℓ	3.0 fl oz	3.2 fl oz