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NISSAN
MURANO
MODEL Z52 SERIES

QUICK REFERENCE INDEX

FOREWORD

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

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 NORTH AMERICA, INC.
Technical Publications Department

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.
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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.*

_____

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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: _____

_____

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

Please comment: _____

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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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_____

DATE: _____ YOUR NAME: _____ POSITION: _____

DEALER: _____ DEALER NO.: _____ ADDRESS: _____

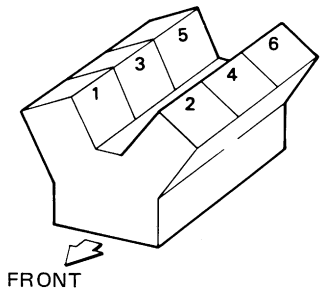
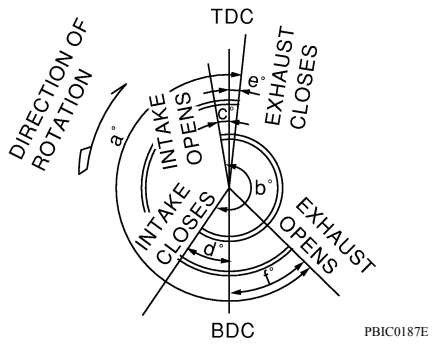
CITY:_____ STATE/PROV./COUNTRY: _____ ZIP/POSTAL CODE: _____

QUICK REFERENCE CHART: MURANO

Engine Tune-up Data

INFOID:0000000013529919

GENERAL SPECIFICATIONS

Cylinder arrangement		V-6
Displacement cm^3 (cu in)		3,498 (213.45)
Bore and stroke mm (in)		95.5 x 81.4 (3.760 x 3.205)
Valve arrangement		DOHC
Firing order		1-2-3-4-5-6
Number of piston rings	Compression	2
	Oil	1
Number of main bearings		4
Compression ratio		10.3:1
Compression pressure kPa (kg/cm^2, psi)/300 rpm	Standard	1,275 (12.75, 13.0, 185)
	Minimum	981 (9.81, 10.0, 142)
	Differential limit between cylinders	98 (0.98, 1.0, 14)
Cylinder number	 SEM713A	
Valve timing (Valve timing control - “OFF”)	 PBIC0187E	

Unit: degree

a	b	c	d	e	f
240	240	−10	70	10	50

Drive Belt

INFOID:0000000013529918

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

Spark Plug

INFOID:0000000013529651

Unit: mm (in)

Make		DENSO
Standard type*		FXE22HR11
Gap	Standard	1.1 (0.043)

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

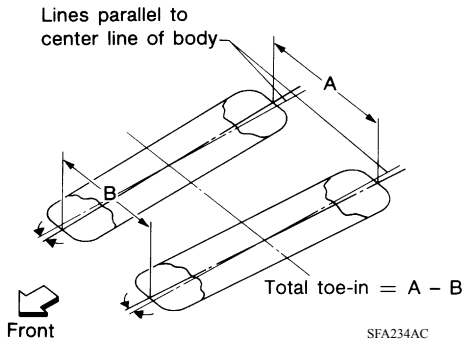
Front Wheel Alignment (Unladen*1)

INFOID:0000000013529650

WARNING:

If the vehicle is equipped with the Intelligent Cruise Control (ICC) system and the rear toe has been adjusted during a wheel alignment, the ICC sensor must be aligned.

Measurement wheel		(LH) side	(RH) side
Camber Degree minute (Decimal degree)	Minimum	–1° 00′ (–1.00°)	–1° 15′ (–1.25°)
	Nominal	–0° 15′ (–0.25°)	–0° 30′ (–0.50°)
	Maximum	0° 30′ (0.50°)	0° 15′ (0.25°)
	Difference (LH-RH)	0° 15′±0° 33′ (0.25° ±0.55°)	
Caster Degree minute (Decimal degree)	Minimum	4° 00′ (4.00°)	
	Nominal	4° 45′ (4.75°)	
	Maximum	5° 30′ (5.50°)	
	(LH) and (RH) difference	0.30′ (0.50°) Maximum	
Kingpin inclination Degree minute (Decimal degree)	Minimum	12° 00′ (12.00°)	12° 15′ (12.25°)
	Nominal	12° 45′ (12.75°)	13° 00′ (13.00°)
	Maximum	13° 30′ (13.50°)	13° 45′ (13.75°)



Total toe-in	Distance (A - B)	Minimum	Out 0.6 mm (Out 0.024 in)
		Nominal	In 1.4 mm (In 0.055 in)
		Maximum	In 3.4 mm (In 0.134 in)
	Angle (LH) and (RH) Degree minute (Decimal degree)	Minimum	Out 0° 03′ 30″ (Out 0.06°)
		Nominal	In 0° 06′ 00″ (In 0.10°)
		Maximum	In 0° 15′ 30″ (In 0.26°)

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

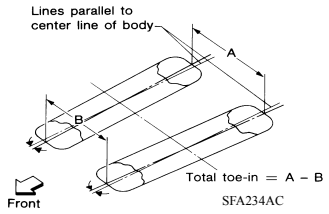
Rear Wheel Alignment (Unladen*)

INFOID:0000000013529649

WARNING:

If the vehicle is equipped with the Intelligent Cruise Control (ICC) system and the rear toe has been adjusted during a wheel alignment, the ICC sensor must be aligned.

Item		Standard
Camber Degree minute (Decimal degree)	Minimum	–1° 15′ (–1.25°)
	Nominal	–0° 45′ (–0.75°)
	Maximum	–0° 15′ (–0.25°)



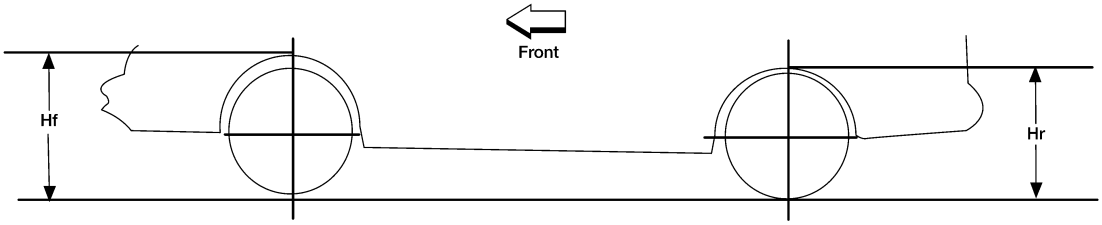
Total toe-in	Distance (A - B)	Minimum	In 0.5 mm (In 0.020 in)
		Nominal	In 3.3 mm (In 0.130 in)
		Maximum	In 6.1 mm (In 0.240 in)
	Angle (LH and RH) Degree minute (Decimal degree)	Minimum	In 0° 2′ (In 0.04°)
		Nominal	In 0° 14′ (In 0.24°)
		Maximum	In 0° 26′ (In 0.44°)

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

Wheelarch Height (Unladen*)

INFOID:0000000013529648

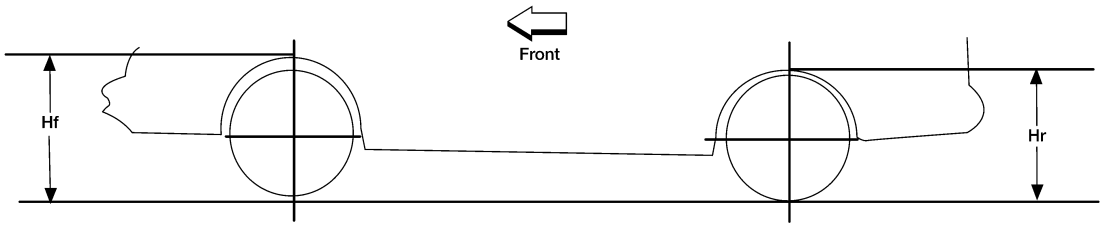
UNITED STATES



Tire size	235/65R18	235/55R20
Front (Hf)	835 mm (32.87 in)	834 mm (32.83 in)
Rear (Hr)	824 mm (32.44 in)	822 mm (32.36 in)

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

CANADA



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Tire size	235/65R18	235/55R20
Front (Hf)	836 mm (32.91 in)	834 mm (32.83 in)
Rear (Hr)	824 mm (32.44 in)	822 mm (32.36 in)

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

Brake Specifications

INFOID:0000000013529647

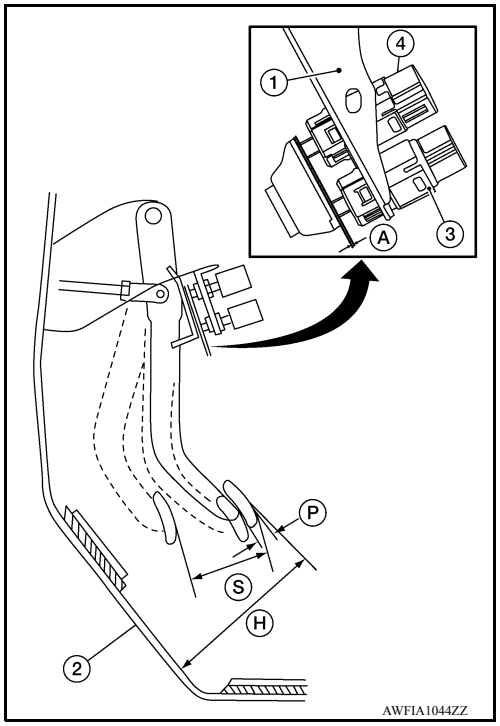
Unit: mm (in)

Front disc brake	Cylinder bore diameter	45.0 (1.772) × 2
	Pad length × width × thickness	131.4 (5.173) × 53.0 (2.087) × 10 (0.394)
	Disc brake rotor outer diameter × thickness	320 (12.598) × 28 (1.102)
Rear disc brake	Cylinder bore diameter	42.86 (1.6874)
	Pad length × width × thickness	83 (3.268) × 33 (1.299) × 8.5 (0.335)
	Disc brake rotor outer diameter × thickness	308 (12.126) × 16 (0.630)
Master cylinder	Cylinder bore diameter	27 (1.063)
Control valve	Valve type	Electric brake force distribution

Brake Pedal

INFOID:0000000013529646

Unit: mm (in)



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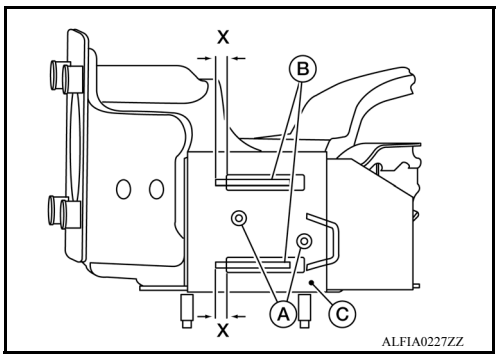
Item	Standard

Brake pedal height (H)	196.1 – 206.1 (7.72 – 8.11)
Clearance (A) between brake pedal bracket, stop lamp switch (3) and brake pedal position switch (4) contact ends	0.74 – 1.96 (0.0291 – 0.0772)
Brake pedal full stroke (S)	135.8 (5.35)
Brake pedal play (P)	4.6 (0.18)

Unit: mm (in)



Overlap distance (X) between sub-bracket (B) and slide plate (C)	5.5 ± 0.5 (0.22 ± 0.02)

Front Disc Brake

INFOID:0000000013529645

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2 (0.079)
Disc brake rotor	Wear thickness	26 (1.024)
	Thickness variation (measured at 8 positions)*	0.004 (0.0002)
	Runout (with disc brake rotor attached to the vehicle)	0.040 (0.0016) or less

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

Rear Disc Brake

INFOID:0000000013529644

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2 (0.079)
Disc brake rotor	Wear thickness	14 (0.551)
	Thickness variation (measured at 8 positions)*	0.010 (0.0004)
	Runout (with disc brake rotor attached to the vehicle)	0.05 (0.0020) or less

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

Fluids and Lubricants

INFOID:0000000013529643

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

Fluid types		Capacity (Approximate)		
		Metric	US measure	Imp measure
Fuel		71.9 ℓ	19 gal	15-7/8 gal
Engine oil Drain and refill	With oil filter change	4.8 ℓ	5-1/8 qt	4-1/4 qt
	Without oil filter change	4.5 ℓ	4-3/4 qt	4 qt
	Dry engine (Over-haul)	5.2 ℓ	5-1/2 qt	4-5/8 qt

QUICK REFERENCE CHART: MURANO

2016

Fluid types	Capacity (Approximate)		
	Metric	US measure	Imp measure
Engine coolant (with reservoir at MAX level)	8.7 ℓ	9-1/4 qt	7-5/8 qt
CVT fluid	8.8 ℓ	9-1/4 qt	7-3/4 qt
Differential gear oil	0.5 ℓ	1 pt	7/8 pt
Transfer fluid	0.31 ℓ	5/8 pt	1/2 pt
Power steering fluid (E-PSF)	1.0 ℓ	1-1/8 qt	7/8 qt
Brake fluid	—	—	—
Multi-purpose grease	—	—	—
Windshield washer fluid	4.6 ℓ	4-7/8 qt	4 qt
Air conditioning system refrigerant	0.55 ± 0.03 kg	1.21 ± 0.11 lb	1.21 ± 0.11 lb
Air conditioning system oil	100 m ℓ	3.4 fl oz	3.5 fl oz