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NISSAN NV
MODEL F80 SERIES

QUICK REFERENCE INDEX

FOREWORD

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

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.
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.*

_____

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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?

_____

_____

_____

_____

DATE: _____ YOUR NAME: _____ POSITION: _____

DEALER: _____ DEALER NO.: _____ ADDRESS: _____

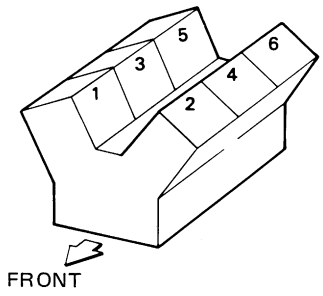
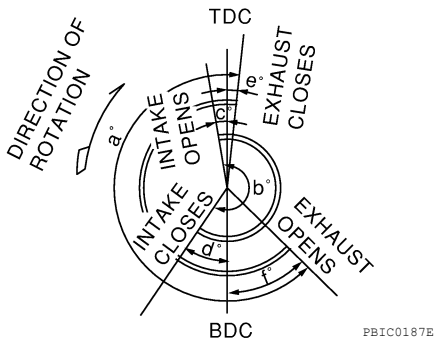
CITY:_____ STATE/PROV./COUNTRY: _____ ZIP/POSTAL CODE: _____

SQUICK REFERENCE CHART: NV

Engine Tune-up Data: VQ40DE

INFOID:0000000007279071

GENERAL SPECIFICATIONS

Cylinder arrangement		V-6
Displacement cm^3(cu in)		3,954 (241.30)
Bore and stroke mm (in)		95.5 × 92.0 (3.76 × 3.622)
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		9.7
Compression pressure kPa (kg/cm^2, psi)/300 rpm	Standard	1,275 (13.0, 185)
	Minimum	981 (10.0, 142)
	Differential limit between cylinders	98 (1.0, 14)
Cylinder number	 SEM713A	
Valve timing (Intake valve timing control - “OFF”)	 PBIC0187E	

Unit: degree

a	b	c	d	e	f
244	240	–4	64	6	58

DRIVE BELT

Tension of drive belts	Auto adjustment by auto-tensioner

SPARK PLUG

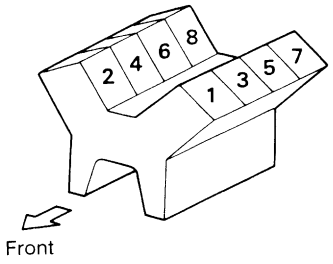
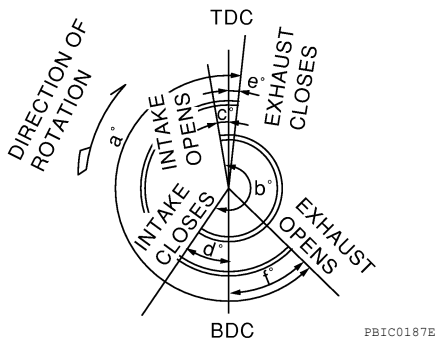
Make	NGK
Standard type*	DILFR5A-11
Gap (nominal)	1.1 mm (0.043 in)

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

Engine Tune-up Data: VK56DE

INFOID:0000000007279070

GENERAL SPECIFICATIONS

Cylinder arrangement		V-8
Displacement cm^3(in^3)		5,552 (338.80)
Bore and stroke mm (in)		98 x 92 (3.86 x 3.62)
Valve arrangement		DOHC
Firing order		1-8-7-3-6-5-4-2
Number of piston rings	Compression	2
	Oil	1
Number of main bearings		5
Compression ratio		9.8:1
Compression pressure kPa (kg/cm^2, psi)/rpm	Standard	1,520 (15.5, 220)/200
	Minimum	1,324 (13.5, 192)/200
	Differential limit between cylinders	98 (1.0, 14)/200
Cylinder number	 SEM957C	
Valve timing	 PBIC0187E	

Unit: degree

a	b	c	d	e	f
244°	232°	-8°	60°	10°	54°

DRIVE BELTS

Tension of drive belts	Auto adjustment by auto-tensioner

SPARK PLUG

Unit: mm (in)

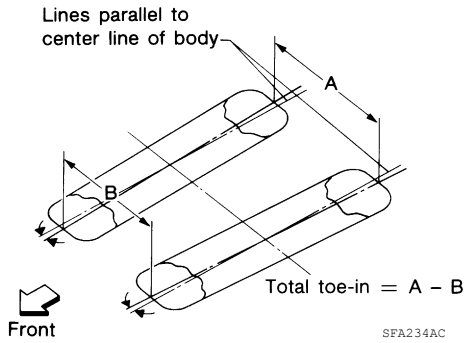
Make	NGK
Model	Standard model
Standard type*	DILFR5A-11
Gap (Nominal)	1.1 (0.043)

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

Front Wheel Alignment (Unladen*1)

INFOID:0000000007279069

Vehicle type		NV1500/2500	NV3500	Passenger van
Camber Degree minute (decimal degree)	Minimum	-0° 30′ (-0.50°)	-0° 30′ (-0.50°)	-0° 30′ (-0.50°)
	Nominal	0° 00′ (0.00°)	0° 00′ (0.00°)	0° 00′ (0.00°)
	Maximum	0° 30′ (0.50°)	0° 30′ (0.50°)	0° 30′ (0.50°)
	Cross camber	0° 45′ (0.75°) or less	0° 45′ (0.75°) or less	0° 45′ (0.75°) or less
Caster Degree minute (decimal degree)	Minimum	5° 40′ (5.67°)	5° 25′ (5.42°)	5° 40′ (5.67°)
	Nominal	6° 10′ (6.17°)	5° 55′ (5.92°)	6° 10′ (6.17°)
	Maximum	6° 40′ (6.67°)	6° 25′ (6.42°)	6° 40′ (6.67°)
	Cross caster	0° 45′ (0.75°) or less	0° 45′ (0.75°) or less	0° 45′ (0.75°) or less
Kingpin inclination (reference only) Degree minute (decimal degree)		8° 55′ (8.92°)	8° 55′ (8.92°)	8° 55′ (8.92°)



Toe-in	Total toe-in	Minimum	5.0 mm (0.20 in)	5.2 mm (0.20 in)	5.0 mm (0.20 in)
		Nominal	6.0 mm (0.24 in)	6.2 mm (0.24 in)	6.0 mm (0.24 in)
		Maximum	7.0 mm (0.28 in)	7.2 mm (0.28 in)	7.0 mm (0.28 in)
	Angle (left or right) Degree minute (decimal degree)	Minimum	0° 11′ (0.18°)	0° 11′ (0.18°)	0° 11′ (0.18°)
		Nominal	0° 13′ (0.22°)	0° 13′ (0.22°)	0° 13′ (0.22°)
		Maximum	0° 15′ (0.25°)	0° 15′ (0.25°)	0° 15′ (0.25°)
Wheel turning angle (full turn)	Inside Degree minute (decimal degree)		35° 30′– 39° 30′ *2 (35.50°– 39.50°)	35° 30′– 39° 30′ *2 (35.50°– 39.50°)	35° 30′– 39° 30′ *2 (35.50°– 39.50°)
	Outside Degree minute (decimal degree)		35° 30′ (35.50°)	35° 30′ (35.50°)	35° 30′ (35.50°)

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

*2: Target value 38° 31′ (38.52°)

General Specification (Rear)

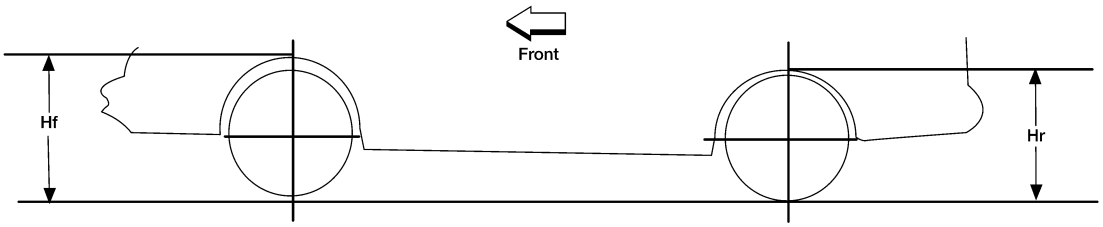
INFOID:0000000007279067

Suspension type	Rigid axle with semi-elliptic leaf spring
Shock absorber type	Double-acting hydraulic

Wheelarch Height (Unladen*1)

INFOID:0000000007279068

Unit: mm (in)



LEIA0085E

Vehicle type	NV1500/2500	NV3500	Passenger van
Tire Size	245/70R17	245/75R17	245/70R17
Front wheel arch height (Hf)	888 (35.0)	900 (35.4)	888 (35.0)
Rear wheel arch height (Hr)	922 (36.3)	947 (37.3)	922 (36.3)

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

Brake Specifications

INFOID:0000000007278844

Unit: mm (in)

Front brake	Cylinder bore diameter	57.15 (2.250) × 2
	Pad length × width × thickness	192.0 (7.56) × 39.5 (1.555) x 14.0 (0.551)
	Rotor outer diameter × thickness	359.75 (14.16) × 38.0 (1.496)
Rear brake	Cylinder bore diameter	42.86 (1.687) × 2
	Pad length × width × thickness	192.0 (7.56) × 61.7 (2.429) x 11.0 (0.433)
	Rotor outer diameter × thickness	364.75 (14.36) × 30.0 (1.181)
Control valve	Valve type	Electric brake force distribution

Brake Pedal

INFOID:0000000007278845

Unit: mm (in)

Item	Standard
Brake pedal height	191 (7.52) – 201 (7.91)
Clearance between brake pedal bracket and the threaded end of stop lamp switch and ASCD brake switch (if equipped).	0.74 (0.0291) – 1.96 (0.0772)

Front Disc Brake

INFOID:0000000007278842

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	1.0 (0.039)
Disc rotor	Wear thickness	36.5 (1.437)
	Thickness variation (measured at 8 positions)	0.010 (0.0004)
	Runout (with it attached to the vehicle)	0.040 (0.0016)

Rear Disc Brake

INFOID:0000000007278843

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	1.0 (0.039)
Disc rotor	Wear thickness	28.5 (1.122)
	Thickness variation (measured at 8 positions)	0.010 (0.0004)
	Runout (with it attached to the vehicle)	0.070 (0.0028)

Fluids and Lubricants

INFOID:0000000007278841

FOR VQ40DE ENGINE EQUIPPED MODELS

VQ40DE

Description		Capacity (Approximate)		
		Metric	US measure	Imp measure
Fuel		105.8 ℓ	28 gal	23 1/4 gal
Engine oil Drain and refill	With oil filter change	5.1 ℓ	5 3/8 qt	4 1/2 qt
	Without oil filter change	4.8 ℓ	5 1/8 qt	4 1/4 qt
	Dry engine (engine over-haul)	6.3 ℓ	6 5/8 qt	5 1/2 qt
Cooling system	(With reservoir at MAX level)	12.7 ℓ	13 3/8 qt	11 1/8 qt
Automatic transmission fluid (ATF)		10.6 ℓ	11 1/4 qt	9 3/8 qt
Rear differential gear oil		2.6 ℓ	5 1/2 pt	4 5/8 pt
Power steering fluid (PSF)		1.4 ℓ	3 pt	2 1/2 pt
Brake fluid		—	—	—
Multi-purpose grease		—	—	—
Windshield washer fluid		4.5 ℓ	4 3/4 qt	4 qt
Air conditioning system refrigerant	With rear A/C	1.20 ± 0.05 kg	2.64 ± 0.11 lb	2.64 ± 0.11 lb
	Without rear A/C	0.85 ± 0.05 kg	1.87 ± 0.11 lb	1.87 ± 0.11 lb
Air conditioning system oil	With rear A/C	230 m ℓ	7.8 fl oz	8.1 fl oz
	Without rear A/C	180 m ℓ	6.1 fl oz	6.3 fl oz

FOR VK56DE ENGINE EQUIPPED MODELS

VK56DE

Description		Capacity (Approximate)		
		Metric	US measure	Imp measure
Fuel		105.8 ℓ	28 gal	23 1/4 gal
Engine oil Drain and refill	With oil filter change	6.5 ℓ	6 7/8 qt	5 3/4 qt
	Without oil filter change	6.2 ℓ	6 1/2 qt	5 1/2 qt
	Dry engine (engine over-haul)	7.6 ℓ	8 qt	6 3/4 qt
Cooling system	With reservoir at MAX level	12.7 ℓ	13 3/8 qt	11 1/8 qt
Automatic transmission fluid (ATF)		10.6 ℓ	11 1/4 qt	9 3/8 qt
Rear differential gear oil		2.6 ℓ	5 1/2 pt	4 5/8 pt
Power steering fluid (PSF)		1.4 ℓ	3 pt	2 1/2 pt

SQUICK REFERENCE CHART: NV

2012

Description		Capacity (Approximate)		
		Metric	US measure	Imp measure
Brake fluid		—	—	—
Multi-purpose grease		—	—	—
Windshield washer fluid		4.5 ℓ	4 3/4 qt	4 qt
Air conditioning system refrigerant	With rear A/C	1.20 ± 0.05 kg	2.64 ± 0.11 lb	2.64 ± 0.11 lb
	Without rear A/C	0.85 ± 0.05 kg	1.87 ± 0.11 lb	1.87 ± 0.11 lb
Air conditioning system oil	With rear A/C	230 m ℓ	7.8 fl oz	8.1 fl oz
	Without rear A/C	180 m ℓ	6.1 fl oz	6.3 fl oz