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NISSAN

NV

MODEL F80 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
	STR Starting System
	ACC Accelerator Control System
C HYBRID	HBC Hybrid Control System
	HBB Hybrid Battery System
	HBR Hybrid Brake System
D TRANSMISSION & DRIVE-LINE	TM Transaxle & Transmission
	DLN Driveline
	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
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
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
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
Q INDEX	IDX Alphabetical Index

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FOREWORD

This manual contains maintenance and repair procedures for the 2016 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.



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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: _____

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 - NV

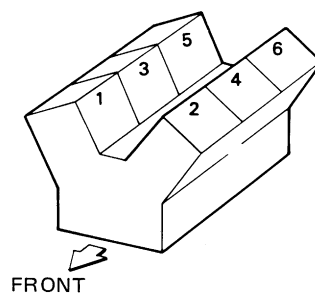
Engine Tune-up Data: VQ40DE

INFOID:0000000013037731

GENERAL SPECIFICATIONS

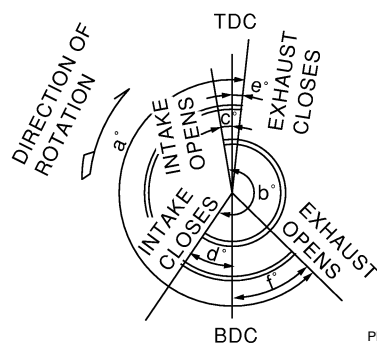
Cylinder arrangement		V-6
Displacement $\text{cm}^3(\text{cu in})$		3,954 (241.30)
Bore and stroke mm (in)		95.5 $\times$ 92.0 (3.76 $\times$ 3.622)
Valve arrangement		DOHC
Firing order		1-2-3-4-5-6
Number of piston rings	Compression	2
	Oil	1
Number of main bearings		4
Compression ratio		9.7
Compression pressure $\text{kPa (kg/cm}^2, \text{psi)/300 rpm}$	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
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SPARK PLUG

QUICK REFERENCE CHART - NV

2016

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

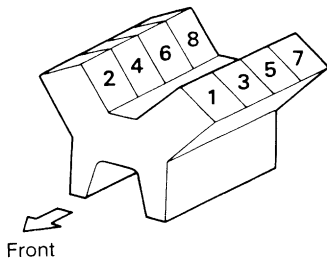
*: Always check with the Parts Department for the latest parts information.

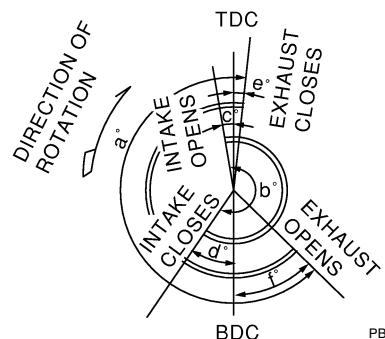
Engine Tune-up Data: VK56DE

INFOID:0000000013037730

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	 Front SEM957C
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Valve timing	 PBIC0187E
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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
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QUICK REFERENCE CHART - NV

2016

SPARK PLUG

Unit: mm (in)

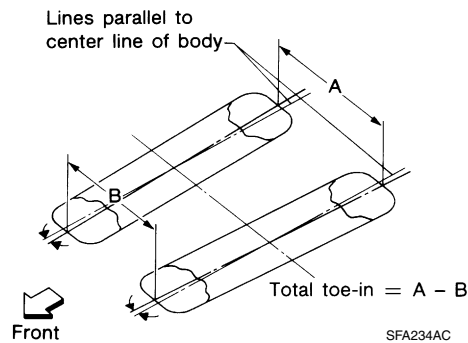
Make	NGK
Model	Standard model
Standard type*	DILFR5A-11
Gap (Nominal)	1.1 (0.043)

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

Front Wheel Alignment (Unladen*1)

INFOID:0000000013037716

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°)



Total toe-in	Distance (A - B)	Minimum	In 1.2 mm (0.05 in)	In 1.2 mm (0.05 in)	In 1.2 mm (0.05 in)
		Nominal	In 6.8 mm (0.27 in)	In 7.0 mm (0.28 in)	In 6.8 mm (0.27 in)
		Maximum	In 12.4 mm (0.48 in)	In 12.8 mm (0.50 in)	In 12.4 mm (0.48 in)
	Angle Degree minute (Decimal degree)	Minimum	In 0° 3' 36" (0.06°)	In 0° 3' 36" (0.06°)	In 0° 3' 36" (0.06°)
		Nominal	In 0° 13' 12" (0.22°)	In 0° 13' 12" (0.22°)	In 0° 13' 12" (0.22°)
		Maximum	In 0° 22' 48" (0.38°)	In 0° 22' 48" (0.38°)	In 0° 22' 48" (0.38°)
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°)

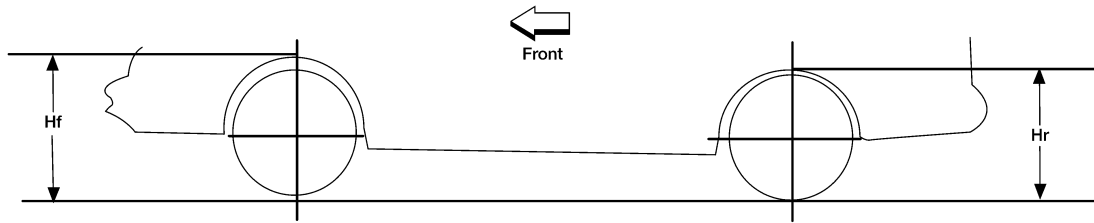
*1: Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

*2: Target value 38° 31' (38.52°)

Wheelarch Height (Unladen*1)

INFOID:0000000013037669

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 Specification

INFOID:0000000013037668

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) × 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) × 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:0000000013037641

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 brake pedal position switch (if equipped).	0.74 (0.0291) – 1.96 (0.0772)

Front Disc Brake

INFOID:0000000013037640

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)

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

Rear Disc Brake

INFOID:0000000013037639

Unit: mm (in)

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

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

FOR USA AND CANADA : Fluids and Lubricants

INFOID:0000000013037638

FOR VQ40DE ENGINE EQUIPPED MODELS

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		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
Engine coolant	(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

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		105.8 ℓ	28 gal	23-1/4 gal

QUICK REFERENCE CHART - NV

2016

Fluid types		Capacity (Approximate)		
		Metric	US measure	Imp measure
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
Engine Coolant	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 MEXICO : Fluids and Lubricants

INFOID:0000000013037637

FOR VQ40DE ENGINE EQUIPPED MODELS

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		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 conditing system refrigerant	Without rear A/C	0.85 ± 0.05 kg	1.87 ± 0.11 lb	1.87 ± 0.11 lb
Air conditioning system oil	Without rear A/C	180 m ℓ	6.1 fl oz	6.3 fl oz