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NISSAN **QUEST** **MODEL E52 SERIES**

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GI General Information

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

TM Transaxle & Transmission

FAX Front Axle

RAX Rear Axle

FSU Front Suspension

RSU Rear Suspension

WT Road Wheels & Tires

BR Brake System

PB Parking Brake System

BRC Brake Control System

ST Steering System

STC Steering Control System

SB Seat Belt

SR SRS Airbag

SRC SRS Airbag Control System

VTL Ventilation System

HA Heater & Air Conditioning System

HAC Heater & Air Conditioning Control System

INT Interior

IP Instrument Panel

SE Seat

ADP Automatic Drive Positioner

DLK Door & Lock

SEC Security Control System

GW Glass & Window System

PWC Power Window Control System

RF Roof

EXT Exterior

BRM Body Repair

MIR Mirrors

EXL Exterior Lighting System

INL Interior Lighting System

WW Wiper & Washer

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

AV Audio, Visual & Navigation System

CCS Cruise Control System

DAS Driver Assistance System

MA Maintenance

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FOREWORD

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

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 MOTOR CO., LTD.



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 QUEST

ENGINE TUNE-UP DATA (VQ35DE)

PFP:00000

ELS0003W

Engine model		VQ35DE
Firing order		1-2-3-4-5-6
Idle speed	rpm	650 ± 50
CVT (In "P" or "N" position)		
Ignition timing (BTDC at idle speed)		12° ± 2°
CVT (In "P" or "N" position)		
Tensions of drive belt		Auto adjustment by auto tensioner
Radiator cap relief pressure	kPa (kg/cm ² , psi)	
	Standard	122.3 - 151.7 (1.2 - 1.5, 17.7 - 22.0)
	Limit	108 (1.1, 15.6)
Cooling system leakage testing pressure	kPa (kg/cm ² , psi)	156 (1.59, 22.6)
Compression pressure	kPa (kg/cm ² , psi)/rpm	
	Standard	1,275 (13.0, 185)/300
	Minimum	981 (10.0, 142)/300
Spark plug	Make	DENSO
	Standard type	FXE22HR11
	Gap	
	Standard	1.1 mm (0.043 in)
	Limit	1.4 mm (0.055 in)

FRONT WHEEL ALIGNMENT

ELS0003X

FOR USA MODELS

Item		Standard	
		Left side	Right 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°)
	Left and right difference*1	-0° 18' (-0.30°) - 0° 48' (0.80°)	
Caster Degree minute (Decimal degree)	Minimum	3° 55' (3.92°)	4° 05' (4.09°)
	Nominal	4° 40' (4.67°)	4° 50' (4.83°)
	Maximum	5° 25' (5.41°)	5° 35' (5.58°)
	Left and right difference*1	-0° 18' (-0.30°) - 0° 48' (0.80°)	
Kingpin inclination Degree minute (Decimal degree)	Minimum	12° 00' (12.00°)	
	Nominal	12° 45' (12.75°)	
	Maximum	13° 30' (13.50°)	
Toe-in	Total toe-in Distance	Minimum	Out 0.4 mm (0.016 in)
		Nominal	In 0.6 mm (0.024 in)
		Maximum	In 1.6 mm (0.063 in)
	Toe angle (left wheel or right wheel) Degree minute (Decimal degree)	Minimum	In 0° 02' (0.04°)
		Nominal	In 0° 04' (0.07°)
		Maximum	In 0° 06' (0.10°)
			In 0° 05' (0.08°)

Measure value under unladen*2 conditions.

*1: A difference when assuming the left side a standard.

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

FOR CANADA MODELS

For 3.5S Grade

Item		Standard	
		Left side	Right 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°)
	Left and right difference*1	-0° 18' (-0.30°) - 0° 48' (0.80°)	
Caster Degree minute (Decimal degree)	Minimum	3° 50' (3.84°)	4° 05' (4.09°)
	Nominal	4° 35' (4.58°)	4° 50' (4.83°)
	Maximum	5° 20' (5.33°)	5° 35' (5.58°)
	Left and right difference*1	-0° 18' (-0.30°) - 0° 48' (0.80°)	
Kingpin inclination Degree minute (Decimal degree)	Minimum	12° 00' (12.00°)	
	Nominal	12° 45' (12.75°)	
	Maximum	13° 30' (13.50°)	
Toe-in	Total toe-in Distance	Minimum	Out 0.4 mm (0.016 in)
		Nominal	In 0.6 mm (0.024 in)
		Maximum	In 1.6 mm (0.063 in)
	Toe angle (left wheel or right wheel) Degree minute (Decimal degree)	Minimum	In 0° 02' (0.04°)
		Nominal	In 0° 04' (0.07°)
		Maximum	In 0° 06' (0.10°)

Measure value under unladen*2 conditions.

*1: A difference when assuming the left side a standard.

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

For 3.5SV Grade

Item		Standard	
		Left side	Right 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°)
	Left and right difference*1	-0° 18' (-0.30°) - 0° 48' (0.80°)	
Caster Degree minute (Decimal degree)	Minimum	3° 50' (3.84°)	4° 00' (4.00°)
	Nominal	4° 35' (4.58°)	4° 45' (4.75°)
	Maximum	5° 20' (5.33°)	5° 30' (5.50°)
	Left and right difference*1	-0° 18' (-0.30°) - 0° 48' (0.80°)	
Kingpin inclination Degree minute (Decimal degree)	Minimum	12° 00' (12.00°)	
	Nominal	12° 45' (12.75°)	
	Maximum	13° 30' (13.50°)	
Toe-in	Total toe-in Distance	Minimum	Out 0.4 mm (0.016 in)
		Nominal	In 0.6 mm (0.024 in)
		Maximum	In 1.6 mm (0.063 in)
	Toe angle (left wheel or right wheel) Degree minute (Decimal degree)	Minimum	In 0° 02' (0.04°)
		Nominal	In 0° 03' (0.05°)
		Maximum	In 0° 05' (0.08°)

Measure value under unladen*2 conditions.

*1: A difference when assuming the left side a standard.

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

For 3.5SL and 3.5LE Grade

Item		Standard	
		Left side	Right 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°)
	Left and right difference* ¹	-0° 18' (-0.30°) - 0° 48' (0.80°)	
Caster Degree minute (Decimal degree)	Minimum	3° 55' (3.92°)	4° 05' (4.09°)
	Nominal	4° 40' (4.67°)	4° 50' (4.83°)
	Maximum	5° 25' (5.41°)	5° 35' (5.58°)
	Left and right difference* ¹	-0° 18' (-0.30°) - 0° 48' (0.80°)	
Kingpin inclination Degree minute (Decimal degree)	Minimum	12° 00' (12.00°)	
	Nominal	12° 45' (12.75°)	
	Maximum	13° 30' (13.50°)	
Toe-in	Total toe-in Distance	Minimum	Out 0.4 mm (0.016 in)
		Nominal	In 0.6 mm (0.024 in)
		Maximum	In 1.6 mm (0.063 in)
	Toe angle (left wheel or right wheel) Degree minute (Decimal degree)	Minimum	In 0° 02' (0.04°)
		Nominal	In 0° 04' (0.07°)
		Maximum	In 0° 06' (0.10°)
			In 0° 01' (0.02°)
			In 0° 03' (0.05°)
			In 0° 05' (0.08°)

Measure value under unladen*² conditions.

*1: A difference when assuming the left side a standard.

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

REAR WHEEL ALIGNMENT

ELS0003Y

FOR USA MODELS

Item		Standard	
Camber Degree minute (Decimal degree)	Minimum	-1° 06' (-1.10°)	
	Nominal	-0° 36' (-0.60°)	
	Maximum	-0° 06' (-0.10°)	
Toe-in	Total toe-in Distance	Minimum	In 1.2 mm (0.047 in)
		Nominal	In 2.8 mm (0.110 in)
		Maximum	In 4.4 mm (0.173 in)
	Toe angle (left wheel or right wheel) Degree minute (Decimal degree)	Minimum	In 0° 03' (0.05°)
		Nominal	In 0° 07' (0.12°)
		Maximum	In 0° 11' (0.18°)

Measure value under unladen* conditions.

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

FOR CANADA MODELS

Item			Standard	
Wheel size			16 inch	18 inch
Camber Degree minute (Decimal degree)			Minimum	−1° 05′ (−1.08°)
			Nominal	−0° 35′ (−0.58°)
			Maximum	−0° 05′ (−0.09°)
Toe-in	Total toe-in Distance	Minimum	In 0.8 mm (0.031 in)	In 0.9 mm (0.035 in)
		Nominal	In 2.4 mm (0.094 in)	In 2.5 mm (0.098 in)
		Maximum	In 4.0 mm (0.157 in)	In 4.1 mm (0.161 in)
	Toe angle (left wheel or right wheel) Degree minute (Decimal degree)	Minimum	In 0° 02′ (0.04°)	
		Nominal	In 0° 06′ (0.10°)	
		Maximum	In 0° 10′ (0.16°)	

Measure value under unladen* conditions.

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

BRAKE PEDAL

Unit: mm (in)

Item	Standard
Brake pedal height	195.6 – 205.6 (7.70 – 8.09)
Depressed brake pedal height [Depressing 490 N (50 kg, 110 lb) while turning the engine ON]	105.0 (4.13) or more
Clearance between stop lamp switch and brake switch threaded end and the stopper rubber	0.2 – 1.96 (0.008 – 0.0772)
Brake pedal play	3 – 11 (0.12 – 0.43)

BRAKE BOOSTER

Vacuum type

Unit: mm (in)

Item	Standard
Input rod length	127.0 – 128.0 (5.00 – 5.04)

FRONT DISC BRAKE

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
	Wear thickness	26.0 (1.024)
Disc rotor	Runout (with it attached to the vehicle)	0.040 (0.0016)

REAR DISC BRAKE

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
	Wear thickness	14.0 (0.551)
Disc rotor	Runout (with it attached to the vehicle)	0.050 (0.0020)

QUICK REFERENCE CHART QUEST

2012

FREFILL CAPACITIES

UNIT		Liter	US measure
Fuel tank		75.6	20 gal
Engine coolant capacity (With reservoir tank at "MAX" level)		11.3	12 qt
Engine oil capacity	Drain and refill		
	With oil filter change	4.6	4-7/8 qt
	Without oil filter change	4.3	4-1/2 qt
	Dry engine (Overhaul)	5.3	5-5/8 qt
Transmission	CVT	10.2	10-6/8 qt
Power steering system		1.0	1-1/8 qt
Air conditioning system	Compressor oil	0.25	7.1 fl oz
	Refrigerant	0.9 kg	1.98 lb