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NISSAN QUEST

MODEL V42 SERIES

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
	ACC Accelerator Control System
C TRANSMISSION/ TRANSAXLE	AT Automatic Transaxle
D DRIVELINE/AXLE	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	PS Power Steering System
H RESTRAINTS	SB Seat Belts
	SRS Supplemental Restraint System (SRS)
I BODY	BL Body, Lock & Security System
	GW Glasses, Window System & Mirrors
	RF Roof
	EI Exterior & Interior
	IP Instrument Panel
	SE Seat
	AP Adjustable Pedal
J AIR CONDITIONER	ATC Automatic Air Conditioner
	MTC Manual Air Conditioner
K ELECTRICAL	SC Starting & Charging System
	LT Lighting System
	DI Driver Information System
	WW Wiper, Washer & Horn
	BCS Body Control System
	LAN LAN System
	AV Audio Visual, Navigation & Telephone System
	ACS Auto Cruise Control System
	PG Power Supply, Ground & Circuit Elements
L MAINTENANCE	MA Maintenance
M INDEX	IDX Alphabetical Index

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FOREWORD

This manual contains maintenance and repair procedures for the 2004 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.



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Technical Publications Department
• Gardena, California



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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

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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: _____

QUICK REFERENCE CHART: QUEST

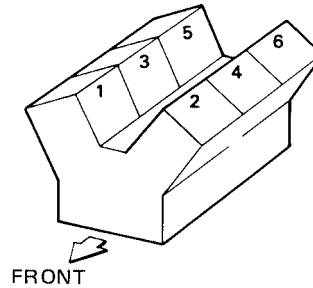
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Engine Tune-Up Data

ELS0014N

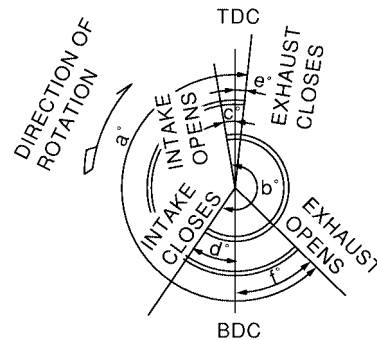
Cylinder arrangement		V-6
Displacement cm^3 (cu in)		3,498 (213.45)
Bore and stroke mm (in)		95.5 x 81.4 (3.760 x 3.205)
Valve arrangement		DOHC
Firing order		1-2-3-4-5-6
Number of piston rings	Compression	2
	Oil	1
Number of main bearings		4
Compression ratio		10.0:1
Compression pressure kPa (kg/cm^2 , 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 (IVTC - OFF)

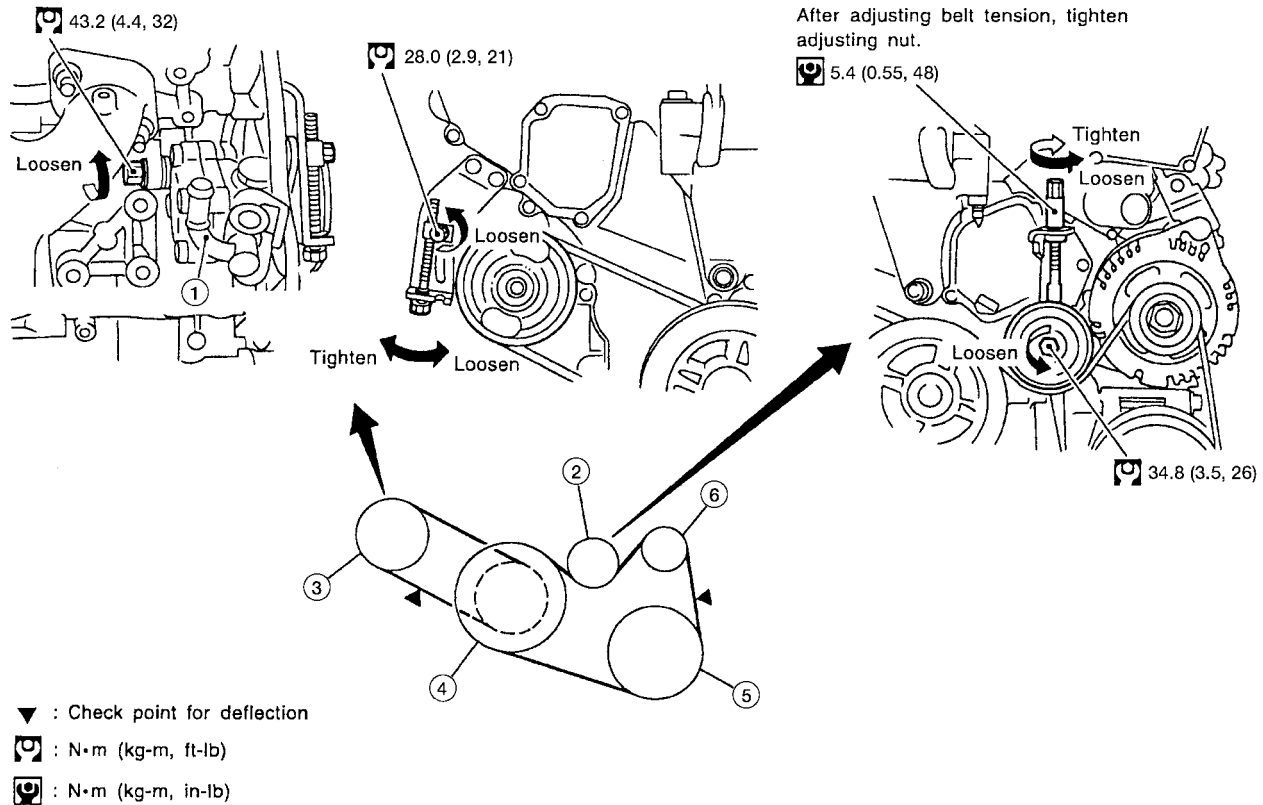


PBIC0187E

Unit: degree

a	b	c	d	e	f
240°	238°	- 6°	64°	8°	52°

Drive Belt Deflection and Tension



WBIA0385E

- | | | |
|----------------------------|-------------------------------|----------------------------|
| 1. Power steering oil pump | 2. Idler pulley | 3. Power steering oil pump |
| 4. Crankshaft pulley | 5. Air conditioner compressor | 6. Generator |

	Deflection adjustment			Tension adjustment*		
	Used belt		New belt	Used belt		New belt
	Limit	After adjustment		Limit	After adjustment	
Generator and air conditioner compressor	7 (0.28)	4.2 - 4.6 (0.17 - 0.18)	3.7 - 4.1 (0.15 - 0.16)	294 (30, 66)	730 - 818 (74.5 - 83.5, 164 - 184)	838 - 926 (85.5 - 94.5, 188 - 208)
Power steering oil pump	11 (0.43)	7.3 - 8.0 (0.29 - 0.30)	6.5 - 7.2 (0.26 - 0.28)	196 (20, 44)	495 - 583 (50.5 - 59.5, 111 - 131)	603 - 691 (61.5 - 70.5, 135.6 - 155.4)
Applied pushing force	98 N (10 kg, 22 lb)			—		

*: If belt tension gauge cannot be installed at check points shown, check drive belt tension at different location on the belt.

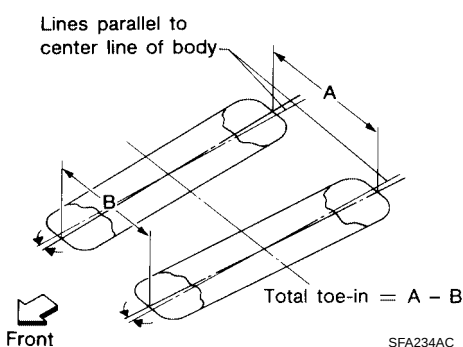
Spark Plugs (Double Platinum Tipped)

Make	NGK
Standard type	PLFR5A-11
Hot type	PLFR4A-11
Cold type	PLFR6A-11
Gap (nominal)	1.1 mm (0.043 in)

Front Wheel Alignment (Unladen*1)

ELS0017X

Tire size		225/65HR16	225/60HR17
Camber degree minute (decimal degree)	Minimum	-1°15' (-1.25°)	
	Nominal	-0°30' (-0.50°)	
	Maximum	0°15' (0.25°)	
	Left and right difference	45' (0.75°) or less	
Caster degree minute (decimal degree)	Minimum	1°57' (1.95°)	
	Nominal	2°42' (2.70°)	
	Maximum	3°27' (3.45°)	
	Left and right difference	45' (0.75°) or less	
Kingpin inclination degree minute (decimal degree)	Minimum	13°39' (13.65°)	
	Nominal	14°24' (14.40°)	
	Maximum	15°09' (15.15°)	



Total toe-in	Distance (A - B) mm (in)	Minimum	-0.75 (-0.0295)
		Nominal	0.25 (0.0098)
		Maximum	1.25 (0.0492)
	Angle (left plus right) degree minute (decimal degree)	Minimum	0° 3' 30" (0.06°)
		Nominal	0° 6' (0.10°)
		Maximum	0° 8' 30" (0.14°)
Wheel turning angle full turn*2	Inside degree minute (decimal degree)	Minimum	35°15' (35.25°)
		Nominal	38°45' (38.75°)
		Maximum	39°45' (39.75°)
	Outside degree minute (decimal degree)	Nominal	32°30' (32.5°)

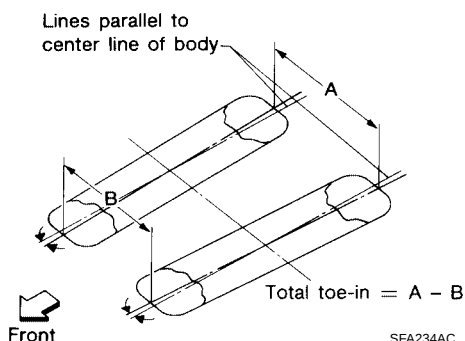
*1: Fuel, engine coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

*2: On power steering models, wheel turning force (at circumference of steering wheel) of 98 to 147 N (10 to 15 kg, 22 to 33 lb) with engine idle.

Rear Wheel Alignment (Unladen*)

ELS0016L

Camber Degree minute (decimal degree)	Minimum	-1° 3' (-1.05°)
	Nominal	-0° 33' (-0.55°)
	Maximum	-0° 3' (-0.05°)



Total toe-in	Distance ("A" - "B") mm (in)	Minimum Nominal Maximum	1.6 (0.063) 3.2 (0.126) 4.8 (0.189)
			-0.2 (-0.008) 0 (0) 0.2 (0.008)
			0° 5' (0.06°) 0° 8' (0.13°) 0° 12' (0.20°)
	Angle (left plus right) Degree minute (decimal degree)	Minimum Nominal Maximum	
	Difference between LH, RH	Minimum Nominal Maximum	

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

Brake

ELS0014Q

Unit: mm (in)

Front brake	Brake model		AD35VB
	Cylinder bore diameter		47.62 (1.87)
	Pad Length × width × thickness		132.0 × 53.5 × 10.0 (5.20 × 2.11 × 0.39)
	Rotor outer diameter × thickness		290 × 28 (11.42 × 1.10)
Rear brake	Brake model		AD14VE
	Cylinder bore diameter		42.86 (1.69)
	Pad Length × width × thickness		83.0 × 33.0 × 8.5 (3.27 × 1.30 × 0.33)
	Rotor outer diameter × thickness		308 × 16 (12.13 × 0.63)
Master cylinder	Cylinder bore diameter		25.4 (1.00)
Brake booster	Booster model		M245T
	Diaphragm diameter	Primary	252 (9.92)
		Secondary	230 (9.06)
Recommended brake fluid			Genuine NISSAN Super Heavy Duty Brake Fluid or equivalent, DOT 3 (US FMVSS No. 116)

Disc Brake - Repair Limits

Unit: mm (in)

Brake model		AD35VB (Front)	AD14VE (Rear)
Pad wear limit	Minimum thickness	2.0 (0.079)	2.0 (0.079)

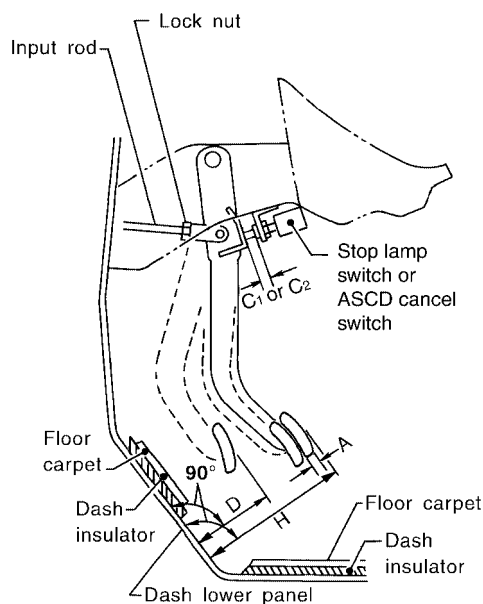
QUICK REFERENCE CHART: QUEST

2004

Brake model		AD35VB (Front)	AD14VE (Rear)
Rotor repair limit	Maximum runout	0.04 (0.0016)	0.05 (0.0020)
	Minimum thickness	26.0 (1.02)	14.0 (0.55)
	Maximum thickness variation (measured at 8 positions)	0.015 (0.0006) or less	

Brake Pedal

Unit: mm (in)



WFIA0160E

Free height "H" *	156.3 - 166.3 (6.15 - 6.55)
Depressed pedal height "D" [under a force of 490 N (50 kg, 110 lb) with engine running *	more than 90.3 (3.55)
Clearance "C ¹ " or "C ² " between pedal stopper and threaded end of stop lamp switch or ASCD switch	0.74 - 1.96 (0.029 - 0.077)
Pedal play "A"	3 - 11 (0.12 - 0.43)

*: Measured from surface of dash reinforcement panel to surface of pedal pad

Refill Capacities

ELS0014R

Description		Capacity (approximate)		
		Metric	US measure	Imp measure
Fuel		75.6 ℓ	20 gal	16 5/8 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	3.7 ℓ	3 7/8 qt	3 1/4 qt
Dry engine (engine overhaul)		5.0 ℓ	5 1/4 qt	4 3/8 qt
Cooling system	With reservoir at MAX level	10.5 ℓ	2 3/4 gal	2 3/8 gal
Automatic transaxle fluid (ATF)	4 A/T	8.9 ℓ	9 3/8 qt	7 7/8 qt
	5 A/T	7.4 ℓ	7 7/8 qt	6 1/2 qt
Power steering fluid (PSF)		1.0 ℓ	2 1/8 pt	1 3/4 pt
Windshield washer fluid		4.5 ℓ	1 1/4 gal	1 gal

QUICK REFERENCE CHART: QUEST

2004

Description	Capacity (approximate)		
	Metric	US measure	Imp measure
Air conditioning system refrigerant	900 ± 50 g	1.98 ± 0.11 lb	1.98 ± 0.11 lb
Air conditioning system lubricants	220 mℓ	7.4 fl oz	7.7 fl oz