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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 2007 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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• 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.*

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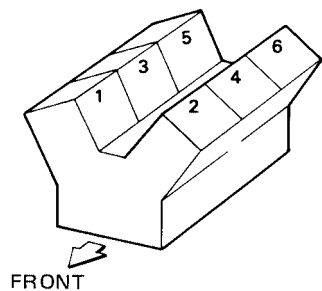
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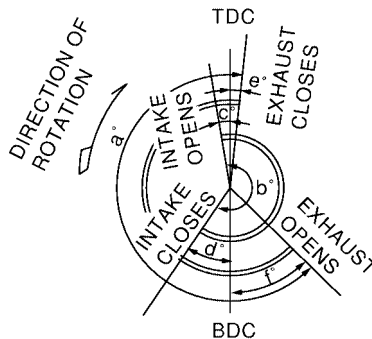
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Engine Tune-Up Data

ELS001XP

Cylinder arrangement		V-6
Displacement		3,498 cm ³ (213.45 in ³)
Bore and stroke		95.5 x 81.4 mm (3.760 x 3.205 in)
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	Standard	1,275 kPa (13.0 kg/cm ² , 185 psi) / 300 rpm
	Minimum	981 kPa (10.0 kg/cm ² , 142 psi) / 300 rpm
	Differential limit between cylinders	98 kPa (1.0 kg/cm ² , 14 psi) / 300 rpm

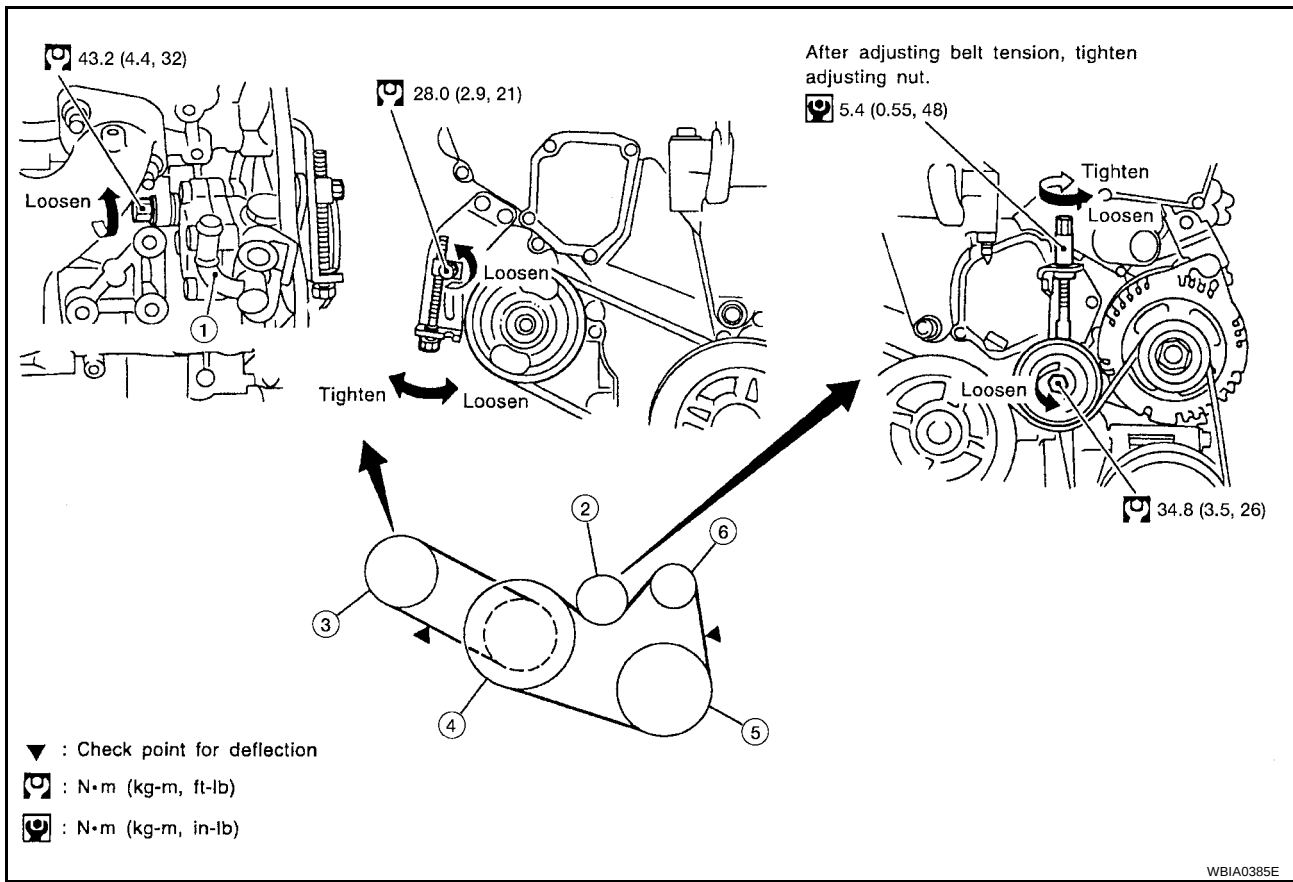
Cylinder number	 FRONT SEM713A
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Valve timing (IVTC - OFF)	 PBIC0187E
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Unit: degree

a	b	c	d	e	f
240°	238°	- 6°	64°	8°	52°

Drive Belt Deflection and Tension



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-f, 22 lb-f)			—		

*: 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)

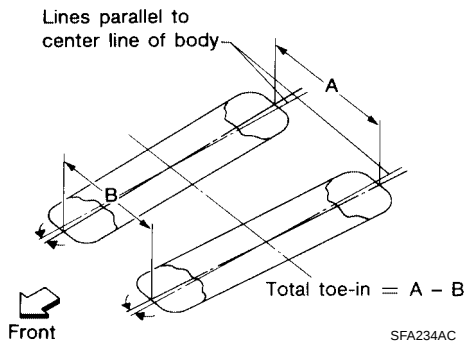
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2007

Front Wheel Alignment (Unladen*1)

ELS001XQ

Market		United States and Canada	Mexico
Camber degree minute (decimal degree)	Minimum	-1° 15' (-1.25°)	-0° 4' (-0.07°)
	Nominal	-0° 30' (-0.50°)	-0° 4' (-0.07°)
	Maximum	0° 15' (0.25°)	0° 41' (0.68°)
	Left and right difference	0° 45' (0.75°) or less	0° 45' (0.75°) or less
Caster degree minute (decimal degree)	Minimum	1° 57' (1.95°)	2° 27' (2.45°)
	Nominal	2° 42' (2.70°)	2° 27' (2.45°)
	Maximum	3° 27' (3.45°)	3° 12' (3.20°)
	Left and right difference	0° 45' (0.75°) or less	0° 45' (0.75°) or less
Kingpin inclination degree minute (decimal degree)	Minimum	13° 39' (13.65°)	13° 42' (13.70°)
	Nominal	14° 24' (14.40°)	13° 42' (13.70°)
	Maximum	15° 09' (15.15°)	14° 27' (14.45°)



Total toe-in	Distance (A - B) mm (in)	Minimum	-0.75 (-0.0295)	-0.75 (-0.0295)
		Nominal	0.25 (0.0098)	0.25 (0.0098)
		Maximum	1.25 (0.0492)	1.25 (0.0492)
	Angle (left plus right) degree minute (decimal degree)	Minimum	-0° 1' 54" (-0.03°)	-0° 1' 54" (-0.03°)
		Nominal	0° 0' 36" (0.01°)	0° 0' 36" (0.01°)
		Maximum	0° 3' 6" (0.05°)	0° 3' 6" (0.05°)
Wheel turning angle full turn*2	Inside degree minute (decimal degree)	Minimum	35° 15' (35.25°)	38° 00' (38.00°)
		Nominal	38° 45' (38.75°)	41° 30' (41.50°)
		Maximum	39° 45' (39.75°)	42° 30' (42.50°)
	Outside degree minute (decimal degree)	Nominal	32° 30' (32.5°)	33° 24' (33.4°)

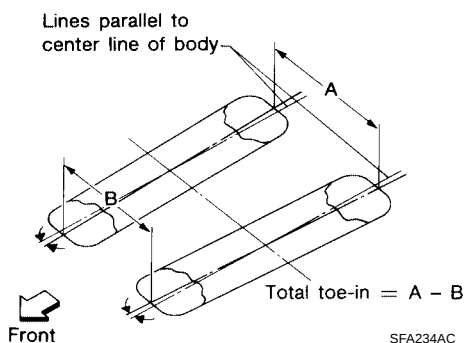
*1: Fuel, engine coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

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

Rear Wheel Alignment (Unladen*)

ELS001XR

Market		United States and Canada	Mexico
Camber Degree minute (Decimal degree)	Minimum	-1° 3' (-1.05°)	0° 3' (0.05°)
	Nominal	-0° 33' (-0.55°)	0° 33' (0.55°)
	Maximum	-0° 3' (-0.05°)	1° 3' (1.05°)



Total toe-in	Distance ("A" - "B") mm (in)	Minimum	1.6 (0.063)	1.6 (0.063)
		Nominal	3.2 (0.126)	3.2 (0.126)
		Maximum	4.8 (0.189)	4.8 (0.189)
	Difference between LH, RH	Minimum	-2.0 (-0.079)	-2.0 (-0.079)
		Nominal	0 (0)	0 (0)
		Maximum	2.0 (0.079)	2.0 (0.079)
	Angle (left plus right) Degree minute (Decimal degree)	Minimum	0° 3' 35" (0.06°)	0° 3' 35" (0.06°)
		Nominal	0° 7' 48" (0.13°)	0° 7' 48" (0.13°)
		Maximum	0° 12' 0" (0.20°)	0° 12' 0" (0.20°)

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

Brake

ELS001XS

Unit: mm (in)

Front brake	Brake model		AD35VB disc brake
	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 disc brake
	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)

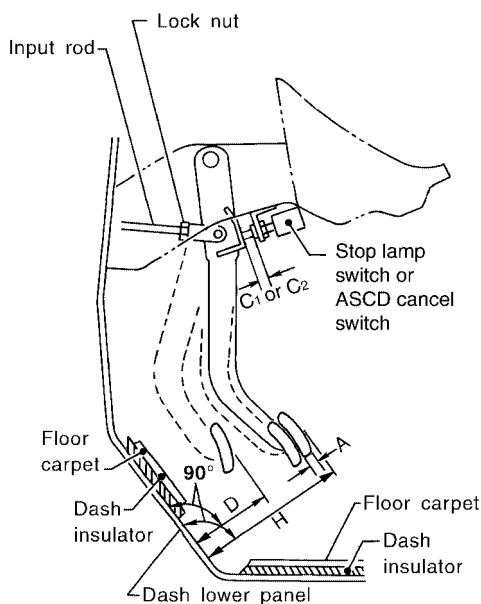
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Brake model		AD35VB (Front)	AD14VE (Rear)
Rotor repair limit	Maximum runout	0.04 (0.0016)	0.05 (0.0020)
	Minimum thickness	26.0 (1.02)	14.0 (0.55)
	Maximum thickness variation (measured at 8 positions)	0.015 (0.0006) or less	

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-f, 110 lb-f) 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

ELS001XT

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)		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
Air conditioning system refrigerant		900 ± 50 g	1.98 ± 0.11 lb	1.98 ± 0.11 lb
Air conditioning system lubricants		220 m ℓ	7.44 fl oz	7.7 fl oz