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QUICK REFERENCE INDEX

**NISSAN
 QUEST**
 MODEL V42 SERIES

| | |
|---|---|
| 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.



NISSAN NORTH AMERICA, INC.
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

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Please describe the issue or problem in detail: _____

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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: _____

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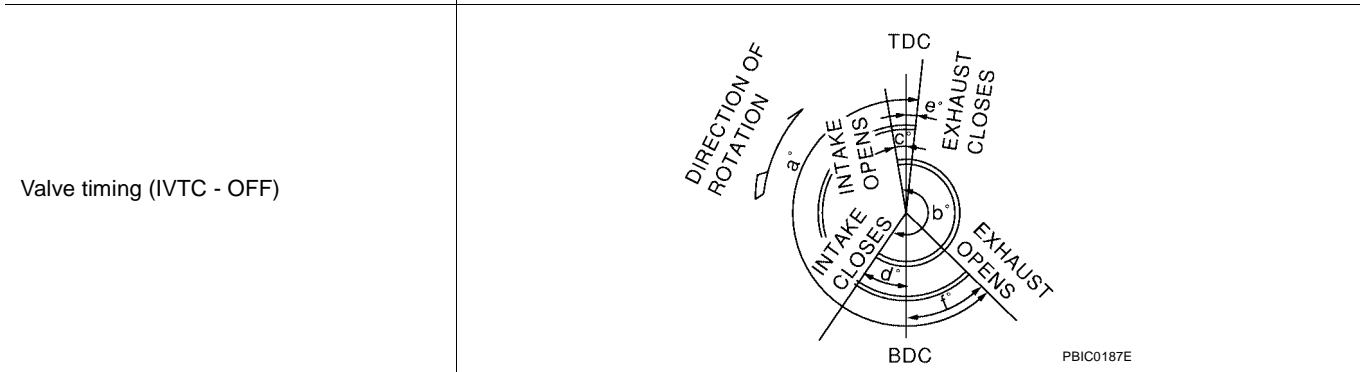
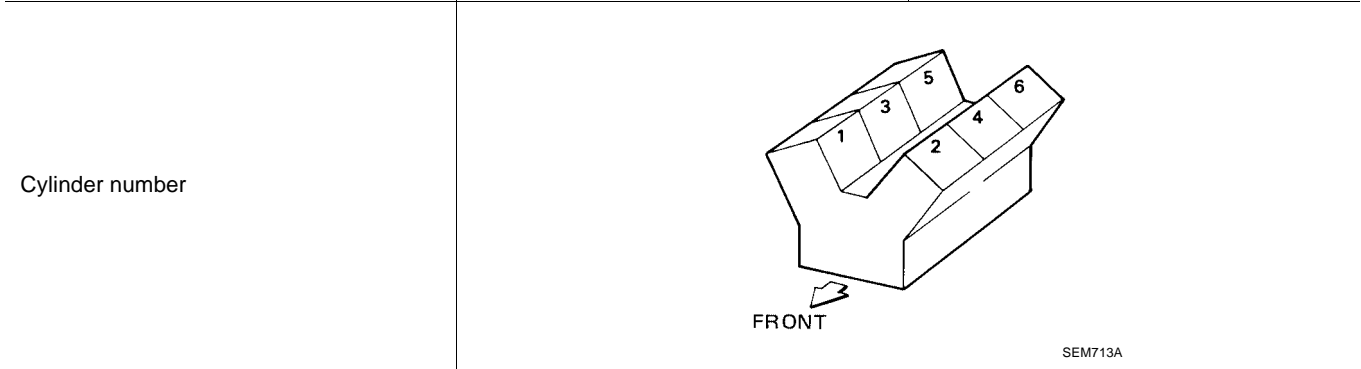
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Engine Tune-Up Data

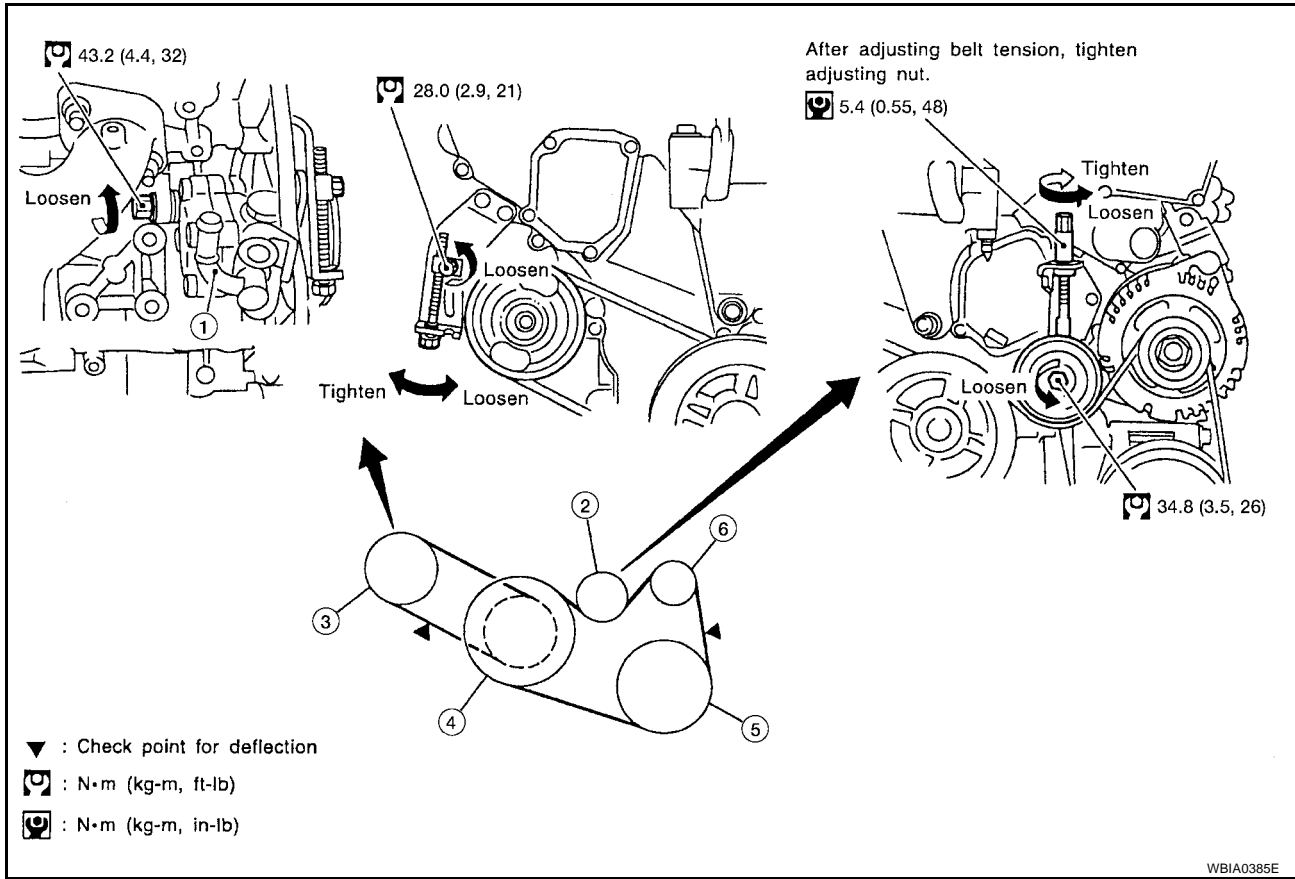
ELS001XP

| | | |
|-------------------------|--------------------------------------|---|
| 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 |



| | | | | | |
|--------------|------|-----|-----|----|-----|
| 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 | | Unit: mm (in) | Tension adjustment* | | Unit: N (kg-f, lb-f) |
|--|-------------------------|-------------------------|-------------------------|---------------------|------------------------------------|--|
| | 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) |

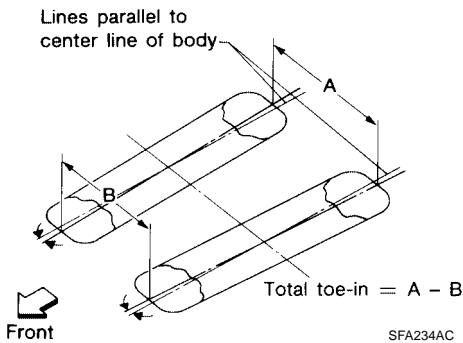
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Front Wheel Alignment (Unladen*1)

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°) |

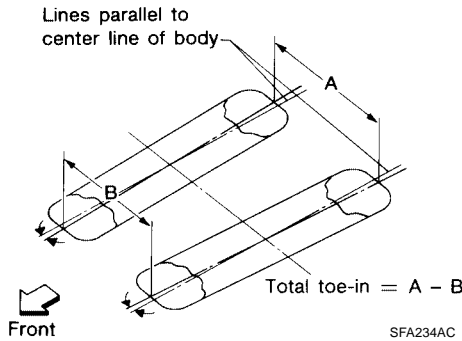
*1: Fuel, engine coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

*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) |

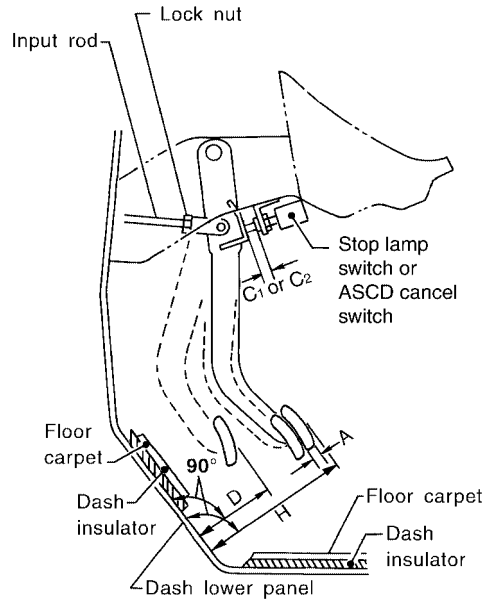
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| Brake model | | AD35VB (Front) | AD14VE (Rear) |
|--------------------|---|------------------------|---------------|
| Rotor repair limit | Maximum runout | 0.04 (0.0016) | 0.05 (0.0020) |
| | Minimum thickness | 26.0 (1.02) | 14.0 (0.55) |
| | Maximum 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 | |