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# NISSAN ALTIMA

MODEL L32 SERIES



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## QUICK REFERENCE INDEX

<b>A GENERAL INFORMATION</b>	<b>GI General Information</b>	
<b>B ENGINE</b>	<b>EM Engine Mechanical</b>	
	<b>LU Engine Lubrication System</b>	
	<b>CO Engine Cooling System</b>	
	<b>EC Engine Control System</b>	
	<b>FL Fuel System</b>	
	<b>EX Exhaust System</b>	
	<b>STR Starting System</b>	
	<b>ACC Accelerator Control System</b>	
	<b>C HYBRID</b>	<b>HBC Hybrid Control System</b>
		<b>HBB Hybrid Battery System</b>
<b>HBR Hybrid Brake System</b>		
<b>D TRANSMISSION &amp; DRIVE-LINE</b>	<b>CL Clutch</b>	
	<b>TM Transaxle &amp; Transmission</b>	
	<b>DLN Driveline</b>	
	<b>FAX Front Axle</b>	
	<b>RAX Rear Axle</b>	
<b>E SUSPENSION</b>	<b>FSU Front Suspension</b>	
	<b>RSU Rear Suspension</b>	
	<b>SCS Suspension Control System</b>	
	<b>WT Road Wheels &amp; Tires</b>	
	<b>F BRAKES</b>	<b>BR Brake System</b>
<b>PB Parking Brake System</b>		
<b>BRC Brake Control System</b>		
<b>G STEERING</b>	<b>ST Steering System</b>	
<b>H RESTRAINTS</b>	<b>STC Steering Control System</b>	
	<b>SB Seat Belt</b>	
	<b>SBC Seat Belt Control System</b>	
	<b>SRS SRS Airbag</b>	
	<b>SRC SRS Airbag Control System</b>	
<b>I VENTILATION, HEATER &amp; AIR CONDITIONER</b>	<b>VTL Ventilation System</b>	
	<b>HA Heater &amp; Air Conditioning System</b>	
	<b>HAC Heater &amp; Air Conditioning Control System</b>	
<b>J BODY INTERIOR</b>	<b>INT Interior</b>	
	<b>IP Instrument Panel</b>	
	<b>SE Seat</b>	
	<b>ADP Automatic Drive Positioner</b>	
	<b>DLK Door &amp; Lock</b>	
	<b>SEC Security Control System</b>	
<b>K BODY EXTERIOR, DOORS, ROOF &amp; VEHICLE SECURITY</b>	<b>GW Glass &amp; Window System</b>	
	<b>PWC Power Window Control System</b>	
	<b>RF Roof</b>	
	<b>EXT Exterior</b>	
	<b>BRM Body Repair Manual</b>	
	<b>L DRIVER CONTROLS</b>	<b>MIR Mirrors</b>
		<b>EXL Exterior Lighting System</b>
<b>INL Interior Lighting System</b>		
<b>WW Wiper &amp; Washer</b>		
<b>DEF Defogger</b>		
<b>HRN Horn</b>		
<b>PWO Power Outlet</b>		
<b>BCS Body Control System</b>		
<b>LAN LAN System</b>		
<b>PCS Power Control System</b>		
<b>M ELECTRICAL &amp; POWER CONTROL</b>	<b>CHG Charging System</b>	
	<b>PG Power Supply, Ground &amp; Circuit Elements</b>	
	<b>MWI Meter, Warning Lamp &amp; Indicator</b>	
	<b>WCS Warning Chime System</b>	
	<b>SN Sonar System</b>	
	<b>AV Audio, Visual &amp; Navigation System</b>	
<b>O CRUISE CONTROL</b>	<b>CCS Cruise Control System</b>	
<b>P MAINTENANCE</b>	<b>MA Maintenance</b>	

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# FOREWORD

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This manual contains maintenance and repair procedure for the 2007 NISSAN ALTIMA.

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

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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



## 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:

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39001 Sunrise Drive, P.O. Box 9200  
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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.*

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**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: \_\_\_\_\_

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**Is the organization of the manual clear and easy to follow? (circle your answer) YES NO**  
Please comment: \_\_\_\_\_

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**What information should be included in NISSAN Service Manuals to better support you in servicing or repairing customer vehicles?**

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DATE: \_\_\_\_\_ YOUR NAME: \_\_\_\_\_ POSITION: \_\_\_\_\_

DEALER: \_\_\_\_\_ DEALER NO.: \_\_\_\_\_ ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE/PROV./COUNTRY: \_\_\_\_\_ ZIP/POSTAL CODE: \_\_\_\_\_

**QUICK REFERENCE CHART G35  
ENGINE TUNE-UP DATA (VQ35HR)**

PF0:00000

ELS0003W

Engine model		VQ35HR
Firing order		1-2-3-4-5-6
Idle speed A/T (In "N" position) M/T	rpm	650 ± 50
Ignition timing (BTDC at idle speed)		15° ± 5° (without 4WAS) 11° ± 5° (with 4WAS)
CO% at idle		0.7 - 9.9 % and engine runs smoothly
Tensions of drive belts		Auto adjustment by auto tensioner
Radiator cap relief pressure	kPa (kg/cm <sup>2</sup> , psi)	
	Standard	122.3 - 151.7 (1.2 - 1.5, 18 - 22)
	Limit	107 (1.1, 16)
Cooling system leakage testing pressure	kPa (kg/cm <sup>2</sup> , psi)	157 (1.6, 23)
Compression pressure	kPa (kg/cm <sup>2</sup> , psi)/rpm	
	Standard	1,275 (13.0, 185)/300
	Minimum	981 (10.0, 142)/300
	Differential limit between cylinders	98 (1.0, 14)/300
Spark plug (Iridium-tipped type)	Make	DENSO
	Standard type	FXE22HR11
	Gap (Nominal)	1.1 (0.043)

**FRONT WHEEL ALIGNMENT**  
**2WD**

ELS0003X

Tire size		225/55R17	225/50R18	
Camber Degree minute (Decimal degree)	Minimum	-1° 05' (-1.08°)		
	Nominal	-0° 20' (-0.33°)		
	Maximum	0° 25' (0.42°)		
	Left and right difference	0° 33' (0.55°) or less		
Caster Degree minute (Decimal degree)	Minimum	3° 50' (3.83°)	3° 55' (3.92°)	
	Nominal	4° 35' (4.58°)	4° 40' (4.67°)	
	Maximum	5° 20' (5.33°)	5° 25' (5.42°)	
	Left and right difference	0° 39' (0.65°) or less		
Kingpin inclination Degree minute (Decimal degree)	Minimum	6° 35' (6.58°)		
	Nominal	7° 20' (7.33°)		
	Maximum	8° 05' (8.08°)		
Total toe-in	Distance	Minimum	0 mm (0 in)	
		Nominal	1 mm (0.04 in)	
		Maximum	2 mm (0.08 in)	
	Angle (Left wheel or right wheel) Degree minute (Decimal degree)	Minimum	0° 00' (0.00°)	
		Nominal	0° 02' 30" (0.04°)	
		Maximum	0° 05' (0.08°)	

Measure value under unladen\* conditions.

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

**AWD**

Camber Degree minute (Decimal degree)	Minimum	-1° 05' (-1.08°)		
	Nominal	-0° 20' (-0.33°)		
	Maximum	0° 25' (0.42°)		
	Left and right difference	0° 33' (0.55°) or less		
Caster Degree minute (Decimal degree)	Minimum	3° 15' (3.25°)		
	Nominal	4° 00' (4.00°)		
	Maximum	4° 45' (4.75°)		
	Left and right difference	0° 39' (0.65°) or less		
Kingpin inclination Degree minute (Decimal degree)	Minimum	6° 35' (6.58°)		
	Nominal	7° 20' (7.33°)		
	Maximum	8° 05' (8.08°)		
Total toe-in	Distance	Minimum	0 mm (0 in)	
		Nominal	1 mm (0.04 in)	
		Maximum	2 mm (0.08 in)	
	Angle (Left wheel or right wheel) Degree minute (Decimal degree)	Minimum	0° 00' (0.00°)	
		Nominal	0° 02' 30" (0.04°)	
		Maximum	0° 05' (0.08°)	

Measure value under unladen\* conditions.

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

**REAR WHEEL ALIGNMENT**

ELS0003Y

Applied model		2WD		AWD
		Without 4WAS	With 4WAS	
Camber Degree minute (Decimal degree)	Minimum	-1° 20' (-1.33°)	-1° 25' (-1.42°)	-0° 45' (-0.75°)
	Nominal	-0° 50' (-0.83°)	-0° 55' (-0.92°)	-0° 15' (-0.25°)
	Maximum	-0° 20' (-0.33°)	-0° 25' (-0.42°)	0° 15' (0.25°)
Total toe-in	Distance	Minimum	0 mm (0 in)	
		Nominal	2.8 mm (0.110 in)	
		Maximum	5.6 mm (0.220 in)	
	Angle (Left wheel or right wheel) Degree minute (Decimal degree)	Minimum	0° 00' (0.00°)	
		Nominal	0° 07' (0.12°)	
		Maximum	0° 14' (0.23°)	

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.)

Depressed brake pedal height (H1)	171.5 - 181.5 (6.75 - 7.15)
Brake pedal reserve height (H2) [Depressing 490 N (50 kg, 110 lb) while turning the engine ON]	124.0 (4.88) or more

**FRONT DISK BRAKE**

**Front Caliper 1 Piston Type**

Unit : mm (in.)

Brake pad	Wear limit thickness	2.0 (0.079)
Disc rotor	Wear limit thickness	30.0 (1.181)

**Front Caliper 2 Piston Type**

Unit : mm (in.)

Brake pad	Wear limit thickness	2.0 (0.079)
Disc rotor	Wear limit thickness	26.0 (1.024)

**REAR DISK BRAKE**

**Front Caliper 1 Piston Type**

Unit : mm (in.)

Brake pad	Wear limit thickness	2.0 (0.079)
Disc rotor	Wear limit thickness	15.0 (0.591)

**Front Caliper 2 Piston Type**

Unit : mm (in.)

Brake pad	Wear limit thickness	2.0 (0.079)
Disc rotor	Wear limit thickness	14.0 (0.551)

## QUICK REFERENCE CHART G35

### REFILL CAPACITIES

ELS00040

UNIT		Liter	US measure
Fuel tank		76	20 gal
Engine Coolant ( With reservoir tank ) at MAX level		9.0	9-1/2 qt
Engine oil	Drain and refill		
	With oil filter change	4.9	5-1/8 qt
	Without oil filter change	4.6	4-7/8 qt
Dry engine (Overhaul)		5.5	5-3/4 qt
Transmission	A/T	10.3	10-7/8 qt
	M/T	2.93	6-1/4 pt
Transfer		1.25	2-5/8 pt
Final drive	Front	0.65	1-3/8 pt
	Rear	1.4	3 pt
Power steering system		1.0	1-1/8 qt
Air conditioning system	Compressor oil	0.15	5.03 fl oz
	Refrigerant	0.55 kg	1.21 lb