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NISSAN ALTIMA

MODEL L32 SERIES



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

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FOREWORD

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

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



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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:

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Are the trouble diagnosis procedures logical and easy to use? (circle your answer) YES NO

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QUICK REFERENCE CHART G35

PFP:00000

ENGINE TUNE-UP DATA (VQ35HR)

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 ² , 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 ² , psi)	157 (1.6, 23)
Compression pressure	kPa (kg/cm ² , 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) mm (in)	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