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NISSAN MAXIMA

MODEL A34 SERIES

QUICK REFERENCE INDEX

A GENERAL INFORMATION	GI General Information
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	CO Engine Cooling System
	EC Engine Control System
	FL Fuel System
	EX Exhaust System
	ACC Accelerator Control System
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	MT Manual Transaxle
	AT Automatic Transaxle
D DRIVELINE/AXLE	FAX Front Axle
	RAX Rear Axle
E SUSPENSION	FSU Front Suspension
	RSU Rear Suspension
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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
J AIR CONDITIONER	ATC Automatic Air Conditioner
K ELECTRICAL	SC Starting & Charging System
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	DI Driver Information System
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	ACS Auto Cruise Control System
	PG Power Supply, Ground & Circuit Elements
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FOREWORD

This manual contains maintenance and repair procedures for the 2005 NISSAN MAXIMA.

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.*

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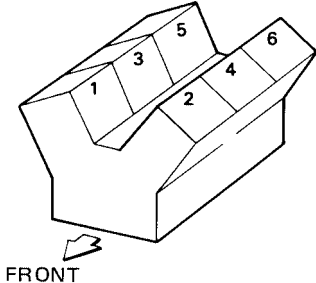
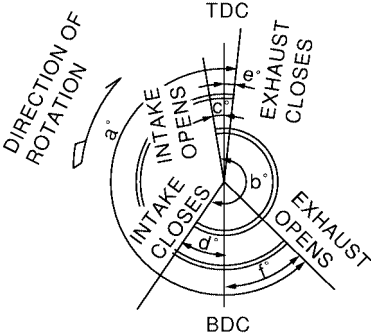
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Engine Tune-Up Data

ELS001CY

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 cm ² , 185 psi) / 300 rpm
	Minimum	981 kPa (10.0 cm ² , 142 psi) / 300 rpm
	Differential limit between cylinders	98 kPa (1.0 cm ² , 14 psi) / 300 rpm
Cylinder number	 SEM713A	
Valve timing (IVTC - OFF)	 PBIC0187E	

Unit: degree

a	b	c	d	e	f
240°	238°	- 6°	64°	8°	52°

Radiator

Unit: kPa (kg/cm², psi)

Cap relief pressure	Standard	78 – 98 (0.8 – 1.0, 11 – 14)
	Limit	59 (0.6, 9)
Leakage test pressure		157 (1.6, 23)

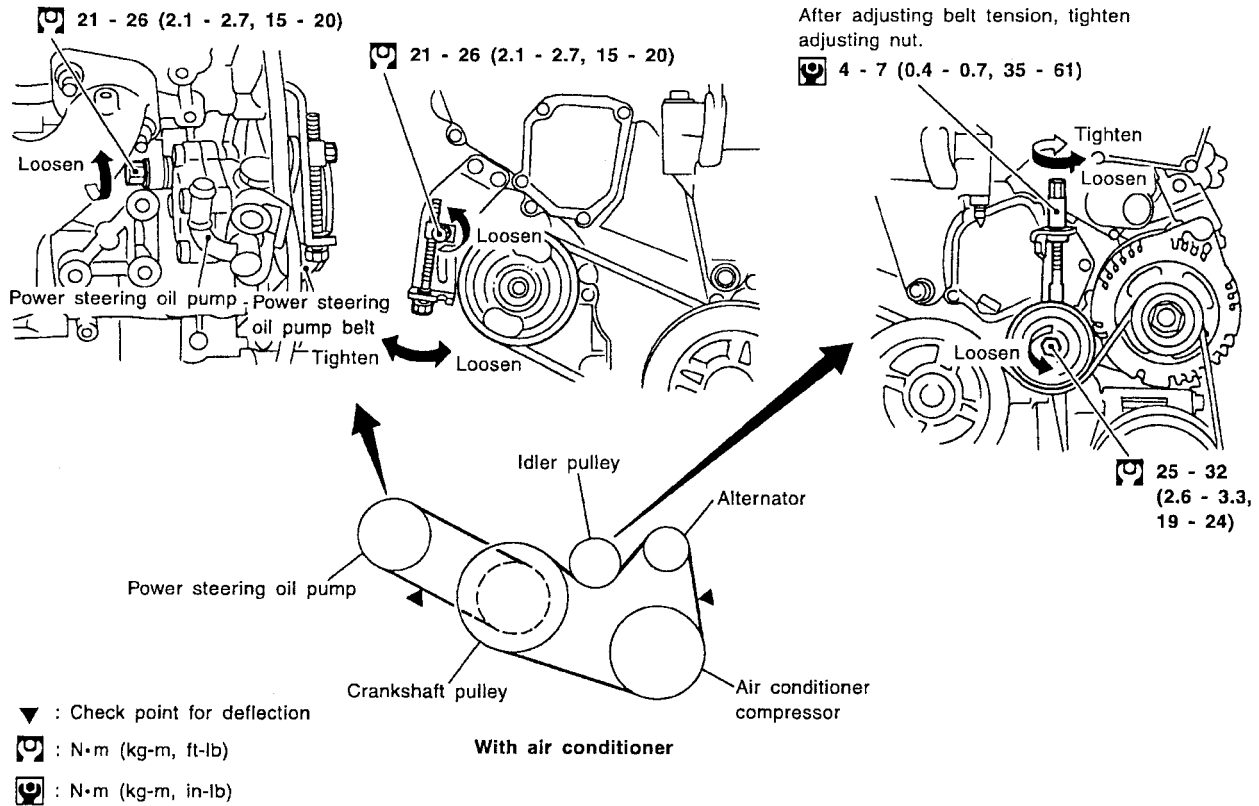
Engine Idle Speed and Ignition Timing

Target idle speed	No load* ¹ (in P or N position)	M/T: 625 ± 50 rpm
		5-speed A/T: 675 ± 50 rpm
Air conditioning: ON	In P or N position	825 rpm or more
Ignition timing	In P or N position	15° ± 5° BTDC

*1: Under the following conditions:

- Air conditioner switch: OFF
- Electric load: OFF (Lights, heater fan & rear window defogger)
- Steering wheel: Kept in straight-ahead position

Drive Belt Deflection and Tension



LLIA0060E

	Deflection adjustment		Unit: mm (in)	Tension adjustment*		Unit: N (kg, lb)
	Used belt		New belt	Used belt		New belt
	Limit	After adjustment		Limit	After adjustment	
Alternator and air conditioning 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 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.

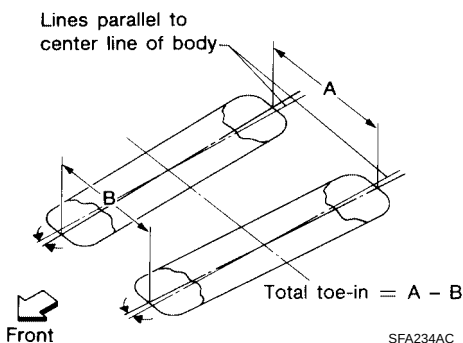
Spark Plugs (Double-Platinum Tipped)

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)

ELS001E6

Tire size		225/55R17	245/45R18
Camber degree minute (decimal degree)	Minimum	-1°00' (-1.00°)	
	Nominal	-0°15' (-0.25°)	
	Maximum	0°30' (0.50°)	
	Left and right difference	0° 45' (0.75°) or less	
Caster degree minute (decimal degree)	Minimum	2°05' (2.08°)	
	Nominal	2°50' (2.83°)	
	Maximum	3°35' (3.58°)	
	Left and right difference	0° 45' (0.75°) or less	
Kingpin inclination degree minute (decimal degree)	Minimum	13°50' (13.83°)	
	Nominal	14°35' (14.58°)	
	Maximum	15°20' (15.33°)	



Total toe-in	Distance (A - B) mm (in)	Minimum	-0.5 (-0.020)	
		Nominal	0.5 (0.020)	
		Maximum	1.5 (0.059)	
	Angle (left plus right) degree minute (decimal degree)	Minimum	—	
		Nominal	2' (0.03°)	
		Maximum	—	
Wheel turning angle full turn*2	Inside degree minute (decimal degree)	Minimum	32°00' (32.0°)	31°00' (31.0°)
		Nominal	35°30' (35.5°)	34°30' (34.5°)
		Maximum	36°30' (36.5°)	35°30' (35.5°)
	Outside degree minute (decimal degree)	Nominal	29°30' (29.0°)	28°30' (28.5°)

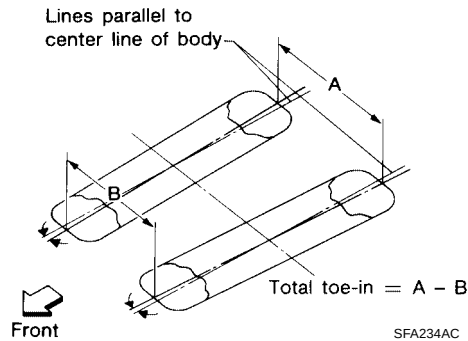
*1: Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

*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 at idle.

Rear Wheel Alignment (Unladen*)

ELS001E7

Camber Degree minute (Decimal degree)	Minimum	-0° 08' (-0.13°)
	Nominal	-0° 38' (-0.63°)
	Maximum	-0° 68' (-1.13°)



Total toe-in	Distance (A - B) mm (in)	Minimum	2.3 (0.091)
		Nominal	3.8 (0.150)
		Maximum	5.3 (0.209)
	Distance difference between RH and LH side mm (in)	Minimum	-2.0 (-0.079)
		Nominal	0 (0)
		Maximum	2.0 (0.079)
	Angle (left plus right) Degree minute (Decimal degree)	Minimum	0° 6' (0.10°)
		Nominal	0° 10' (0.17°)
		Maximum	0° 14' (0.23°)

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

Brake

ELS001D1

Unit: mm (in)

Front brake	Brake model		CLZ25VE disc brake
	Cylinder bore diameter		57.2 (2.25)
	Pad Length × width × thickness		111.0 × 62.5 × 9.5 (4.37 × 2.46 × 0.37)
	Rotor outer diameter × thickness		320 × 28 (12.60 × 1.10)
Rear brake	Brake model		AD9A disc brake
	Cylinder bore diameter		34.9 (1.374)
	Pad Length × width × thickness		83.0 × 33.0 × 8.5 (3.27 × 1.30 × 0.33)
	Rotor outer diameter × thickness		292 × 9 (11.50 × 0.35)
Master cylinder	Cylinder bore diameter		23.81 (15/16)
Control valve	Screw in type		30 × 0.4 (1.18 × 0.02)
Brake booster	Booster model		M215T
	Diaphragm diameter	Primary	230 (9.06)
		Secondary	205 (8.07)
Recommended brake fluid			Genuine NISSAN Super Heavy Duty Brake Fluid, or equivalent DOT 3 (US FMVSS No. 116)

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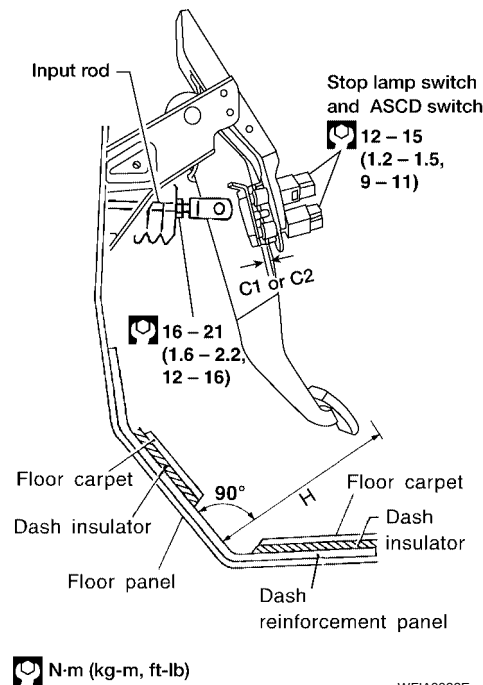
Disc Brake - Repair Limits

Unit: mm (in)

Brake model		CLZ25VE	AD9A
Pad wear limit	Minimum thickness	2.0 (0.079)	2.0 (0.079)
	Maximum runout	0.07 (0.0028)	0.05 (0.0020)
	Minimum thickness	26.0 (1.02)	8.0 (0.31)
	Maximum uneven wear (measured at 8 positions)	0.015 (0.0006) or less	

Brake Pedal

Unit: mm (in)



N-m (kg-m, ft-lb)

WFIA0022E

Free height "H"	M/T	164.1 - 174.1 (6.46 - 6.85)
	A/T	173.1 - 183.1 (6.81 - 7.21)
Clearance "C1" and "C2" between pedal stopper and threaded end of stop lamp switch or ASCD switch		0.74 - 1.96 (0.029 - 0.077)

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

Refill Capacities

ELS001D2

Description		Capacity (approximate)		
		Liter	US measure	Imp measure
Fuel		75.6	20 gal	16 5/8 gal
Engine oil Drain and refill	With oil filter change	4.2	4 1/2 qt	3 3/4 qt
	Without oil filter change	4.0	4 1/4 qt	3 1/2 qt
Dry engine (engine overhaul)		4.6	4 7/8 qt	4 qt
Cooling system	With reservoir at MAX level	8.5	2 1/4 gal	1 7/8 gal
Manual transaxle fluid (MTF)		2.2	2 3/8 qt	2 qt
Transaxle fluid (ATF)	5 A/T	7.3	7 3/4 qt	6 3/8 qt
Power steering fluid (PSF)		1.0	2 1/8 pt	1 3/4 pt
Air conditioning system refrigerant		0.55 ± 0.25 kg	1.21 ± 0.055 lb	1.21 ± 0.055 lb
Air conditioning system lubricant		150 mℓ	5.03 fl oz	5.3 fl oz