

Edition: February 2003
Revision: September 2003
Publication No. SM4E-1A34U1

NISSAN MAXIMA

MODEL A34 SERIES

QUICK REFERENCE INDEX

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FOREWORD

This manual contains maintenance and repair procedures for the 2004 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: _____

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Please describe any issues or problems in detail:

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QUICK REFERENCE CHART - MAXIMA

PFP:00000

Engine Tune-Up Data

ELS000UB

Cylinder arrangement		V-6
Displacement cm^3 (cu in)		3,498 (213.45)
Bore and stroke mm (in)		95.5 × 81.4 (3.76 × 3.205)
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 kPa (kg/cm^2 , psi) / 250 rpm	Standard	1,275 (13.0, 185)
	Minimum	981 (10.0, 142)
	Differential limit between cylinders	98 (1.0, 14)
Idle speed rpm No-load*1 (in "P" or N" position)		700 ± 50
Ignition timing (BTDC at idle speed)		15° ± 5°
CO% at idle		0.7 – 9.9% and engine runs smoothly
Radiator cap relief pressure kPa (kg/cm^2 , psi)	Standard	79 – 98 (0.8 – 1.0, 11 – 14)
	Limit	59 (0.6, 9)
Cooling system leakage testing pressure kPa (kg/cm^2 , psi)		157 (1.6, 23)

*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

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Drive Belt Deflection and Tension

	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, Air conditioner compressor	7.0 (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 (0.43)	7.3 - 8.0 (0.29 - 0.32)	6.5 - 7.2 (0.26 - 0.28)	196 (20, 44)	495 - 583 (50.5 - 59.5, 111.3 - 131.1)	603 - 691 (61.5 - 70.5, 135.6 - 155.4)

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)

ELS000UC

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	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	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 (-0.02)
		Nominal	0.5 (0.02)
		Maximum	1.5 (0.06)
	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	31°00' (31.0°)
		Nominal	34°30' (34.5°)
		Maximum	35°30' (35.5°)
	Outside Degree minute (Decimal degree)	Nominal	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, 22 to 33 lb) with engine idle.

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Rear Wheel Alignment (Unladen*)

ELS000UD

Camber Degree minute (Decimal degree)		Minimum	-0°10' (-0.17°)
		Nominal	-0°40' (-0.67°)
		Maximum	-0°70' (-1.17°)
Total toe-in	Distance (A - B) mm (in)	Minimum	2.5 (0.10)
		Nominal	4.0 (0.16)
		Maximum	5.5 (0.22)
	Angle (left plus right) Degree minute (Decimal degree)	Minimum	6' (0.1°)
		Nominal	10' (0.167°)
		Maximum	14' (0.233°)

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

Brake

ELS000UE

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		AD9E 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			DOT 3

Disc Brake - Repair Limits

Unit: mm (in)

Brake model		CLZ25VE (Front)	AD9E (Rear)
Pad wear limit	Minimum thickness	2.0 (0.079)	2.0 (0.079)
	Maximum runout	0.07 (0.0028)	0.05 (0.0020)
Rotor repair limit	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)

Free height "H"	M/T	164.1 - 174.1 (6.46 - 6.85)
	A/T	173.1 - 183.1 (6.81 - 7.21)
Clearance "C" 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

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ELS000UF

Refill Capacities

Engine Coolant Capacity (Approximate)

Unit: ℓ (US qt, Imp qt)

Drain and refill (without reservoir)	7.5 (7 7/8, 6 5/8)
Reservoir tank (at MAX level)	0.7 (3/4, 5/8)

Engine Oil Capacity (Approximate)

Unit: ℓ (US qt, Imp qt)

Drain and refill	With oil filter change	4.0 (4 1/4, 3 1/2)
	Without oil filter change	3.7 (3 7/8, 3 1/4)
Dry engine (engine overhaul)		5.0 (5 1/4, 4 3/8)

Miscellaneous Capacity (Approximate)

Fuel tank		75.5 ℓ (20 US gal, 16 5/8 Imp gal)
Power steering system		1.0 ℓ (2 1/8 US pt, 1 3/4 Imp pt)
Transaxle	M/T (RS5F51A)	2.3 ℓ (2 3/8 US qt, 2 Imp qt)
	A/T (RE4F04B)	9.2 ℓ (9 3/4 US qt, 8 1/8 Imp qt)
Air conditioning system	Refrigerant	0.475 - 0.525 kg (1.045 - 1.155 lb)
	Compressor oil	150 ml (5.03 fl oz, 5.3 Imp fl oz)

TEST VALUE AND TEST LIMIT (GST ONLY — NOT APPLICABLE TO CONSULT-II)

The following is the information specified in Mode 6 of SAE J1979.

The test value is a parameter used to determine whether a system/circuit diagnostic test is “OK” or “NG” while being monitored by the ECM during self-diagnosis. The test limit is a reference value which is specified as the maximum or minimum value and is compared with the test value being monitored.

These data (test value and test limit) are specified by Test ID (TID) and Component ID (CID) and can be displayed on the GST screen.

SRT item	Self-diagnostic test item	DTC	Test value (GST display)		Test limit	Conversion
			TID	CID		
CATALYST	Three way catalyst function (Bank 1)	P0420	01H	01H	Max.	1/128
		P0420	02H	81H	Min.	1
	Three way catalyst function (Bank 2)	P0430	03H	02H	Max.	1/128
		P0430	04H	82H	Min.	1
EVAP SYSTEM	EVAP control system (Small leak)	P0442	05H	03H	Max.	1/128mm ²
	EVAP control system purge flow monitoring	P0441	06H	83H	Min.	20mV
	EVAP control system (Very small leak)	P0456	07H	03H	Max.	1/128mm ²
HO2S	A/F sensor 1 (Bank1)	P1271	41H	8EH	Min.	5mV
		P1272	42H	0EH	Max.	5mV
		P1273	43H	0EH	Max.	0.002
		P1274	44H	8EH	Min.	0.002
		P1278	45H	8EH	Min.	0.004
		P1276	46H	0EH	Max.	5mV
		P1276	47H	8EH	Min.	5mV
		P1279	48H	8EH	Min.	0.004
	A/F sensor 1 (Bank2)	P1281	4CH	8FH	Min.	5mV
		P1282	4DH	0FH	Max.	5mV
		P1283	4EH	0FH	Max.	0.002
		P1284	4FH	8FH	Min.	0.002
		P1288	50H	8FH	Min.	0.004
		P1286	51H	0FH	Max.	5mV
		P1286	52H	8FH	Min.	5mV
		P1289	53H	8FH	Min.	0.004
	Heated oxygen sensor 2 (Bank 1)	P0139	19H	86H	Min.	10mV/500ms
		P1147	1AH	86H	Min.	10mV
		P1146	1BH	06H	Max.	10mV
		P0138	1CH	06H	Max.	10mV
	Heated oxygen sensor 2 (Bank 2)	P0159	21H	87H	Min.	10mV/500ms
		P1167	22H	87H	Min.	10mV
		P1166	23H	07H	Max.	10mV
		P0158	24H	07H	Max.	10mV
HO2S HTR	A/F sensor 1 heater (Bank1)	P1032	57H	10H	Max.	5mV
		P1031	58H	90H	Min.	5mV
	A/F sensor 1 heater (Bank2)	P1052	59H	11H	Max.	5mV
		P1051	5AH	91H	Min.	5mV
	Heated oxygen sensor 2 heater (Bank 1)	P0038	2DH	0AH	Max.	20mV
		P0037	2EH	8AH	Min.	20mV
	Heated oxygen sensor 2 heater (Bank 2)	P0058	2FH	0BH	Max.	20mV
		P0057	30H	8BH	Min.	20mV
EGR SYSTEM	EGR function	P0400	31H	8CH	Min.	1°C
		P0400	32H	8CH	Min.	1°C
		P0400	33H	8CH	Min.	1°C
		P0400	34H	8CH	Min.	1°C
		P1402	35H	0CH	Max.	1°C