Edition: August 2002
Revision: April 2004
Publication No. SM3E-1Y34U3

INFINITI®

M45

MODEL Y34 SERIES

QUICK REFERENCE INDEX

A B C D E F G H I J K L M

INFINITI®

FOREWORD

This manual contains maintenance and repair procedure for the 2003 INFINITI M45.

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 MOTOR CO., LTD.

INFINITI®

PLEASE HELP MAKE THIS SERVICE MANUAL BETTER!

Your comments are important to INFINITI 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:

Nissan North America, Inc.
Technical Service Information
39001 Sunrise Drive, P.O. Box 9200
Farmington Hills, MI USA 48331
FAX: (248) 488-3910

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.*

Please describe the issue or problem in detail: _____

_____

_____

_____

Is the organization of the manual clear and easy to follow? (circle your answer) YES NO

Please comment: _____

_____

_____

_____

_____

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

_____

_____

_____

_____

DATE: _____ YOUR NAME: _____ POSITION: _____

DEALER: _____ DEALER NO.: _____ ADDRESS: _____

CITY:_____ STATE/PROV./COUNTRY: _____ ZIP/POSTAL CODE: _____

INCH TO METRIC CONVERSION TABLE

(Rounded-off for automotive use)

inches	**mm**	inches	**mm**
.100	**2.54**	.610	**15.49**
.110	**2.79**	.620	**15.75**
.120	**3.05**	.630	**16.00**
.130	**3.30**	.640	**16.26**
.140	**3.56**	.650	**16.51**
.150	**3.81**	.660	**16.76**
.160	**4.06**	.670	**17.02**
.170	**4.32**	.680	**17.27**
.180	**4.57**	.690	**17.53**
.190	**4.83**	.700	**17.78**
.200	**5.08**	.710	**18.03**
.210	**5.33**	.720	**18.29**
.220	**5.59**	.730	**18.54**
.230	**5.84**	.740	**18.80**
.240	**6.10**	.750	**19.05**
.250	**6.35**	.760	**19.30**
.260	**6.60**	.770	**19.56**
.270	**6.86**	.780	**19.81**
.280	**7.11**	.790	**20.07**
.290	**7.37**	.800	**20.32**
.300	**7.62**	.810	**20.57**
.310	**7.87**	.820	**20.83**
.320	**8.13**	.830	**21.08**
.330	**8.38**	.840	**21.34**
.340	**8.64**	.850	**21.59**
.350	**8.89**	.860	**21.84**
.360	**9.14**	.870	**22.10**
.370	**9.40**	.880	**22.35**
.380	**9.65**	.890	**22.61**
.390	**9.91**	.900	**22.86**
.400	**10.16**	.910	**23.11**
.410	**10.41**	.920	**23.37**
.420	**10.67**	.930	**23.62**
.430	**10.92**	.940	**23.88**
.440	**11.18**	.950	**24.13**
.450	**11.43**	.960	**24.38**
.460	**11.68**	.970	**24.64**
.470	**11.94**	.980	**24.89**
.480	**12.19**	.990	**25.15**
.490	**12.45**	1.000	**25.40**
.500	**12.70**	2.000	**50.80**
.510	**12.95**	3.000	**76.20**
.520	**13.21**	4.000	**101.60**
.530	**13.46**	5.000	**127.00**
.540	**13.72**	6.000	**152.40**
.550	**13.97**	7.000	**177.80**
.560	**14.22**	8.000	**203.20**
.570	**14.48**	9.000	**228.60**
.580	**14.73**	10.000	**254.00**
.590	**14.99**	20.000	**508.00**
.600	**15.24**		

METRIC TO INCH CONVERSION TABLE

(Rounded-off for automotive use)

mm	inches	**mm**	inches
1	.0394	**51**	2.008
2	.079	**52**	2.047
3	.118	**53**	2.087
4	.157	**54**	2.126
5	.197	**55**	2.165
6	.236	**56**	2.205
7	.276	**57**	2.244
8	.315	**58**	2.283
9	.354	**59**	2.323
10	.394	**60**	2.362
11	.433	**61**	2.402
12	.472	**62**	2.441
13	.512	**63**	2.480
14	.551	**64**	2.520
15	.591	**65**	2.559
16	.630	**66**	2.598
17	.669	**67**	2.638
18	.709	**68**	2.677
19	.748	**69**	2.717
20	.787	**70**	2.756
21	.827	**71**	2.795
22	.866	**72**	2.835
23	.906	**73**	2.874
24	.945	**74**	2.913
25	.984	**75**	2.953
26	1.024	**76**	2.992
27	1.063	**77**	3.031
28	1.102	**78**	3.071
29	1.142	**79**	3.110
30	1.181	**80**	3.150
31	1.220	**81**	3.189
32	1.260	**82**	3.228
33	1.299	**83**	3.268
34	1.339	**84**	3.307
35	1.378	**85**	3.346
36	1.417	**86**	3.386
37	1.457	**87**	3.425
38	1.496	**88**	3.465
39	1.535	**89**	3.504
40	1.575	**90**	3.543
41	1.614	**91**	3.583
42	1.654	**92**	3.622
43	1.693	**93**	3.661
44	1.732	**94**	3.701
45	1.772	**95**	3.740
46	1.811	**96**	3.780
47	1.850	**97**	3.819
48	1.890	**98**	3.858
49	1.929	**99**	3.898
50	1.969	**100**	3.937

QUICK REFERENCE CHART M45

PFP:00000

ENGINE TUNE-UP DATA (VK45DE)

ELS0003W

Engine model		VK45DE
Firing order		1-8-7-3-6-5-4-2
Idle speed A/T (In “P” or “N” position) rpm		650±50
Ignition timing (BTDC at idle speed)		12°±5°
CO% at idle		0.7 - 9.9 % and engine runs smoothly
Tensions of drive belts		Auto adjustment by auto tensioner
Radiator cap relief pressure Standard kPa (kg/cm^2 , psi)		78-98 (0.8-1.0 , 11-14)
Cooling system leakage testing pressure kPa (kg/cm^2 , psi)		157(1.6, 23)
Compression pressure kPa (kg/cm^2 , psi)/rpm		1,320 (13.5, 191) /300
Standard		
Minimum		1,130 (11.5, 164)/300
Spark plug	Standard type	PLFR5A - 11
	Hot type	PLFR4A - 11
	Cold type	PLFR6A - 11

FRONT WHEEL ALIGNMENT (Unladen*)

ELS0003X

Camber		Minimum	– 1° 25′ (– 1.42°)
		Nominal	– 0° 40′ (– 0.67°)
	Degree minute	Maximum	0° 05′ (0.08°)
	(Decimal degree)	Left and right difference	45′ (0.75°) or less
Caster		Minimum	5° 50′ (5.83°)
		Nominal	6° 35′ (6.58°)
	Degree minute	Maximum	7° 20′ (7.33°)
	(Decimal degree)	Left and right difference	45′ (0.75°) or less
Kingpin inclination		Minimum	12° 40′ (12.67°)
	Degree minute	Nominal	13° 25′ (13.42°)
	(Decimal degree)	Maximum	14° 10′ (14.17°)
Total toe-in		Minimum	1 (0.04)
Distance (A – B)		Nominal	2 (0.08)
	mm (in)	Maximum	3 (0.12)
Angle (left plus right)		Minimum	2′ (0.03°)
	Degree minute	Nominal	5′ (0.08°)
	(Decimal degree)	Maximum	8′ (0.13°)
Wheel turning angle (Full turn)		Minimum	30° 55′ (30.92°)
Inside	Degree minute	Nominal	33°55′ (33.92°)
	(Decimal degree)	Maximum	34° 55′ (34.92°)
Outside	Degree minute (Decimal degree)	Nominal	28° 45′ (28.75°)

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

REAR WHEEL ALIGNMENT (Unladen*)

ELS0003Y

Camber		Minimum	– 1° 10′ (– 1.17°)
	Degree minute	Nominal	– 0° 40′ (– 0.67°)
	(Decimal degree)	Maximum	– 0° 10′ (– 0.17°)
Total toe-in		Minimum	0 (0)
	Distance(A–B)	Nominal	2.6 (0.102)
	mm (in)	Maximum	5.2 (0.205)
	Angle (left plus right)	Minimum	0′ (0.00°)
	Degree minute	Nominal	7′ (0.12°)
	(Decimal degree)	Maximum	14′ (0.23°)

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

BRAKE

ELS0003Z

Unit : mm (in)

Front brake		
	Pad wear limit	2.0 (0.079)
	Rotor repair limit	26.0 (1.024)
Rear brake		
	Pad wear limit	2.0 (0.079)
	Rotor repair limit	14.0 (0.551)
Pedal free height		174 - 184 (6.85 - 7.24)
Pedal depressed height*		More than 90 (3.54)

* : Under force of 490 N(50 kg, 110 lb) with engine running.

REFILL CAPACITIES

ELS00040

UNIT			Liter	US measure
Fuel tank			80	21 - 1/8 gal
Coolant (With reservoir tank)			9.8	10 - 3/8 qt
Engine*	Drain and refill			
		With oil filter change	5.6	5 - 7/8 qt
		Without oil filter change	5.0	5 - 1/4 qt
	Dry engine (overhall)		6.7	7 - 1/8 qt
Transmission	A/T		10.3	10 - 7/8 qt
Differential carrier			1.4	3 pt
Power steering system			1.0	1 - 1/8 qt
Air conditioning system	Compressor oil		0.180	6.0 fl oz
	Refrigerant		0.60 kg	1.32 lb

* : For further details, see “Changing Engine Oil” in MA section.