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M35/M45

MODEL Y50 SERIES



INFINITI®

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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
	ACC Accelerator Control System
C TRANSMISSION/ TRANSAXLE	AT Automatic Transmission
D DRIVELINE/AXLE	TF Transfer
	PR Propeller Shaft
	FFD Front Final Drive
	RFD Rear Final Drive
	FAX Front Axle
	RAX Rear Axle
E SUSPENSION	FSU Front Suspension
	RSU Rear Suspension
	WT Road Wheels & Tires
F BRAKES	BR Brake System
	PB Parking Brake System
	BRC Brake Control System
G STEERING	PS Power Steering System
	STC Steering Control 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
	LT Lighting System
	DI Driver Information System
	WW Wiper, Washer & Horn
	BCS Body Control System
	LAN LAN System
	AV Audio-Visual System
	ACS Auto Cruise Control System
	PG Power Supply, Ground & Circuit Elements
L MAINTENANCE	MA Maintenance
M INDEX	IDX Alphabetical Index

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FOREWORD

This manual contains maintenance and repair procedure for the 2006 INFINITI M35/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.



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QUICK REFERENCE CHART M35/M45

PFP:00000

ENGINE TUNE-UP DATA (VQ35DE)

ELS0003W

Engine model			VQ35DE			
Firing order			1-2-3-4-5-6			
Idle speed A/T (In “P” or “N” position)			rpm	650 ± 50		
Ignition timing (BTDC at idle speed) A/T (In “P” or “N” position)			15° ± 5°			
CO% at idle			0.7 - 9.9% and engine runs smoothly			
Drive Belt	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 power steering oil pump belt	7 (0.28)	4 - 5 (0.16 - 0.20)	3.5 - 4.5 (0.138 - 0.177)	294 (30, 66)	730 - 818 (74.5 - 83.5, 164 - 184)	838 - 926 (85.5 - 94.5, 188 - 208)
A/C compresor belt	12 (0.47)	9 - 10 (0.35 - 0.39)	8 - 9 (0.31 - 0.35)	196 (20, 44)	348 - 436 (35.5 - 44.5, 78 - 98)	470 - 559 (48 - 57, 106 - 126)
Applied pushing force	98N (10kg, 22lb)			—		
Radiator cap relief pressure			kPa (kg/cm ² , psi)			
Standard			78 - 98 (0.8 - 1.0, 11 - 14)			
Limit			59 (0.6, 9)			
Cooling system leakage testing pres- sure			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			
Spark plug	Standard type		PLFR5A-11			
	Hot type		PLFR4A-11			
	Cold type		PLFR6A-11			

ENGINE TUNE-UP DATA (VK45DE)

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	kPa (kg/cm ² , psi)	
Standard		7 8 - 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)
Compression pressure	kPa (kg/cm ² , psi)/rpm	
Standard		1,320 (13.5, 191) /300
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

Axle		2WD		AWD
Tire		P245/45R18	245/40R19	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	33' (0.55°) or less		
Caster Degree minute (Decimal degree)	Minimum	3° 45' (3.75°)	3° 50' (3.83°)	3° 05' (3.08°)
	Nominal	4° 30' (4.50°)	4° 35' (4.58°)	3° 50' (3.83°)
	Maximum	5° 15' (5.25°)	5° 20' (5.33°)	4° 35' (4.58°)
	Left and right difference	39' (0.65°) or less		
Kingpin inclination Degree minute (Decimal degree)	Minimum	6° 30' (6.50°)		
	Nominal	7° 15' (7.25°)		
	Maximum	8° 00' (8.00°)		
Total toe-in	Distance (A - B)	Minimum	0 mm (0 in)	
		Nominal	1 mm (0.04 in)	
		Maximum	2 mm (0.08 in)	
	Angle (left plus right) Degree minute (Degree)	Minimum	0' (0°)	
		Nominal	3' (0.05°)	
		Maximum	6' (0.10°)	

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Axle			2WD		AWD
Tire			P245/45R18	245/40R19	245/45R18
Wheel turning angle (Full turn)	Inside Degree minute (Decimal degree)	Minimum	36°20' (36.3°)		39°45' (39.8°)
		Nominal	39°20' (39.3°)		42°45' (42.8°)
		Maximum	40°20' (40.3°)		43°45' (43.8°)
	Outside Degree minute (Decimal degree)	Nominal	33° 25' (33.4°)	33° 20' (33.3°)	32° 30' (32.5°)

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

REAR WHEEL ALIGNMENT (Unladen*)

ELS0003Y

Axle			2WD		AWD
Tire			P245/45R18	245/40R19	245/45R18
Camber Degree minute (Decimal degree)		Minimum	- 1° 10' (- 1.17°)	- 1° 20' (- 1.33°)	- 1° 40' (- 0.67°)
		Nominal	- 0° 40' (- 0.67°)	- 0° 50' (- 0.83°)	- 0° 10' (- 0.17°)
		Maximum	- 0° 10' (- 0.17°)	- 0° 20' (- 0.33°)	0° 20' (0.33°)
Total toe-in	Distance (A - B)	Minimum	0.1 mm (0.004 in)		
		Nominal	2.8 mm (0.110 in)		
		Maximum	5.5 mm (0.217 in)		
	Angle (left plus right) Degree minute (Decimal degree)	Minimum	0' (0°)		
		Nominal	7' (0.12°)		
		Maximum	14' (0.23°)		

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

BRAKE

ELS0003Z

Front brake	Pad wear limit	2.0 mm (0.079 in)
	Rotor repair limit	26.0 mm (1.024 in)
Rear brake	Pad wear limit	2.0 mm (0.079 in)
	Rotor repair limit	14.0 mm (0.551 in)
Pedal free height		157 - 167 mm (6.18 - 6.57 in)
Pedal depressed height*		90 mm (3.54 in) or more

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

REFILL CAPACITIES

ELS00040

UNIT		Liter	US measure
Fuel tank		76	20 gal
Coolant (With reservoir tank)	VQ35DE	8.9	9 - 3/8 qt
	VK45DE	10.4	11 qt
Engine (VQ35DE)	Drain and refill		
	With oil filter change	4.7	5 qt
	Without oil filter change	4.4	4 - 5/8 qt
	Dry engine (Overhaul)	5.4	5 - 3/4 qt
Engine (VK45DE)	Drain and refill		
	With oil filter change	5.5	5 - 3/4 qt
	Without oil filter change	4.9	5 - 1/8 qt
	Dry engine (Overhaul)	6.7	7 - 1/8 qt

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UNIT		Liter	US measure
Transmission	A/T	10.3	10 - 7/8 qt
Transfer		1.25	2 - 5/8 pt
Differential carrier	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