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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	
	AT Automatic Transmission	
C TRANSMISSION/ TRANSAXLE		
D DRIVELINE/AXLE	TF Transfer	
	PR Propeller Shaft	
	FFD Front Final Drive	
	RFD Rear Final Drive	
	FAX Front Axle	
	RAX Rear Axle	
	FSU Front Suspension	
	RSU Rear Suspension	
E SUSPENSION	WT Road Wheels & Tires	
	BR Brake System	
	PB Parking Brake System	
F BRAKES	BRC Brake Control System	
	PS Power Steering System	
	STC Steering Control System	
G STEERING		
H RESTRAINTS	SB Seat Belts	
	SRS Supplemental Restraint System (SRS)	
	BL Body, Lock & Security System	
I BODY	GW Glasses, Window System & Mirrors	
	RF Roof	
	EI Exterior & Interior	
	IP Instrument Panel	
	SE Seat	
	ATC Automatic Air Conditioner	
	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		
J AIR CONDITIONER		
K ELECTRICAL	MA Maintenance	
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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
ENGINE TUNE-UP DATA (VQ35DE)

PF0:00000

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 compressor 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 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				
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
	VK45DE	10.4
Engine (VQ35DE)	Drain and refill	
	With oil filter change	4.7
	Without oil filter change	4.4
	Dry engine (Overhaul)	5.4
Engine (VK45DE)	Drain and refill	
	With oil filter change	5.5
	Without oil filter change	4.9
	Dry engine (Overhaul)	6.7

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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