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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
	FSU Front Suspension
E SUSPENSION	RSU Rear Suspension
	WT Road Wheels & Tires
	BR Brake System
F BRAKES	PB Parking Brake System
	BRC Brake Control System
	PS Power Steering System
G STEERING	STC Steering Control System
	SB Seat Belts
H RESTRAINTS	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
J AIR CONDITIONER	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
	MA Maintenance
	IDX Alphabetical Index
K ELECTRICAL	
L MAINTENANCE	
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FOREWORD

This manual contains maintenance and repair procedure for the 2007 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

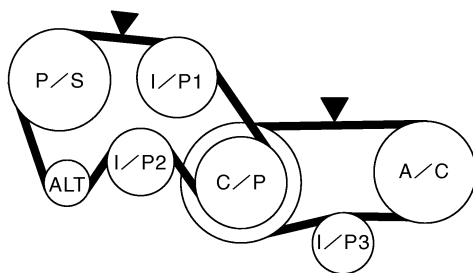
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ENGINE TUNE-UP DATA (VQ35DE)

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 (in)		Unit: mm	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	With idler pulley 1	7 (0.28)	4 - 5 (0.16 - 0.20)	3.5 - 4.5 (0.138 - 0.177)	294 (30, 66)	730 - 818 (74.5 - 83.4, 164 - 184)	838 - 926 (85.5 - 94.5, 188 - 208)
	Without idler pulley 1	12 (0.47)	7 - 8 (0.28 - 0.31)	6 - 7 (0.24 - 0.28)			
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)			—		

SEC. 117



PBIC5333E

Radiator cap relief pressure	kPa (kg/cm ² , psi)	78 - 98 (0.8 - 1.0, 11 - 14)
	Standard	
	Limit	
Cooling system leakage testing pressure	kPa (kg/cm ² , psi)	157 (1.6, 23)
Compression pressure	kPa (kg/cm ² , psi)/rpm	1,275 (13.0, 185) /300
	Standard	
	Minimum	
Spark plug	Standard type	PLFR5A-11
	Hot type	PLFR4A-11
	Cold type	PLFR6A-11

*: If belt tension gauge cannot be installed at check points shown, check drive belt tension at different location on belt.

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		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		1,320 (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			245/45R18	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	Minimum	0 mm (0 in)		
		Nominal	1 mm (0.04 in)		
		Maximum	2 mm (0.08 in)		
	Angle (left wheel or right wheel) Degree minute (Decimal degree)	Minimum	0' (0°)		
		Nominal	3' (0.05°)		
		Maximum	6' (0.10°)		

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Axle			2WD		AWD
Tire			245/45R18	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			245/45R18	245/40R19	245/45R18
Camber Degree minute (Decimal degree)		Minimum	-1° 10' (-1.17°)	-1° 20' (-1.33°)	-0° 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	Minimum	0.1 mm (0.004 in)		
		Nominal	2.8 mm (0.110 in)		
		Maximum	5.5 mm (0.217 in)		
	Angle (left wheel or right wheel) 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	Repair limit thickness	2.0 mm (0.079 in)
	Wear limit	26.0 mm (1.024 in)
Rear brake	Repair limit thickness	2.0 mm (0.079 in)
	Wear limit	14.0 mm (0.551 in)
Brake pedal height		157 - 167 mm (6.18 - 6.57 in)
Depressed pedal 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